

**Under Graduate Foundation
A N D
Skill Enhancement Course (SEC)/
Generic Elective Paper**

I Semester---- Environmental Studies

II Semester---- Gender Sensitization (Non Core)

III Semester--- Communicative Skills in English-
SKILL ENHANCEMENT COURSE-(SEC) – I

IV Semester --- Computer Foundation
SKILL ENHANCEMENT COURSE-(SEC) – II

V Semester-TWO PAPERS (Non Core)

1. SKILL ENHANCEMENT COURSE PAPER (SEC) FOR
ALL COURSES COMPULSORY - 2 Credits 50 Marks

AND

2. GENERIC ELECIVE PAPER FOR ALL COURSES
COMPULSORY - 2 Credits - 50 Marks

SKILL ENHANCEMENT -PAPER TITLES

For B.A./B.SC—Verbal Reasoning---SEC-III

2 Credits - (Non Core) - 50 Marks

For B.Com. --- General Insurance— SEC-III

2 Credits (Non Core) – 50 Marks

For B.B.A. Soft Skills—SEC-III

2 Credits - (Non Core) 50 Marks

AND

Generic Elective (GE)-I

2 Credits (Non Core) 50 Marks

**PAPER TITLE: Public Health & Hygiene
(Common paper for all courses)**

2 Credits (Non Core) 50 Marks

D

**SEMESTER-V
PAPER-V
WESTERN POLITICAL THOUGHT**

Unit-I Introduction

- a. Political thought: Nature, Methods and Significance
- b. Plato: Theory of Justice and ideal state
- c. Aristotle: theory of Justice, slavery, classification of governments and theory of revolutions
- d. Thomas Aquinas – Church- State controversy

Unit- II Modern Western Political thought and Social contractualists

- a. Nicolo Machiavelli as a modern political thinker and views on state craft.
- b. Thomas Hobbes- Individualism and Absolute State
- c. John Locke- Natural Rights and Limited – Government

Unit-III Utilitarian's

- a. Jeremy Bentham- Principles of Utilitarianism
- b. J. S. Mill- Liberty, Representative Government

Unit- IV Idealists

- a. GWF Hegel- Dialectics and theory of state
- b. T.H. Green – Rights and Political Obligations

Unit- V Marist philosophy

- a. Karl Marx: Dialectical and Historical Materialism
- b. Mao Ze Dong: On contradictions, New Democratic- revolutions
- c. Antonio Gramsci: Hegemony and civil society

S. J. G. C.
M. Satyaprakash
Member BOS, S.U.
Trainers.

**SEMESTER-VI
PAPER-VI
INDIAN POLITICAL THOUGHT**

Unit-I Ancient Indian Political Thought

- a. Manu – Dharma and Varna
- b. Koutilya- Saptanga theory, Mandala theory
- c. Buddha- Social and Political Ideas- Dhamma & Sangha

Unit- II Medieval Indian Political Thought

- a. Sufism
- b. Bhakti tradition : Basava.

Unit-III Anti Cast thought and Social reformism

- a. Jyothirao Pule: Critique of Brahmanism, Social revolution
- b. Dr.B.R. Ambedkar: Theory of Caste, Annihilation of caste and state
- c. Social reformism: Brahma Samaj, Arya Samaj, Aligarh movement

Unit- IV National Political Thought

- a. Mohandas Karamchand Gandhi- Ahimsa, Satyagraha
- b. Jawaharlal Nehru- Democratic Socialism, Secularism

Unit- V Socialist Political thought

- a. M.N. Roy,
- b. Rammonohar Lohiya
- c. Jayaprakash Narayana

Signature
(M. Satyaprakash)
Member B.O.S, S.U.
Kannur.

SEMESTER-~~VII~~ VI
PAPER-VII (A) (OPTIONAL)
INTERNATIONAL RELATIONS-I

Unit-I International Political System

- a. International Relations: Definition Evolution, Scope and significance
- b. Rise of Sovereign state system

Unit- II History of International Relations

- a. Colonialism – causes, phases and impact
- b. The first war and the second world war: causes and consequences.

Unit-III Post-war Developments

- a. Decolonization
- b. Emergence of third world- problems and prospects
- c. Cold war- causes, phases and impact

Unit- IV Concepts

- a. Power- National Power
- b. Super Power, Regional Power, Détente
- c. Bipolarity, unipolarity and multi polarity
- d. Peace, Security

Unit- V International Organisations

- a. United Nations: Structure and Role, Need for Reforms
- b. Regional Organisations: EU, ASEAN, SAARC- BRICS

Signature

(M. Satyaprakash)
Member B.O.S., SU.
Kaimngar

SEMESTER-~~VIII(A)~~ VII(A)
PAPER-VIII (A) (OPTIONAL)
INTERNATIONAL RELATIONS-II

Unit-I International Political Economy

- a. Neo Colonialism
- b. IBRD, IMF, WTO and MNCs
- c. Globalization

Unit- II International Security

- a. Arms Race, Arm Control, Disarmament
- b. Issues in Nuclear Politics

Unit-III Foreign Policy

- a. Foreign Policy- Determinants
- b. India's Foreign Policy- Features
- c. Non-Alignment- Relevance

Unit- IV Emerging Areas in International Relations

- a. Environment
- b. Human Rights
- c. Terrorism
- d. Cyber Crimes

Unit- V India's Bilateral Relations

- a. India and Major Powers (USA, Russia)
- b. India and Neighboring Countries (China & Pakistan)

Shyama

(M. Satyaparakash)

Member B.O.S., S.O.

Karimnagar

SEMESTER-V
PAPER-VII (B) (OPTIONAL)
POLITICAL PROCESSES IN THE FORMATION OF TELANGANA STATE-I

Unit-I Historical background of Telangana

- a. Nizam's Hyderabad State
- b. Integration of Princely state- Hyderabad state congress, police action, emergence of Hyderabad state

Unit- II Public Awakening in Telangana

- a. Library movement
- b. Dalit Movement
- c. Tribal movement
- d. Telangana peasant armed struggle

Unit-III States Reorganization

- a. Fazal Ali Commission
- b. Formation of Andhra Pradesh
- c. Gentlemen's Agreement
- d. Mulki Rules – Supreme Court verdicts
- e. Formation of Regional Committees- Six Point Formula

Unit- IV

- a. Telangana Agitation- 1969
- b. Separate Andhra Agitation- 1972
- c. Telangana Mahasabha- Telangana Janasabha
- d. Telanga Rashtrasamiti (TRS) movement- 2001-2014
- e. Cultural organization- intervention

Unit- V Injustices to Telangana

- a. Water resources
- b. Employment
- c. Educational opportunities
- d. Cultural discrimination

Shyamsuk
M. Satyaprakash
Member . B.O.S, SO
Training.

SEMESTER-VI
PAPER-VIII (B) (OPTIONAL)
POLITICAL PROCESSES IN THE FORMATION OF TELANGANA STATE-II

Unit-I Committees and Commissions on Telangana

- a. Girglani Commission
- b. Rosaiah Committee
- c. Justice Srikrishna Committee
- d. Pranab Mukharjee Committee

Unit- II Role of Political Parties

- a. National Parties- INC, BJP, CPI, CPM, BSP
- b. Regional Parties- TRS, TDP, MIM, YSRCP
- c. Role of ML Parties: Maoist Party, New Democracy, Janashakti

Unit-III Role of Non Party and Civil Society Actors

- a. Students JAC
- b. Political JAC
- c. Other JACs
 1. Cultural JAC
 2. Employees JAC
 3. Lawyers JACs
 4. Cast & Community JACs
 5. Role of Media

Unit- IV Emergence of Telangana State

- a. Constitutional Processes
- b. Formation of Telangana State

Unit- V Party Politics and Elections in Telangana

- a. Election alliances, 2004, 2009 and 2014 and promises
- b. Formation of TRS Government

Stephal

(M. Satpaprakash)

Member B.O.S

SU, Karimnagar

DEPARTMENT OF ENGLISH
SATAVAHANA UNIVERSITY
Textbook – English for Communication-3
[Published by Cambridge University Press India Pvt. Ltd.]
Author: Prof G. Damodar

Final Year from 2021-22 onwards, Semester – V (for 3 Credits)

Unit 13 (NON-FICTION)	TEXT (Biography, autobiography, speech, narration)	Swami Vivekananda's Speech, 11 September 1893, Chicago
	Listening Tasks	Yoga and meditation
	Speaking Tasks	Hobbies and activities
	Reading Tasks	Vivekananda Memorial (for literal comprehension with five forms of questions)
	Technical Writing	Information transfer (of data, graphs, etc)
	Communication Skills	Picture Description
Content Developer	Dr E. Satyanarayana	Govt Degree College, Hanamkonda
Unit 14 (NON-FICTION)	TEXT	Dr Kalam: 'My vision for India', IIT Hyderabad
	Listening Tasks	Passages on Dr C. Narayan Reddy and Dr Naveen to be read out for note-making
	Speaking Tasks	Role-plays, Question tags in conversations
	Reading Tasks	Reading for prediction comprehension with five forms of questions
	Technical Writing	Resume-writing (with models of bio-data, one-page resume)
	Communication Skills	Topics of current happening, subject-oriented topics useful for competitive examinations
Content Developer	Dr S. Odelu Kumar	SRR Govt Degree & PG College, Karimnagar
Unit 15 (NON-FICTION)	TEXT	First Woman Teacher of India: Savitribai Phule
	Listening Tasks	Listening for information
	Speaking Tasks	Telephonic conversations
	Reading Tasks	Reading for inference, comprehension with five forms of questions
	Technical Writing	Letter-writing (formal letters, Statement of Purpose, etc.)
	Communication Skills	Questions in interviews, Tips on

		debates
Content Developer	Dr Ch. Joseleena leena_mnc@yahoo.com	SWRDC, Karimnagar
Semester – VI (for Credits 3)		
Unit 16 (NON-FICTION)	TEXT (BIOGRAPHY, AUTOBIOGRAPHY, SPEECH, NARRATION)	Man is the Architect of his Own Future by G. Damodar
	Listening Tasks	Listening for facts
	Speaking Tasks	Debates on current topics
	Reading Tasks	Reading for prediction comprehension with five forms of questions
	Technical Writing	Creating presentation slides
	Communication Skills	Seeking/Giving information
Content Developer	Dr B. Sudheer Kumar	KUWC, Warangal
Unit 17(NON-FICTION)	TEXT	Mehta Gullie by Ved Prakash Mehta
	Listening Tasks	Passage to be read out for opinions
	Speaking Tasks	Group discussion techniques
	Reading Tasks	Reading for evaluation, comprehension with five forms of questions
	Technical Writing	Letters of application
	Communication Skills	Inviting guests on to the dais
Content Developer	Dr K. Sudhaker	Dept of English, KU
Unit 18 (NON-FICTION)	TEXT	PV Narasimha Rao: A Short Biography
	Listening Tasks	Listening for theme
	Speaking Tasks	Mock interviews
	Reading Tasks	Reading for personal response comprehension with five forms of questions
	Technical Writing	Report writing, Organizing a meeting, Minutes of meeting
	Communication Skills	Proposing a Vote of Thanks
Content Developer	Ch. Maruthi	SRR Govt Degree & PG College, Karimnagar

GRADED GRADUATE GRAMMAR
(Topics of Grammar and Vocabulary – Year III)

Semester Five (Third Year) Objective: to train students in composition with imagination

1. Description of a picture / Information transfer (of data, graphs, etc.), Presentation Skills

(for internal assessment)

2. Resume-writing (with models of bio-data, one-page resume, detailed CV, etc.)
3. Topics of current happening, subject-oriented topics useful for competitive examinations

Semester Six (Third Year) Objective: to train students in official communication

4. Letter-writing (personal, business, official, job applications, SOP, etc.)
5. Dialogue-writing (discussing questions in interviews, hobbies, current topics with proper and appropriate words, phrases, registers, etc.) Debates, GDs (**for internal assessment**)
6. Report Writing / Minutes of a meeting (covering title, when (date and time), where, members attended, agenda circulated, resolutions taken, signatures, etc.)

SATAVAHANA UNIVERSITY
DEPARTMENT OF MATHEMATICS

B.A./B.Sc.(MATHEMATICS)

Course structure, Syllabus, Scheme of instruction and Examination

Choice Based Credit System

(With effect from the academic year 2019-2020)

Year	Semester	Course Code	Paper	Subject	Hours per week		Credits	Marks		
					Theory	Tutorials*		IA	Univ. Exam	Total
1	I	DSCI	I	Differential & Integral calculus	5	1	5	20	80	100
	II	DSCII	II	Differential Equations	5	1	5	20	80	100
2	III	DSCIII	III	Real Analysis	5	1	5	20	80	100
	IV	DSCIV	IV	Algebra	5	1	5	20	80	100
3	V	DSCV	V	Linear algebra	5	1	5	20	80	100
	VI	DSE VI	VI-A	Numerical analysis	5	1	5	20	80	100
			VI-B	Integral transforms	5	1	5	20	80	100
			VI-C	Analytical solid Geometry	5	1	5	20	80	100
2	III	SEC-I	MSEC1	Theory of equations	2	--	2	10	40	50
	III	SEC-II	MSEC2	Number theory	2	--	2	10	40	50
	IV	SEC-III	MSEC3	Logic and sets	2	--	2	10	40	50
	IV	SEC-IV	MSEC4	Vector Calculus	2	--	2	10	40	50
3	V	GE	MGE/A	Basic mathematics Or Mathematics of finance & insurance	4	-	4	20	80	100
			MGE/B	Verbal reasoning for aptitude test	4	-	4	20	80	100
3	VI	project/optional	MPW/MOP	Mathematical modeling	4	-	4	20	80	100

***Tutorials:** Problem solving session for each 20 student's one batch.

Each batch should engage by two teachers.

SATAVAHANA UNIVERSITY
DEPARTMENT OF MATHEMATICS
B.A./B.Sc.(MATHEMATICS)

Semester		Paper code
I	Paper-I – Differential and integral calculus	MS1MPI

Theory: 5 credits and Tutorials: 0 credits
Theory: 5 hours /week and Tutorials: 1 hours /week

Objective: The course is aimed at exposing the students to some basic notions in differential calculus.

Outcome: By the time students complete the course they realize wide ranging applications of the subject.

Unit- I

Partial Differentiation: Introduction - Functions of two variables - Neighbourhood of a point (a, b) - Continuity of a Function of two variables, Continuity at a point - Limit of a Function of two variables - Partial Derivatives - Geometrical representation of a Function of two Variables - Homogeneous Functions.

Unit- II

Theorem on Total Differentials - Composite Functions - Differentiation of Composite Functions - Implicit Functions - Equality of $f_{xy}(a, b)$ and $f_{yz}(a, b)$ - Taylor's theorem for a function of two Variables - Maxima and Minima of functions of two variables – Lagrange's Method of undetermined multipliers.

Unit- III

Curvature and Evolutes: Introduction - Definition of Curvature - Radius of Curvature - Length of Arc as a Function, Derivative of arc - Radius of Curvature - Cartesian Equations - Newtonian Method - Centre of Curvature - Chord of Curvature.

Evolutes: Evolutes and Involutives - Properties of the evolute.

Envelopes: One Parameter Family of Curves - Consider the family of straight lines - Definition - Determination of Envelope.

Unit- IV

Lengths of Plane Curves: Introduction - Expression for the lengths of curves $y = f(x)$ - Expressions for the length of arcs $x = f(y)$; $x = f(t)$, $y = \phi(t)$; $r = f(\theta)$

Volumes and Surfaces of Revolution: Introduction - Expression for the volume obtained by revolving about either axis - Expression for the volume obtained by revolving about any line - Area of the surface of the frustum of a cone - Expression for the surface of revolution - Pappus Theorems - Surface of revolution.

Text:

- Shanti Narayan, P.K. Mittal Differential Calculus, S.CHAND, NEW DELHI

- Shanti Narayan Integral Calculus, S.CHAND, NEW DELHI

References:

—

- William Anthony Granville, Percy F Smith and William Raymond Longley; Elements of the differential and integral calculus
- Joseph Edwards , Differential calculus for beginners
- Smith and Minton, Calculus
- Elis Pine, How to Enjoy Calculus
- Hari Kishan, Differential Calculus

SATAVAHANA UNIVERSITY
DEPARTMENT OF MATHEMATICS
B.A./B.Sc.(MATHEMATICS)

Semester		Paper code
II	Paper-II – Differential Equations	MS2MP2

Theory: 5 credits and Tutorials: 0 credits

Theory: 5 hours /week and Tutorials: 1 hours /week

Objective: The main aim of this course is to introduce the students to the techniques of solving differential equations and to train to apply their skills in solving some of the problems of engineering and science.

Outcome: After learning the course the students will be equipped with the various tools to solve few types differential equations that arise in several branches of science.

Unit- I

Differential Equations of first order and first degree: Introduction - Equations in which Variables are Separable - Homogeneous Differential Equations - Differential Equations Reducible to Homogeneous Form - Linear Differential Equations - Differential Equations Reducible to Linear Form - Exact differential equations - Integrating Factors - Change in variables - Total Differential equations – Equations of the form : $dx/P=dy/Q=dz/R$

Unit- II

Differential Equations first order but not of first degree: Equations Solvable for p - Equations Solvable for y - Equations Solvable for x - Equations that do not contain x (or y)- Equations Homogeneous in x and y - Equations of the First Degree in x and y - Clairaut's equation. Applications of First Order Differential Equations : Growth and Decay - Dynamics of Tumour Growth - Radioactivity and Carbon Dating - Compound Interest - Orthogonal Trajectories

Unit- III

Higher order Linear Differential Equations: Solution of homogeneous linear differential equations with constant coefficients - Solution of non-homogeneous differential equations $P(D)y = Q(x)$ with constant coefficients by means of polynomial operators when $Q(x) = be^{ax}, b \sin ax/b \cos ax, bx^k, Ve^{ax}$ - Method of undetermined coefficients.

Unit- IV

Method of variation of parameters - Linear differential equations with non constant coefficients - The Cauchy - Euler Equation - Legendre's Linear Equations - Miscellaneous Differential Equations. Partial Differential Equations: Formation and solution- Equations easily integrable - Linear

equations of first order.

Text:

- Zafar Ahsan, Differential Equations and Their Applications

References:

- Frank Ayres Jr, Theory and Problems of Differential Equations.
- Ford, L.R ; Differential Equations.
- Daniel Murray, Differential Equations.
- S. Balachandra Rao, Differential Equations with Applications and Programs.
- Stuart P Hastings, J Bryce McLead; Classical Methods in Ordinary Differential Equations.

SATAVAHANA UNIVERSITY
DEPARTMENT OF MATHEMATICS

B.A./B.Sc.(MATHEMATICS)

Pattern of university examination paper for each semester and each paper having 5 credits

Time 3 hours

Section (A)

MARKS 4 X 8=32

Answer any 4 questions
Each question carry equal marks.

- Q.1 Question from unit-I
- Q.2 Question from unit-I
- Q.3 Question from unit-II
- Q.4 Question from unit-II
- Q.5 Question from unit-III
- Q.6 Question from unit-III
- Q.7 Question from unit-IV
- Q.8 Question from unit-IV

Section (B)

MARKS 4X 12=48

Answer ALL questions.
Each question carry equal marks.

Q.13.a) Question from unit-I

OR

b) Question from unit-I

Q.14. a) Question from unit-II

OR

b) Question from unit-II

Q.15. a) Question from unit-III

OR

b) Question from unit-III

Q.16. a) Question from unit-IV

OR

b) Question from unit-IV

**SATAVAHANA UNIVERSITY
DEPARTMENT OF MATHEMATICS**

B.A./B.Sc.(MATHEMATICS)

Pattern of Internal assessment-I for each semester and each paper having 5 credits

MARKS 5X 2=10

**Answer any 5 questions.
Each question carry equal marks.**

- Q.1 Question from unit-I
 - Q.2 Question from unit-I
 - Q.3 Question from unit-I
 - Q.4 Question from unit-I
 - Q.5 Question from unit-II
 - Q.6 Question from unit-II
 - Q.7 Question from unit-II
 - Q.8 Question from unit-II
-

**SATAVAHANA UNIVERSITY
DEPARTMENT OF MATHEMATICS**

B.A./B.Sc.(MATHEMATICS)

Pattern of Internal assessment-II for each semester and each paper having 4 credits

MARKS 5X 2=10

**Answer any 5 questions.
Each question carry equal marks.**

- Q.1 Question from unit-III
- Q.2 Question from unit-III
- Q.3 Question from unit-III
- Q.4 Question from unit-III
- Q.5 Question from unit-IV
- Q.6 Question from unit-IV
- Q.7 Question from unit-IV
- Q.8. Question from unit-IV

తెలుగు-ద్వితీయ భాష
మొదటి సంవత్సరం - మొదటి సెమిస్టర్

యూనిట్ - 1

ప్రాచీన కవిత్వం

1. శకుంతలోపాఖ్యానం - నన్నయ
- ఆ.మ.భా - ఆదిపర్వం (చ.ఆ) ప. 1-36 వరకు
2. గౌడగూచి కథ - పాల్కురికి సోమనాథుడు
- బసవపురాణం - తృథీయాశ్వాసం

యూనిట్ - 2

ఆధునిక కవిత్వం

1. కాసులు - గురజాడ అప్పారావు
2. గబ్బిలం - గుఱ్ఱం జాషువ (పంచముని దుస్థితిని గబ్బిలం ద్వారా శివునికి పంపించిన సందేశం)
మొదటి భాగం - చిక్కిన కాసు చే నుండి.... పరమార్థంబు బోధ సేయుదురు వరకు.
3. గంగిరెడ్డు - డా. పల్ల దుర్గయ్య
- అంత బసవని కన్నల గంగ గంటె.... నుండి...
పిల్లి మీ యిల్లు మీయూరు చల్లగాను వరకు(21 పద్యాలు)
4. జయభేరి - శ్రీశ్రీ

యూనిట్ - 3

ఉపవాచకం

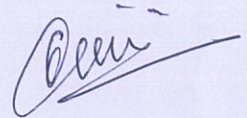
1. రుద్రమదేవి (నవల) - ఒద్దిరాజు సోదరులు

యూనిట్ - 4

భాషాంశాలు

1. తెలుగు వాక్య భేదాలు
2. పర్యాయ పదాలు
3. నానార్థాలు


Head
Department of Telugu
Sri Mahana University
Kurnool-505 001



తెలుగు - ద్వితీయ భాష
మొదటి సంవత్సరం - రెండవ సెమిస్టర్

యూనిట్ - 1

ప్రాచీన కవిత్వం

1. గజేంద్ర మోక్షం - పోతన
2. హనుమత్ సందేశం - మొల్ల
3. సుభాషితాలు - ఏనుగు లక్ష్మణ కవి

యూనిట్ - 2

ఆధునిక కవిత్వం

1. స్నేహలత లేఖ - రాయప్రోలు సుబ్బారావు
2. అంతర్నాదం - దాశరథి కృష్ణమాచార్యులు
3. ప్రపంచ పదులు - డా. సి. నారాయణరెడ్డి
4. అల్విదా - కౌముది

యూనిట్ - 3

వచన విభాగం

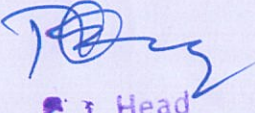
1. ఎంకన్న - ఆచార్య పాకాల యశోదారెడ్డి
2. మామిడిపండు - సురవరం ప్రతాపరెడ్డి
3. మా ఊరు పోయింది - దేవులపల్లి కృష్ణశాస్త్రి

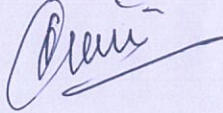
యూనిట్ - 4

వ్యాకరణం

1. సంధులు
2. సమాసాలు

నోట్: ఛందస్సు మూడవ సెమిస్టర్లో పెట్టడానికి తీర్మానించినది.


P. S. Head
Department of Telugu
Maharaja University
Vijaynagar-505 001



Question Paper Model

Part A : 6 లభు ప్రశ్నలకు 4 చేయాలి = 4 x 5 = 20

Part B : 7,8,9,10 వ్యాసరూప ప్రశ్నలు Internal Choice 4 x 15 = 60

Exam : 80+

Internal Assessment 20 = 100 Marks

B.A., B.Sc., B.Com & B.B.A. (CBCS) 1st Semester

Telugu (IInd Language)

Scheme of the Question Paper

Time : 3 Hrs.

Marks : 80

అ భాగం (సంగ్రహ సమాధానాలు)

ఏవేని నాలుగు ప్రశ్నలకు క్లుప్తంగా సమాధానాలు రాయండి

4 x 5 = 20

1. ప్రాచీన పద్యభాగం నుండి ఒక సందర్భం
2. ఆధునిక పద్యభాగం నుండి ఒక సందర్భం
3. కవి పరిచయం (ప్రాచీన, ఆధునిక పద్యభాగం నుండి)
4. నవలనుండి చిన్న ప్రశ్న ఒకటి రాయాలి.
5. పర్యాయ పదాలు (5) రాయాలి. (ఛాయిస్ లేదు)
6. నానార్థాలు (5) రాయాలి. (ఛాయిస్ లేదు)

ఆ భాగం (వ్యాసరూప సమాధానాలు)

అన్ని ప్రశ్నలకు వివరంగా సమాధానాలు రాయండి.

15 x 4 = 60

7. ప్రాచీన పద్యభాగం నుండి రెండు పద్యాలు ఉంటాయి. (ఒకదానికి సందర్భం, కవి పరిచయం, ప్రతిపదార్థ తాత్పర్యాలు, వ్యాకరణాంశాలు వివరించాలి).
8. ప్రాచీన/ఆధునిక పద్యభాగం నుండి రెండు ప్రశ్నలు ఉంటాయి. (ఒకదానికి సమాధానం రాయాలి).
9. నవల నుండి రెండు ప్రశ్నలు ఉంటాయి (ఒకదానికి సమాధానం రాయాలి).
10. తెలుగు వాక్యనిర్మాణరీతులను సోదాహరణంగా తెల్పండి లేదా

మూడు సంధులను / మూడు సమాసాలను లక్ష్య లక్షణ సమన్వితంగా వివరించాలి.

Question Paper Model

Part A : 6 లభు ప్రశ్నలకు 4 చేయాలి = 4 x 5 = 20

Part B : 7,8,9,10 వ్యాసరూప ప్రశ్నలు Internal Choice 4 x 15 = 60

Exam : 80+

Internal Assessment 20 = 100 Marks

B.A., B.Sc., B.Com & B.B.A. (CBCS) 1st Semester

Telugu (IInd Language)

SCHEME OF THE QUESTION PAPER

Time : 3 Hrs.

Marks : 80

అ భాగం (సంగ్రహ సమాధానాలు)

ఏవేని నాలుగు ప్రశ్నలకు క్లుప్తంగా సమాధానాలు రాయండి

4 x 5 = 20

1. ప్రాచీన పద్యభాగం నుండి ఒక సందర్భం
2. ఆధునిక పద్యభాగం నుండి ఒక సందర్భం
3. పాఠ్యభాగాలలోని కవి / రచయిత పరిచయం
4. ఆధునిక కవితా ఖండికను ఇచ్చి విశ్లేషించమని అడగాలి.
5. వచన విభాగానికి సంబంధించి ఒక ప్రశ్న.
6. పద్యపాదాన్ని ఇచ్చి గణవిభజన చేసి యతిస్థానాన్ని ఛందస్సును గుర్తించుట

ఆ భాగం (వ్యాసరూప సమాధానాలు)

అన్ని ప్రశ్నలకు వివరంగా సమాధానాలు రాయండి.

15 x 4 = 60

7. ప్రాచీన పద్యభాగం నుండి రెండు పద్యాలు ఉంటాయి. (ఒకదానికి సందర్భం, కవి పరిచయం, ప్రతిపదార్థ తాత్పర్యాలు, వ్యాకరణాంశాలు వివరించాలి).
8. ప్రాచీన/ఆధునిక పద్యభాగం నుండి రెండు ప్రశ్నలు ఉంటాయి. (ఒకదానికి సమాధానం రాయాలి).
9. వచన విభాగం నుండి రెండు ప్రశ్నలు ఉంటాయి (ఒకదానికి సమాధానం రాయాలి).
10. మూడు ఛందస్సులను లక్ష్య లక్షణ సమన్వితంగా వివరించాలి లేదా
మూడు పద్యపాదాలను ఇచ్చి గణవిభజన చేసి యతిస్థానాన్ని ఛందస్సును గుర్తించమని అడగాలి.

CIT

**B.Sc Botany- III Year
Semester-V - Paper-V
Cell Biology and Genetics**

DSC-1E (3 hrs./week)

Theory Syllabus

Credits-3

Unit - I:

45 hours

1. Plant cell envelops: Ultra structure of cell wall, molecular organization of cell membranes.(4h)
2. Nucleus: Ultra structure, Nucleic acids - Structure of DNA, types and functions of RNA. (4 h)
3. Chromosomes: Morphology, organization of DNA in a chromosome, Euchromatin and Heterochromatin, Karyotype. DNA Replication. Special types of chromosomes: Lampbrush Polytene and B - chromosomes. (7h)
4. Extra nuclear genome: Mitochondrial and plastid DNA, plasmids. (3 h)

Unit - II:

5. Cell division: Cell and its regulation; mitosis, meiosis and their significance (3h)
6. Mendelism: Laws of inheritance. Genetic interactions - Epistasis, Complementary, Supplementary and inhibitory genes. (5h)
7. Linkage: A brief account and theories of Linkage. Crossing over: Mechanism and theories of crossing over. (4 h)
8. Genetic maps: Construction of genetic maps with Two point and Three point test cross data. (3h)

Unit - III:

9. Mutations: Chromosomal aberrations - structural and numerical changes; Gene mutations, Transposable elements. (3 h)
10. Gene Organization- Structure of gene, Genetic code, Method of Replication of DNA in Eukaryotes & Prokaryotes (3h)
11. Mechanism of transcription in Prokaryotes and Eukaryotes, translation (4h)
12. Regulation of gene expression in prokaryotes (Lac and Trp. Operons). (2h)

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

References:

1. Sharma, A. K. and A. Sharma. 1999. Plant Chromosomes: Analysis, Manipulation and Engineering. Harward Academic Publishers, Australia.
2. Shukla, R. S. and P. S. Chandel. 2007. Cytogenetics, Evolution, Biostatistics and Plant Breeding. S.Chand & Company Ltd., New Delhi.
3. Singh, H. R. 2005. Environmental Biology. S. Chand & Company Ltd., New Delhi.
4. Snustad, D. P. and M. J. Simmons. 2000. Principles of Genetics. John Wiley & Sons, Inc., U S A.
5. Strickberger, M. W. 1990. Genetics (3rd Ed.). Macmillan Publishing Company.
6. Verma, P. S. and V. K. Agrawal. 2004. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology. S. Chand & Company Ltd., New Delhi.

ku. Shukla Verma
Sy Sh

3

**B.Sc (CBCS) Botany- III Year
Semester-V - Paper-V
Cell Biology and Genetics**

Practical Syllabus

(45 hours)

1. Demonstration of cytochemical methods: Fixation of plant material and nuclear staining for mitotic and meiotic studies. (6 h)
2. Study of various stages of mitosis using cytological preparation of Onion root tips. (6 h)
3. Study of various stages of meiosis using cytological preparation of Onion flower buds. (3 h)
5. Solving genetic problems related to monohybrid, dihybrid ratio incomplete dominance and interaction of genes (minimum of six problems in each topic). (12h)
6. Construction of linkage maps; two and three point test cross. (6 h)
7. Study of ultra structure of cell organelles using photographers. (6h)
8. Study of Special types of Chromosomes (6h)

Waddip

ku.

san w

S. rbs

**B.Sc (CBCS) Botany-III Year
Semester-V - Paper VI
Elective I
Ecology & Biodiversity**

DSE-1E (3 hrs./week)

Theory Syllabus

**Credits-3
(45 hours)**

UNIT - I

1. Concept and components of Ecosystem. Energy flow, food chains, food webs, ecological pyramids, Biogeochemical cycles - Carbon Cycle (4h)
2. Definition of Environment: Atmosphere (Troposphere, Stratosphere, Mesosphere, Ionosphere), Hydrosphere, Lithosphere & Biosphere. (3h)
3. Plants and environment: Ecological factors - Climatic (Light and Temperature), and biotic. Ecological adaptations of plants. (5h)
4. Edaphic Factors: Soil- Formation- Weathering, mode of formation-residual; Transported: Colluvial, Alluvial, Glacial & Eolian. Soil erosion & Conservation. (4h)

UNIT - II

5. Population ecology: Natality, Mortality, Growth curves, Ecotypes & Ecads. (4h)
6. Community ecology: Frequency, density cover, Life forms & Biological spectrum. (4h)
7. Community Dynamics: Succession - Serial stages, Modification of physical environment, Climax formation with reference to Hydrosere and Xerosere. (4h)
8. Production ecology: Concepts of productivity - Primary and Secondary Productivity. (4h)

UNIT- III

9. Biodiversity: Concepts, Convention of Biodiversity - Earth Summit (Copenhagen). (4h)
10. Biodiversity- Levels, threats and value (3h)
11. Hot spots of India - North Eastern Himalayas, Western Ghats; Endemism. (3 h)
IUCN categories, RED data book
12. Principles of conservation – *In situ* and *Ex situ*. Role of organizations in the conservation of Biodiversity - WWF and NBPGR. (3h)

W. J. D. D. J.

R. M.

(an m)

S. J. D. S.

5

References:

1. Bharucha, E. 2005. Textbook of Environmental Studies for Undergraduate Courses. Universities Press (India) Private Limited, Hyderabad.
2. Khitoliya, R. K. 2007. Environmental Pollution – Management and Control for Sustainable Development. S. Chand & Company Ltd., New Delhi.
3. Michael, S. 1996. Ecology. Oxford University Press, London.
4. Mishra, D. D. 2008. Fundamental Concepts in Environmental Studies. S. Chand & Company Ltd., New Delhi.
5. Odum, E. P. 1983. Basics of Ecology. Saunder's International Students Edition, Philadelphia.
6. Sharma, P. D. 1989. Elements of Ecology. Rastogi Publications, Meerut.
7. Verma, P. S. and V. K. Agrawal. 2006. Genetics. S. Chand & Company Ltd., New Delhi

hu
Sg
Buddy
lmw

**B.Sc (CBCS) Botany-III Year
Semester-V - Paper VI
Elective I
Ecology & Biodiversity**

Practical Syllabus

45 hours

1. Study of plant communities by Quadrat Method (9h)
2. Estimation of carbonates and bicarbonates in the given water sample. (6h)
3. Determination of soil texture (composition of clay, sand silt etc.) and pH. (6h)
4. Study of morphological and anatomical characteristics of plant communities using locally available plant species: Hydrophytes (*Eichhornia, Hydrilla, Pistia, Nymphaea, Vallisneria*), Xerophytes: (*Asparagus, Opuntia, Euphorbia spp*), Halophytes (*Rhizophora, Avicennia*). (12h)
5. Value of biodiversity
 - a) Medicinal value: *Catharanthus, Tinospora* and *Emblica* (12h)
 - b) Timber Value: *Acacia, Tectona* and *Azadirachta*
 - c) Aesthetic Value: *Mangifera, Ficus, Ocimum*

W. G. D. D. P.

lu:

1. 2. 3.

S. G. N. S.

B.Sc (CBCS) BOTANY: III YEAR
Semester-V - Paper VII
Elective II
Horticulture

DSE-1E (3 hrs./week)

Theory Syllabus

Credits-3
(45 hours)

UNIT - I

1. Definition, branches, scope and economic importance of horticultural crops (4h)
2. Classification of horticultural crops based on -Climatic requirements, Season of growth, (6h)
3. Manures: Definition, importance of manures FYM (compost), oil cakes, green manure, Organic manures and vermi-compost. (5h)

UNIT - II

- 4.. Natural Propagation : By seeds, Vegetative Structures like Bulbs, Tubers, Corms, Rhizomes, Root stock, runners, Offsets and suckers . (4h)
- 5.. Artificial Propagation: Cutting, Layering, Grafting and Budding (4h)
6. Application of the following-plant growth regulators in horticulture - (4h)
 Auxins, Gibberellins, Cytokinins, Ethylene and Brassinosteroids.
7. Green house technology- definition, types, layout, construction, irrigation systems, care and attention, hardening of plants. (3h)

UNIT - III

8. Soil and climatic requirements of horticultural crops, Selection of site, planning, training, pruning and Cropping system; Garden implements and their uses. (5h)
9. Management: Orchard management, Nutrition management, Water management and Weed Management. (4h)
10. Organic Farming; Bonsai techniques. (6h)

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

8

References:

1. Bhattacharjee.S.K. 2006. Amenity Horticulture, Biotechnology and Post harvest technology. Pointer publishers. Jaipur
2. Chadha, K.L. 2001, Handbook of Horticulture, ICAR, New Delhi.
3. Chandra, R. and M. Mishra. 2003. Micropropagation of horticultural crops. International Book Distributing Co., Lucknow.
4. Chattopadhyaya, P.K.2001. A text book on Pomology (Fundamentals of fruit growing) Kalyani Publication, New Delhi
5. Christopher, E.P. 2001. Introductory Horticulture, Biotech Books, New Delhi
6. Edmond, J.B. T.L.Senn, F.S. Andrews and P.G.Halfacre, 1975. Fundamentals of Horticulture, Tata MC. Graw Hill Publishing Co.New Delhi
7. George Acquaaah, 2002, Horticulture-principles and practices. Prentice-Hall of India pvt. Ltd., New Delhi.
8. Hartman, H.T. and Kester, D.E. 1986. Plant propagation – Principles and Practices – Prentice Hall of India Ltd., New Delhi.
9. Jacob John. P. 2008. A hand book of post harvest management of fruits and vegetables. Daya publishers.
10. Jitendra Singh. 2006. Basic Horticulture. Kalyani Publishers, New Delhi.
11. Rajan, S. and B.L. Markose. 2007. Propagation of horticultural crops. New India Publishing, New Delhi.
12. Shanmugavelu, K.G., N. Kumar and K.V. Peter. 2005. Production technology of spices and plantation crops. Agrobios, Jodhpur.
13. Singh, D.K. 2008. Hi-tech horticulture. Agrotech publishers, Udaipur
14. Singh, N.P. 2005. Basic concepts of fruit science. International Book Distributing Co., Lucknow.
15. Surendra Prasad and U. Kumar. 1999. Principles of horticulture, Agro-botanica, Bikaner, India.
16. Sureshkumar, P. Sagar and Manish Kanwat. 2009. Post harvest physiology and quality management of fruits and vegetables. Agrotech publishers, Udaipur
17. Utpal Banerjee. 2008. Horticulture. Mangal Deep publishers
18. Vijaikumar UmRao. 2008. Horticulture terms – Definitions and Terminology. IBD publishers, Dehradun
19. Adams, C.R. and M. P. Early. 2004. Principles of horticulture. Butterworth –Heinemann, Oxford University Press.
20. Bansil. P.C. 2008. Horticulture in India. CBS Publishers and Distributors, New Delhi.
21. Kumar, N.1997. Introduction to Horticulture, Rajalakshmi Publication, Nagercoil.

hu
Maddy
S
AB
(unad)

B.Sc (CBCS) BOTANY: III YEAR
Semester-V - Paper VII
Elective II
Horticulture

Practical Syllabus

- | | (45 hours) |
|--|-------------------|
| 1. Garden tools and implements. | (3h) |
| 2. Identification and description of any two varieties/hybrids of tropical and subtropical vegetable, fruit, flower and ornamental crops. | (3h) |
| 3. Propagation practices by seed, Vegetative propagation (Rhizome, bulb, corm), cutting, layering, budding, grafting with two examples. | (9h) |
| 4. Seed propagation- seed treatments, sowing and seedling production. | (6h) |
| 5. Nursery practices, transplanting, field preparation, sowing/planting, use of herbicides, top dressing of fertilizers and use of growth regulators. | (6h) |
| 6. Nursery containers, media, potting and repotting of plants, hardening of plants in nursery, shade regulation in nursery, plant protection in nursery plants (Demonstration) | (6h) |
| 7. Packing nursery plants for local and long distance markets. (Demonstration) | (3h) |
| 8. Making of organic-compost. | (9h) |

Hddp

ku.

(u m)

Sg

B.Sc (CBCS) Botany-III Year
Semester-VI – Paper-IX
Elective III
Tissue Culture and Biotechnology

DSE-1F (3 hrs./week)

Theory Syllabus

UNIT - I

Credits-3
(45 hours)

1. Tissue culture: Introduction, sterilization procedures, explants, culture media – composition and preparation; Micropropagation. (5h)
2. Organ culture: Vegetative Organs-Root, Shoot, Leaf culture (6h)
Reproductive Organs-Anther, Ovary, Ovule, Embryo culture
3. Callus culture, Cell and Protoplast culture (4h)
4. Somatic hybrids and Cybrids. (4h)

UNIT- II

5. Applications of tissue culture: Production of pathogen free plants and somaclonal variants, production of stress resistance plants, secondary metabolites and synthetic seeds. (6h)
6. Production of hairy roots and its applications in production of secondary metabolites. (2h)
7. Biotechnology: Introduction, history, scope and applications. (3h)
8. rDNA technology: Basic aspect of of gene cloning, Enzymes used in gene cloning-Restriction enzymes, Ligases, Polymerases. (4h)

UNIT- III

9. Gene cloning-Vectors – cloning vehicles (Plasmid , Cosmids, Bacteriophages , & Phasmids) application of r DNA technology. (5h)
10. Gene Libraries: Genomic Libraries, cDNA Libraries, Polymerase chain reaction and its applications. (4h)
11. Method of gene transfer in plants (*Agrobacterium* and Microprojectile) (4h)
12. Production of transgenic plants, Bt –application in cotton and brinjal. Application of Transgenic in crop improvement. (3h)

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

References:

1. Balasubramanian, D., C. F. A. Bryce, K. Dharmalingam, J. Green and K. Jayaraman. 2004.
2. Biotechnology. Universities Press (India) Private Limited, Hyderabad.
3. Channarayappa. 2007. Molecular Biotechnology – Principles and Practices. Universities Press
Press
4. (India) Private Limited, Hyderabad.
5. Chawala, H. S. 2002. Introduction to Plant Biotechnology. Oxford & IBH Publishing
Company,
6. New Delhi.
7. Dubey, R. C. 2001. A Textbook of Biotechnology. S. Chand & Company Ltd., New Delhi
8. Edmond, J. B., T. L. Senn, F. S. Adrews and R. J. Halfacre. 1977..
9. Jha, T.B. and B. Ghosh. 2005. Plant Tissue Culture – Basic and Applied. Universities Press
(India)
10. Private Limited, Hyderabad..
11. Ramawat, K. G. 2008. Plant Biotechnology. S. Chand & Company Ltd., New Delhi.
12. Salisbury, F. B. and C. W. Ross. 1992. Plant Physiology. 4th edn. (India Edition),
Wordsworth,
13. Thomson Learning Inc., USA..

hu:

Alpdy

(in m)

S
4

de

12

B.Sc (CBCS) Botany-III Year
Semester-VI – Paper-IX
Elective III
Tissue Culture and Biotechnology

Practical Syllabus

Major Experiments:

1. Estimation of plant DNA. (Tomato) (6h)
2. Production of synthetic seeds /Encapsulation of embryo (3 h)
3. Preparation of plant tissue culture medium. (6h)

Minor Experiments:

4. Callus Micropropagation (3h)
5. Demonstration of Micropropagation/ multiple shoots (6h)
6. Anther culture (3 h)
7. PCR –Demonstration (3h)
8. Study of biotechnology products: Samples of antibiotics and vaccines (6h)
9. Photographs of transgenic plants – Bt Cotton, Bt –Brinjal. (3h)
10. Instruments used in Biotechnology lab- Autoclave, Laminar air flow, Hot air oven and Incubator. (6h)

hmj
Gady
Sy
Mr
Lyn m

**B.Sc (CBCS) Botany: III Year
Semester-VI - Paper-VIII
Plant Physiology**

DSC-1F (3hrs./week)

Theory Syllabus

**Credits-3
(45 hours)**

UNIT - I

1. Water Relations: Importance of water to plant life, physical properties of water, diffusion, imbibition, osmosis; water, osmotic and pressure potentials; absorption, transport of water, ascent of sap; transpiration; Stomatal structure and movements. (7h)
2. Mineral Nutrition: Essential macro and micro mineral nutrients and their role; symptoms of mineral deficiency. (3h)
3. Stress physiology: concept and plant responses to water, salt and temperature stresses (2h)
4. Translocation of organic substances: Mechanism of phloem transport; source-sink relationships. (2h)

UNIT- II

5. Enzymes: Nomenclature, characteristics, mechanism and regulation of enzyme action, enzyme kinetics, factors regulating enzyme action. (4h)
6. Photosynthesis: Photosynthetic pigments, absorption and action spectra; Red drop and Emerson enhancement effect; concept of two photosystems; mechanism of photosynthetic electron transport and evolution of oxygen; Factors effecting Photosynthesis, photophosphorylation. (4h)
7. Carbon assimilation pathways: C₃, C₄ and CAM. (4h)
8. Respiration: Aerobic and Anaerobic; Glycolysis, Krebs cycle; electron transport system, mechanism of oxidative phosphorylation, pentose phosphate pathway. (6h)

UNIT - III

9. Nitrogen Metabolism: Biological nitrogen fixation, nitrate reduction, ammonia assimilation, (GS-GOGAT, transamination) (4h)
10. Lipid Metabolism: Structure and function of lipids. (3h)
11. Growth and Development: Physiological effects of phytohormones—Auxins, gibberellins, cytokinins, ABA, ethylene and Brassinosteroids (3h)
12. Physiology of flowering and photoperiodism. Role of Phytochrome in flowering. (3h)

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

14

References:

1. Hopkins, W. G. 1995. Introduction to Plant Physiology. John Wiley & Sons Inc., New York, USA
2. Jain, J.L., S. Jain and Nitin Jain. 2008. Fundamentals of Biochemistry. S. Chand & Company Ltd., New Delhi.
3. Pandey, B. P. 2007. Botany for Degree Students: Plant Physiology, Biochemistry, Biotechnology, Ecology and Utilization of Plants. S. Chand & Company Ltd., New Delhi.
4. Salisbury, F. B. and C. W. Ross. 1992. Plant Physiology. 4th edn. (India Edition), Wordsworth, Thomson Learning Inc., USA.
5. Taiz, L. and E. Zeiger. 1998. Plant Physiology (2nd Ed.). Sinauer Associates, Inc., Publishers, Massachusetts, USA.
6. Dutta A.C. 2016. Botany for Degree Students. Oxford University Press.

hu
Sg ds
K. S. W. S.

15

B.Sc (CBCS) Botany: III Year
Semester-VI - Paper-VIII
Plant Physiology

Practical Syllabus

(45 hours)

1. Determination of osmotic potential of vacuolar sap by Plasmolytic method using leaves of *Rheodiscolor* / *Tradescantia*. (6h)
2. Determination of rate of transpiration using Cobalt chloride method (3h)
3. Determination of stomatal frequency using leaf epidermal peelings / impressions (6h)
4. Determination of catalase activity using potato tubers by titration method (6h)
5. Separation of chloroplast pigments using paper chromatography technique (12h)
6. Estimation of protein by Biurette method (6h)
7. Mineral deficiency- Detail study of Micronutrients and Macro nutrients (3h)
8. Identification of C₃, C₄ and CAM plants (3h)

hu

Blade

Sy

(un un)

DR

B.Sc (CBCS) BOTANY: III YEAR
Semester-VI – Paper-X
Elective IV
Seed Technology

DSE- 1F (3 hrs./week)

Theory Syllabus

Credits-3
(45 hours)

UNIT-I

- 1. Seed: Structure and types. Seed dormancy: causes and methods of breaking dormancy. (4h)
- 2. Seed storage: Long term and short term storage. Orthodox and recalcitrant seeds.
Packing of seeds – Principles, practices, bagging and labelling. (3h)
- 3. Physico and Bio-chemical changes during seed storage. (2h)
- 4. Seed viability, factors affecting seed viability and genetic erosion. (3h)



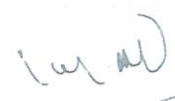


UNIT-II

- 5. Cultural practices and harvesting of Seed: Isolation, Sowing, Cultural practices, harvesting and threshing of the following crops: (9h)
a) Rice b) Cotton c) Sunflower
- 6. Seed Treatment to control seed borne disease –General account (3h)
- 7. Structure of pollen and ovule-Types of ovules, Collection and storage of pollen (3h)
- 8. Principles of hybrid seed production–Cross pollination, Emasculation, Self pollination, role of pollinators and their management. (6h)

UNIT-III

- 9. Seed development in cultivated plants, seed quality concept, importance of genetic purity of seed. Hybrid seed production and Heterosis. (4h)
- 10. Seed production technology; seed testing- Procedures of seed testing, seed testing laboratories and importance of seed testing.
- 11. Seed certification- History, Seed certification agency, Indian minimum, general and specific seed certification standard. (3h)
- 12. Seed banks- National, International and Millennium seed banks. (3h)

[Handwritten signatures and initials]

References:

1. Agrawal, P. K. 1993. Hand Book of Seed Technology. Dept. of Agriculture and Cooperation. National Seed Corporation Ltd., New Delhi
2. Balasubramanian, D., C. F. A. Bryce, K. Dharmalingam, J. Green and K. Jayaraman. 2004. Biotechnology. Universities Press (India) Private Limited, Hyderabad.
3. Bedell, Y. E. Seed Science and Technology. Indian Forest Species. Allied Publishers Limited, New Delhi.
4. Channarayappa. 2007. Molecular Biotechnology – Principles and Practices. Universities Press (India) Private Limited, Hyderabad.
5. Chawala, H. S. 2002. Introduction to Plant Biotechnology. Oxford & IBH Publishing Company, New Delhi.
6. Dubey, R. C. 2001. A Textbook of Biotechnology. S. Chand & Company Ltd., New Delhi
7. Edmond, J. B., T. L. Senn, F. S. Adrews and R. J. Halfacre. 1977..
8. Hartman, H. T. and D. E. Kestler. 1976. Plant Propagation: Principles and Practices. Prentice & Hall of India, New Delhi.
9. Jha, T.B. and B. Ghosh. 2005. Plant Tissue Culture – Basic and Applied. Universities Press (India) Private Limited, Hyderabad..
10. Ramawat, K. G. 2008. Plant Biotechnology. S. Chand & Company Ltd., New Delhi.
11. Salisbury, F. B. and C. W. Ross. 1992. Plant Physiology. 4th edn. (India Edition), Wordsworth, Thomson Learning Inc., USA..
12. Tiwari, G. N. and R. K. Goal. Green House Technology – Fundamentals, Design, Modelling and Application. Narosa Publishing House, New Delhi.
13. Tunwar, N. S. and S. V. Singh. 1988. Indian Minimum Seed Certification Standards. The Central Seed Certification Board, Govt. of India, New Delhi.

du
Bhady
(u m)
SM

18

B.Sc (CBCS) BOTANY: III YEAR
Semester-VI – Paper-X
Elective IV
Seed Technology
Practical syllabus

(45 hours)

Major Experiment

1. Testing of seed viability using 2, 3, 5-triphenyl tetrazolium chloride (TTC). (3h)
2. Estimation of amylase activity of germinating seeds (Qualitatively). (3h)
3. Demonstration of seed dressing using fungicides to control plant diseases. (3h)
4. Demonstration of seed dressing using Biofertilizers (BGA) to enrich nutrient supply. (3h)

Minor Experiments

5. Emasculation, bagging of flower for hybrid seed production. (6h)
6. Dissection of Dicot embryo (bean) and Monocot embryo (maize). (6h)
7. Pollen viability test using Evan's blue staining. (*Hibiscus*). (3h)
8. Harvesting and Importance of following seeds:
Rice,
Maize,
Cotton,
Groundnut and
Sunflower. (6h)
9. Types of ovules: Orthotropous, Anatropous and Campylotropous. (3h)
10. Structure of pollen grains: *Hibiscus* and grass. (3h)
11. Study visits to research institutes, seed tests and certification laboratories and places seed banks. (6h)

Ru. *W. J. J. J. J.* *S. J.*
(m.w.) *Dr.*

**SATAVAHANA UNIVERSITY, KARIMNAGAR,
TELANGANA STATE**

Skill Enhancement Course (SEC): Communicative Skills in English

C.B.C.S. – U.G. Common Core

2 Credits (2 hours per week)

Common paper for all UG III-Semester Courses

Objectives of the course:

The course has been designed for UG students to be able to create an awareness about the four fold language skills and it also motivates the students to use different language skills and their sub skills in their day to day life. They further train the students to have adequate knowledge and exposure to different genres of language in English.

The Syllabus:

Unit – I: Oral Skills

- Sub-skills of Listening
- Understanding the Real Purpose of Listening
- Factors affecting Listening Comprehension
- How to Develop Listening Comprehension
- Essential Elements for Speaking
- Sub-skills of Speaking
- How to Develop Speaking Skills

(The following areas to be covered: Speech Sounds in English, Stress, Intonation, Rhythm, and Voice Quality, Characteristics of a Speech, Group Discussion, Mock Interview, JAMs and Strategies for Spoken English)

Unit – II: Written Skills

- Sub-skills of Reading
- How to read, reflect and interpret the text
- Factors affecting Reading comprehension
- How to develop Reading Skills
- Essential Elements for Writing
- Sub-skills of Writing
- Factors affecting Writing skills
- How to get mastery in Writing

(The following areas to be covered: Narrative passages, Reading and understanding advertisements, matrimonial, classifieds and resumes, brochures, tabular forms; Review of articles, news items and books, Paragraph Writing, Letter Writing, Notice, Invitation, Resume and qualities of good handwriting.)

Suggested Reading:

1. Byrne, Donn. *Listening Comprehension. Teaching Oral English.* New York: Longman, 1976.
2. Ur, Penny. *Teaching Listening Comprehension.* Cambridge, C.U.P., 1984.
3. .Balasubramanian, T. *A Textbook of English Phonetics for Indian Students.* Madras: Macmillan India Press, 1981.
4. Bansal, R.K. and J. B. Harrison. *Spoken English for India.* London: Orient Longman, 1972.
5. Doff, Adrian. *Teach English: A Training Course for Teachers.* Cambridge: C.U.P. ,1988.
6. Jones, Danial. *Everyman's English Pronouncing Dictionary.* London: ELBS, 1974.
7. Munby, John. *Read and Think: Training in Intensive Reading Skills.* England: Longman Group Ltd., 1978.
8. Nuttall, Christine. *Teaching Reading Skills in a Foreign Language.* London: Heinenemann, 1982.
9. Freeman, Sarah. *Written Communication in English.* Hyderabad: Orient Longman, 1996.
10. Hedge, Tricia. *Writing.* Oxford: O.U.P.1991.



SATAVAHANA UNIVERSITY

KARIMNAGAR, TELANGANA STATE, INDIA

FACULTY OF COMMERCE

B.Com (Computer Applications), CBCS III YEAR, SEMESTER-VI SYLLABUS

BCO601	SEC-4	Regulations of Insurance Business
BCO602	GE- II	Water Resources Management
BCO603	DSC-1E	Managerial Accounting
BCO604	DSC-2E	Company Law
BCO605	DSC-3E	Auditing
BCO606	DSC-4E	Commerce Lab
BCO607	DSE-1E	E-Commerce (Specialisation-III)
BCO608	DSE-2E	Management Information Systems (Specialisation – IV)

Note: SEC- Skill- Enhancement Course; CC - Core Course; DSC - Discipline Specific Course; DSE- Discipline Specific Elective ; GE – Generic Elective; L-Lecture; T-Tutorial; P-Practical Marks; T-Theory Marks; R- Report; VV- Viva Voce Examination.

SKILL ENHANCEMENT COURSE: IV
BCO601: REGULATIONS OF INSURANCE BUSINESS

Paper: BCO601

Max. Marks: 40+10

PPW: 2 Hrs

Exam Duration: 1½ hrs

Objective: To equip the students with the knowledge regarding Insurance Business Regulations

UNIT I: INSURANCE LEGISLATION IN INDIA:

History of life and non-life insurance legislation—nationalization—insurance reforms—insurance business Act, 1972—IRDA and its functions including licensing functions—Web aggregators—regulation for intermediaries—CCS-SPV-PoS—insurance repositories-TPAs—Role and duties of surveyors—Origin and development of micro-insurance—regulation of ULIPs—pension schemes—money laundering—KYC—methods of receipt of premium—Exchange control regulations relating to General and Life Insurance—IRDA Health Insurance Regulations, 2016—Health plus life combi products.

UNIT II: POLICY HOLDERS RIGHTS OF ASSIGNMENT, NOMINATION AND TRANSFER:

Assignment and transfer of insurance policies—provisions related to nomination—repudiation—Fraud—protection of policyholder interest—stages in insurance policy-presale stage-post sale stage-free look period—grievance redressal—claim settlement—key feature document—dispute resolution mechanism—insurance ombudsman—solvency margin and investments—international trends in insurance regulation.

SUGGESTED READINGS :

1. Regulation of Insurance Business – Insurance Institute of India
2. Regulation of Insurance Business – D.S. Vittal, HPH
3. Regulation of Insurance Business: Dr. V. Padmavathi, PBP
4. Risk Management : A Publication of the Insurance Institute of India
5. Insurance Theory and Practice: Tripathi PHI
6. Life and Health Insurance: Black, JR KENNETH & Harold Skipper, Pearson
7. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt
8. South Western College Publishing Cincinnati, Ohio.
9. Insurance Management – S.C. Sahoo & S.C. Das-HPH.

GENERIC ELECTIVE II (FOR ALL FACULTTIES)

BCO602: WATER RESOURCES MANAGEMENT

Paper: BCO602

Max. Marks: 40+10

PPW: 2 Hrs

Exam Duration: 1½ hrs

UNIT-I

1. Importance of Natural Resources – Different Types and Resources
2. Significance of Water Resources and their uses
3. Conservation of water and recycling of the water – Global distribution of water
4. Water shed programmes and their management
5. Storing the rain water in tanks and recharging ground water

Unit-II

6. Rain water harvesting in rural areas (*chekdam, trenches* etc.,)
7. Overuse of surface and ground water and control measures.
8. Aims, objectives and implementation of *Mission Bhagiratha* (Telangana Government Drinking water programme)
9. Aims, objectives and implementation of *Mission Kakatiya* (Telangana Government minor irrigation programme)
10. Issues and challenges in Water Resources Management

Paper: (BCO603) MANAGERIAL ACCOUNTING

Paper: BCO603
PPW: 6 Hrs (5L+1T)

Max. Marks: 80 + 20
Exam Duration: 3 Hrs

Objective: to acquire knowledge of Managerial Accounting decision making techniques, preparation of budgets and estimation of working capital.

UNIT-I: INTRODUCTION:

Managerial Accounting: Features – Objectives – Scope – Functions – Advantages and Limitations – Relationship between Cost, Management and Financial Accounting.

UNIT-II: COST-VOLUME-PROFIT ANALYSIS:

Introduction – Importance – Techniques: Marginal and Break Even Analysis – Break-Even Analysis: Meaning – Assumptions – Importance- Calculation of BEP - Limitations.

UNIT-III: MARGINAL COSTING AND DECISION MAKING:

Marginal Costing: Meaning – Marginal Cost Equation – Difference between Marginal Costing and Absorption Costing – Marginal Costing and Decision Making: Product Decisions – Pricing Decisions - Make or Buy Decisions.

UNIT-IV: BUDGETARY CONTROL:

Budget: Meaning – Objectives — Essentials of Budgets - Budgetary Control - Classification of Budgets-Preparation of Budgets - Advantages and Limitations

UNIT-V: WORKING CAPITAL:

Working Capital: Meaning – Classification – Importance – Objectives –Estimation of Working Capital Requirements- Management of Current Assets.

SUGGESTED READINGS:

1. Introduction to Management Accounting: Charles T, Horngren et al, Pearson
2. Management Accounting: S.P.Gupta
3. Management Accounting: Manmohan &Goyal
4. Management Accounting: Sharma Shashi K. Gupta, Kalyani Publishers
5. Management Accounting: MN Arora, Himalaya
6. Management Accounting: Khan & Jain, Tata McGraw Hill
7. Accounting for Management: SN Maheshwari, Vik

Paper: (BCO604) COMPANY LAW

Paper: BCO604

Max. Marks: 80 + 20

PPW: 5Hrs

Exam Duration: 3Hrs

Objective: *to understand legal provisions applicable for establishment, management and winding up of companies in India as per Companies Act 2013.*

UNIT-I: INCORPORATION OF COMPANIES:

Company: Meaning and Definition – Characteristics - Classification – Legislation on Companies – Incorporation - Promotion – Registration - Memorandum of Association – Articles of Association – Certificate of Incorporation - Prospectus – Statement in lieu of Prospectus – Commencement of business.

UNIT-II: MANAGEMENT OF COMPANIES:

Director: Qualification - Disqualification - Position - Appointment - Removal – Duties and Liabilities – Loans – Remuneration – Managing Director – Corporate Social Responsibility – Corporate Governance.

UNIT-III: COMPANY SECRETARY:

Company Secretary: Definition – Appointment – Duties – Liabilities – Company Secretary in Practice – Secretarial Audit.

UNIT-IV: COMPANY MEETINGS:

Meeting: Meaning – Requisites - Notice – Proxy - Agenda – Quorum – Resolutions – Minutes – Kinds – Shareholder Meetings - Statutory Meeting - Annual General Body Meeting – Extraordinary General Body Meeting – Board Meetings.

UNIT-V: WINDING UP:

Meaning – Modes of Winding Up –Winding Up by tribunal – Voluntary Winding Up – Compulsory Winding Up – Consequences of Winding Up –Removal of name of the company from Registrar of Companies

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 3) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 4) Corporate Law: PPS Gogna, S Chand.
- 5) Company Law: Bagriyal AK: Vikas Publishing House

Paper : (BCO605) AUDITING

Paper: BCO605

Max Marks: 80 + 20

PPW: 5Hrs

Exam Duration: 3Hrs

Objective: to understand meaning and elements of auditing and gain knowledge for execution of audit.

UNIT-I: INTRODUCTION:

Auditing: Meaning – Definition – Evolution – Objectives – Importance -Types of Audit – Standards of Auditing – Procedure for issue of standards by AASB.

UNIT-II: AUDITOR AND EXECUTION OF AUDIT:

Appointment – Qualification and Disqualification – Qualities – Remuneration – Removal – Rights – Duties – Civil and Criminal Liabilities of Auditors – Commencement of Audit –Engagement Letter – Audit Program – Audit Note Book – Audit Workbook – Audit Markings.

UNIT-III: INTERNAL CONTROL, INTERNAL CHECK AND INTERNAL AUDIT:

Meaning and Objectives of Internal Control – Internal Check and Internal Audit – Internal Check Vs.Internal Audit – Internal Control vs.Internal Audit.

UNIT-IV: VOUCHING:

Meaning – Objectives – Types of Vouchers – Vouching of Trading Transactions – Vouching Cash Transaction – Auditing in an EDP Environment.

UNIT-V: VERIFICATION AND VALUATION OF ASSETS:

Meaning and Definition – Distinction – Verification and Valuation of various Assets andLiabilities– Audit Committee – Role of Audit Committee – Audit Reports.

SUGGESTED READINGS:

1. Principles and Practice of Auditing: RG Saxena, Himalaya Publishing House.
2. Auditing and Assurance for CA Integrated Professional Competence: SK Basu, Pearson.
3. Auditing: ArunaJha, Taxmann Publications.
4. Auditing Principles, Practices & Problems: Jagdish Prakash, Kalyani Publishers.
5. Auditing and Assurance: Ainapure&Ainapure, PHI Learning.
6. Principles and Practice of Auditing: DinkarPagare, Sultan Chand & Sons.
7. Fundamentals of Auditing: Kamal Gupta andAshok Arora, Tata McGraw-Hill
8. A Hand Book of Practical Auditing: B.N. Tandonetal., S. Chand.

Paper: (BCO606) COMMERCE LAB

Paper: BCO606

Max. Marks: 20 Internal +60PF + 20VV

PPW: 4

Exam Duration: 3 Hrs

Credits:4

Objective: *to become familiar with various business documents and acquire practical knowledge, which improve over all skill and talent.*

UNIT-I: BASIC BUSINESS DOCUMENTS:

Trade license under Shops and Establishments Act - Labor license from Department of labor - Partnership Deed - Pollution, Health licenses – Quotation - Invoice form and preparation - Computation of simple interest, compound interest and EMI - Way bill used during transport - Debit Note and Credit Note - Audit Report.

UNIT-II: FINANCE, BANKING AND INSURANCE DOCUMENTS:

Promissory Note - Bill of exchange – Cheque - Pay in slip - Withdrawal form - Account opening and Nomination form - Deposit form and Deposit Receipts - Loan application form - Insurance Proposal form and Insurance Policy - ATM Card Application form - Credit appraisal report - Insurance agency application procedure - ESI / PF membership form.

UNIT-III: BUSINESS LEGAL DOCUMENTS:

Memorandum of Association - Articles of Association - Certificate of Incorporation – Prospectus - Certificate of Commencement of Business - Annual Report – Chairman’s Speech - Model bye-laws of some society - Society/ Trust registration form - Complaint in a Consumer forum - Complaint under Right to Information Act.

UNIT-IV: DOCUMENTS OF TAXATION:

PAN application under Income Tax Act - TAN application under Income Tax Act - Form:16 to be issued by Employer - TDS and its certificate u/s15 - Income Tax payment challans and Refund Order - Income Tax Returns including TDS Return - Notices under Income Tax Act - Assessment Order - VAT/TOT Dealer-Application and License - Registration under Service Tax.

UNIT-V: BUSINESS CHARTS:

Elements of business - Forms of business organizations - Procedure of incorporation of companies - Classification of partners with salient features of each of them - International, National, State level and Regional entrepreneurs - Hierarchy of Banking business in India - Tax administration in India - Various taxes imposed in India - Export and import procedure - Purpose and powers of authorities like RBI, SEBI, IRDA, ROC.

COMMERCE LAB FACILITIES:

- i) Colleges are required to provide a commerce lab containing all the documents related to commerce and facilities as, computer, printer, OHP, LCD Projector with sufficient furniture.
- ii) Teachers should practically explain the documents and help in filling the same in the simulated environment.
- iii) Students are required to do the above personally and gain the knowledge of filling the above documents and the same are to be kept in a portfolio.
- iv) At the end of semester, the portfolios would be evaluated by the external examiner designated by the Controller of Examinations, Satavahana University, from the panel submitted by the Board of Studies in Commerce. The Examiner would evaluate the portfolio for a maximum of 35 marks and conduct viva-voce examination for 15 marks. The award lists duly signed are to be sent the Controller of Examinations.

Paper: (BCO607): E-COMMERCE

Paper: BCO607

Max. Marks: 60+20+20P

PPW: 5 (3T+2P) Hrs

Exam Duration: 3hrs

Objective: to acquire conceptual and application knowledge of ecommerce.

UNIT-I: INTRODUCTION:

E-Commerce: Meaning- Advantages & Limitations - E-Business: Traditional & Contemporary Model, Impact of E-Commerce on Business Models - Classification of E-Commerce: B2B- B2C - C2B - C2C - B2E - Applications of Ecommerce: E-Commerce Organization Applications - E-Marketing - E-Advertising - E-Banking - Mobile Commerce - E-Trading - E-Learning - E-Shopping.

UNIT-II: FRAMEWORK OF E-COMMERCE:

Framework of E-Commerce: Application Services - Interface Layers - Secure Messaging - Middleware Services and Network Infrastructure - Site Security - Firewalls & Network Security - TCP/IP – HTTP - Secured HTTP – SMTP - SSL.

Data Encryption: Cryptography – Encryption – Decryption - Public Key - Private Key - Digital Signatures - Digital Certificates.

UNIT-III: CONSUMER ORIENTED E-COMMERCE APPLICATIONS:

Introduction - Mercantile Process Model: Consumers Perspective and Merchant's Perspective - Electronic Payment Systems: Legal Issues & Digital Currency - E-Cash & E-Cheque - Electronic Fund Transfer (EFT) - Advantages and Risks - Digital Token-Based E-Payment System - Smart Cards.

UNIT-IV: ELECTRONIC DATA INTERCHANGE:

Introduction - EDI Standards - Types of EDI - EDI Applications in Business – Legal - Security and Privacy issues if EDI - EDI and E-Commerce - EDI Software Implementation.

UNIT-V: E-MARKETING TECHNIQUES:

Introduction - New Age of Information - Based Marketing - Influence on Marketing - Search Engines & Directory Services - Charting the On-Line Marketing Process - Chain Letters - Applications of 5P's (Product, Price, Place, Promotion, People) E-Advertisement - Virtual Reality & Consumer Experience - Role of Digital Marketing.

Lab work: Using Microsoft Front Page Editor and HTML in Designing a Static Webpage/Website.

SUGGESTED READINGS:

1. Frontiers of Electronic Commerce: Ravi Kalakota, Andrew B Whinston, Pearson
2. E-Commerce: An Indian Perspective: P.T. Joseph, S.J, PHI
3. Electronic Commerce, Framework Technologies & Applications: Bharat Bhasker, McGraw Hill
4. Introduction To E-Commerce: Jeffrey F Rayport, Bernard J. Jaworski: Tata McGraw Hill
5. Electronic Commerce, A Managers' Guide: Ravi Kalakota, Andrew B Whinston
6. E-Commerce & Computerized Accounting: Rajinder Singh, Er. KaisarRasheed, Kalyani
7. E-Commerce & Mobile Commerce Technologies: Pandey, Saurabh Shukla, S. Chand
8. E-Business 2.0, Roadmap For Success: Ravi Kalakota, Marcia Robinson, Pearson
9. Electronic Commerce: Pete Loshin / John Vacca, Firewall Media
10. E-Commerce, Strategy, Technologies And Applications : David Whiteley, Tata Mcgraw Hill
11. Digital Commerce and Its Applications (Student's Handbook): K Goyal, Kalyani Publication
12. E-Commerce: C. S.V. Murthy, Himalaya Publishing House.

Paper: (BCO608) MANAGEMENT INFORMATION SYSTEM

Paper: BCO608
PPW: 5 Hrs (4L +1T)

Max. Marks: 80+20
Exam Duration: 3hrs

UNIT - I: Introduction

Meaning - Evolution of MIS-Manager's view of Information System - Strategic Planning-Management Control - Operational Control - Using Information Systems for Competitive Advantage-Value Chain Model - Synergies - Core Competencies and Network based Strategies - Information Technology and Business Process Reengineering.

UNIT - II: Decision Making and Information Systems

Herbert Simon Model of Decision Making Process-Criteria for Decision Making-Behavioural Model of Decision Making - Optimisation Model - Decision Support Systems and Expert Systems - Relevance of Decision Making Concepts for Information Systems.

UNIT - III: Strategic Planning of Information Systems

Techniques of Planning - Applications of Information Systems-Financial Information Systems - Marketing Information Systems - Production Information Systems - Human Resources Information Systems.

UNIT - IV: Systems Analysis and Design

Development Strategies-Structured Analysis-Prototyping-System Development Life Cycle-Feasibility-Requirement Analysis-Design of the System Development of Software - Implementation and Evaluation-Systems Project Management.

UNIT - V: Organisation of Information System

Centralised, Decentralised and Distributed Processing-Role and Responsibilities of Information Systems Professionals-Security and Ethical Issues in Information Systems-Risks, Controls and Threats.

Suggested readings:

1. Robert Schultheis and Mary Summer, Management Information Systems-The Manager's View. Tata McGraw Hill, 2008.
2. Kenneth C Laudon and Jane P Laudon, Management Information Systems- Managing the Digital Firm, Pearson Education, 2009.
3. Murthy.CSV, Management Information Systems- Text & Applications, Himalaya Publishing House, 2009.
4. Gordon B. Davis, Magrethe H.Olson, Management Information Systems, Conceptual Foundations Development, Tata McGraw Hill, 2008.
5. James A O'Brien and George M.Marakas, Management Information Systems, Tata McGraw Hills, 2009.

B.Sc. (Physics) Syllabus, Satavahana University
(w.e.f 2019-2020)

SATAVAHANA UNIVERSITY
B.Sc. (Physics)
SCHEME FOR CHOICE BASED CREDIT SYSTEM
(YEAR & SEMESTER - WISE SCHEME OF HPW, CREDITS & MARKS)

Y E A R	SEM	Course/Paper	Course Type*	Hrs / Week	No. of Credits	Marks		
						Internal	SEM End	Total
F I R S T	I	Mechanics & Oscillations	DSC-1	4	4	20	80	100
		Mechanics & Oscillations Lab (Practicals)	DSC-1(Pr)	3	1	-	25	25
	II	Thermal Physics	DSC-2	4	4	20	80	100
		Thermal Physics Lab (Practicals)	DSC-2(Pr)	3	1	-	25	25
S E C O N D	III	Electromagnetic Theory	DSC-3	4	4	20	80	100
		Electromagnetic Theory Lab (Practicals)	DSC-3(Pr)	3	1	-	25	25
		1) Experimental methods & Error analysis 2) Electrical circuits & Networking	SEC-1 SEC-2	2 2	2 2	10 10	40 40	50 50
	IV	Waves & Optics	DSC-4	4	4	20	80	100
		Waves & Optics Lab (Practicals)	DSC-4(Pr)	3	1	-	25	25
		1) Basic Instrumentation 2) Digital Electronics	SEC-3 SEC-4	2 2	2 2	10 10	40 40	50 50
T H I R D	V	(A) Modern Physics Or (B) Computational Physics	DSE-1	4	4	20	80	100
		(A) Modern Physics Lab (Practicals) Or (B) Computational Physics Lab (Practicals)	DSE-1 (Pr)	3	1	-	25	25
		Renewable energy & Energy harvesting	GE	4	4	20	80	100
	VI	(A) Electronics Or (B) Applied Optics	DSE-2	4	4	20	80	100
		(A) Electronics Lab (Practicals) Or (B) Applied Optics Lab (Practicals)	DSE-2 (Pr)	3	1	-	25	25
		Nanoscience	Project / Course in lieu of project	4	4	20	80	100
Total					30 + 16	120+80	630+320	750 + 400

*DSC: Discipline Specific Course (Core);
DSE: Discipline Specific Elective (Elective);
Pr: Practical
SEC: Skill Enhancement Course;
GE: Generic Elective

B.Sc. (Physics)- I Year
Semester – I
Paper – I: Mechanics and Oscillations
(DSC-1: Compulsory)

Total: 56 hrs
(4 Hrs / week)

Unit – I

1. Vector Analysis (14)

Scalar and Vector fields, Gradient of a Scalar field and its physical significance. Divergence and Curl of a Vector field and related problems. Vector integration - line, surface and volume integrals. Stokes, Gauss's and Green's theorems - simple applications.

Unit – II

2. Mechanics of Particles (7)

Laws of motion, motion of variable mass system, motion of a rocket, multi-stage rocket, conservation of energy and momentum. Collisions in two and three dimensions, concept of impact parameter, scattering cross-section.

3. Mechanics of Rigid Bodies (7)

Definition of Rigid body, rotational kinematic relations, equation of motion for a rotating body, angular momentum and inertial tensor. Euler's equations, precession of a top, Gyroscope.

Unit – III

4. Central Forces (8)

Central forces – definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy, equation of motion under a central force, gravitational potential and gravitational field, motion under inverse square law, derivation of Kepler's laws.

5. Special theory of Relativity (8)

Galilean relativity, absolute frames, Michelson-Morley experiment, Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction, addition of velocities, mass-energy relation. Concept of four vector formalism.

Unit – IV

6. Oscillations (12)

Simple harmonic oscillator and solution of the differential equation – Physical characteristics of SHM, Torsion pendulum – Measurement of rigidity modulus, Compound pendulum - Measurement of 'g', combination of two mutually perpendicular simple harmonic vibrations of same frequency and different frequencies, Lissajous figures.

Damped harmonic oscillator, Solution of the differential equation of damped oscillator. Energy considerations, Logarithmic decrement, relaxation time, quality factor, differential equation of forced oscillator and its solution, amplitude resonance, velocity resonance.

Note: Problems should be solved at the end of every chapter of all units.

Suggested Books

1. Berkeley Physics Course. Vol.1, **Mechanics** by C. Kittel, W. Knight, M.A. Ruderman - *Tata-McGraw hill Company Edition 2008.*
2. **Fundamentals of Physics.** Halliday/Resnick/Walker *Wiley India Edition 2007.*
3. **First Year Physics** - *Telugu Academy.*
4. **Introduction to Physics for Scientists and Engineers.** F.J. Ruche. *McGraw Hill.*
5. **Fundamentals of Physics** by Alan Giambattista et al *Tata-McGraw Hill Company Edition, 2008.*
6. **University Physics** by Young and Freeman, *Pearson Education, Edition 2005.*
7. **Sears and Zemansky's University Physics** by Hugh D. Young, Roger A. Freedman *Pearson Education Eleventh Edition.*
8. **An introduction to Mechanics** by Daniel Kleppner & Robert Kolenkow. *The McGraw Hill Companies.*
9. **Mechanics.** Hans & Puri. *TMH Publications.*
10. **Engineering Physics.** R.K. Gaur & S.L. Gupta. *Dhanpat Rai Publications.*
11. **The Feynman Lectures in Physics, Vol.-1,** R P Feynman, RB Lighton and M Sands, BI Publications,
12. **Mechanics-P.K. Srivastava** - New Age International.

B.Sc. (Physics) – I year
Semester - I
Paper – I: Mechanics and Oscillations Practicals
(DSC-1: Compulsory)

1. Measurement of errors – Simple Pendulum.
2. Calculation of slope and intercept of $Y = mX + C$ graph by theoretical method (simple pendulum experiment)
3. Study of a compound pendulum- determination of 'g' and 'k'.
4. Y by uniform Bending
5. Y by Non-uniform Bending.
6. Moment of Inertia of a fly wheel.
7. Rigidity modulus by Torsion Pendulum.
8. Determination of surface tension of a liquid through capillary rise method.
9. Determination of Surface Tension of a liquid by any other method.
10. Determination of Viscosity of a fluid.
11. Observation of Lissajous figures from CRO- Frequency ratio. Amplitude and phase difference of two waves.
12. Study of oscillations of a mass under different combination of springs- Series and parallel
13. Study of Oscillations under Bifilar suspension- Verification of axis theorems

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Suggested Books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (Pragati Prakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, Anchal Srivastava.

B.Sc. (Physics)- I Year
Semester – II
Paper – II: Thermal Physics
(DSC-2: Compulsory)

Total: 56 hrs
(4 Hrs / week)

Unit – I

1. Kinetic theory of gases: (6)

Introduction – Deduction of Maxwell's law of distribution of molecular speeds, Transport Phenomena – Viscosity of gases – thermal conductivity – diffusion of gases.

2. Thermodynamics: (8)

Basics of Thermodynamics - Carnot's engine (qualitative) - Carnot's theorem - Kelvin's and Clausius statements – Thermodynamic scale of temperature – Entropy, physical significance – Change in entropy in reversible and irreversible processes – Entropy and disorder – Entropy of universe – Temperature- Entropy (T-S) diagram – Change of entropy of a perfect gas-change of entropy when ice changes into steam.

Unit – II

3. Thermodynamic potentials and Maxwell's equations: (7)

Thermodynamic potentials – Derivation of Maxwell's thermodynamic relations – Clausius-Clayperon's equation – Derivation for ratio of specific heats – Derivation for difference of two specific heats for perfect gas. Joule Kelvin effect – expression for Joule Kelvin coefficient for perfect and Vanderwaal's gas.

4. Low temperature Physics: (7)

Joule Kelvin effect – liquefaction of gas using porous plug experiment. Joule expansion – Distinction between adiabatic and Joule Thomson expansion – Expression for Joule Thomson cooling – Liquefaction of helium, Kapitza's method – Adiabatic demagnetization – Production of low temperatures – Principle of refrigeration, vapour compression type.

Unit – III

5. Quantum theory of radiation: (14)

Black body-Ferry's black body – distribution of energy in the spectrum of Black body – Wein's displacement law, Wein's law, Rayleigh-Jean's law – Quantum theory of radiation - Planck's law – deduction of Wein's law, Rayleigh-Jeans law, Stefan's law from Planck's law. Measurement of radiation using pyrometers – Disappearing filament optical pyrometer – experimental determination – Angstrom pyroheliometer - determination of solar constant, effective temperature of sun.

Unit – IV

6. Statistical Mechanics: (14)

Introduction, postulates of statistical mechanics. Phase space, concept of ensembles and some known ensembles, classical and quantum statistics and their differences, concept of probability, Maxwell-Boltzmann's distribution law -Molecular energies in an ideal gas- Maxwell-Boltzmann's velocity distribution law, Bose-Einstein Distribution law, Fermi-Dirac Distribution law, comparison of three distribution laws.

NOTE: Problems should be solved at the end of every chapter of all units.

Suggested books

1. **Fundamentals of Physics.** Halliday/Resnick/Walker.C. *Wiley India Edition 2007.*
2. **Second Year Physics – Telugu Academy.**
3. **Modern Physics** by R. Murugesan and Kiruthiga Siva Prasath (for statistical Mechanics) *S. Chand & Co.*
4. **Modern Physics** by G. Aruldhas and P. Rajagopal, *Eastern Economy Education.*
5. Berkeley Physics Course. Volume-5. **Statistical Physics** by F. Reif. *The McGraw-Hill Companies.*
6. **An Introduction to Thermal Physics** by Daniel V. Schroeder. *Pearson Education Low Price Edition.*
7. **Thermodynamics** by R.C. Srivastava, Subit K. Saha& Abhay K. Jain *Eastern Economy Edition.*
8. **Modern Engineering Physics** by A.S. Vasudeva. *S.Chand& Co. Publications.*
9. **Feynman's Lectures on Physics** Vol. 1,2,3 & 4. *Narosa Publications.*
10. **Introduction to Statistical Mechanics.** , B.B. Laud, Macmillan, 1981
11. **Statistical Physics,** K.Haung, Wiley Eastern 1988

B.Sc. (Physics) – I year
Semester - II
Paper – II: Thermal Physics Practicals
(DSC-2: Compulsory)

1. Co-efficient of thermal conductivity of a bad conductor by Lee's method.
2. Measurement of Stefan's constant.
3. Specific heat of a liquid by applying Newton's law of cooling correction.
4. Heating efficiency of electrical kettle with varying voltages.
5. Calibration of thermo couple
6. Cooling Curve of a metallic body
7. Resistance thermometer
8. Thermal expansion of solids
9. Study of conversion of mechanical energy to heat.
10. Determine the Specific of a solid (graphite rod)

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Suggested Books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (Pragati Prakashan, Meerut).
3. Worsnop and Flint- Advanced Practical Physics for students.
4. "Practical Physics" R.K Shukla, Anchal Srivastava

B.Sc. (Physics)- II Year
Semester – III
Paper – III: Electromagnetic Theory
(DSC-3: Compulsory)

Total: 56 hrs
(4 Hrs / week)

Unit I : Electrostatics (14 Hrs)

Electric Field:- Concept of electric field lines and electric flux, Gauss's law (Integral and differential forms), application to linear, plane and spherical charge distributions. Conservative nature of electric field 'E', Irrotational field. Electric potential:- Concept of electric potential, relation between electric potential and electric field, potential energy of a system of charges. Energy density in an electric field. Calculation of potential from electric field for a spherical charge distribution.

Unit II : Magnetostatics (14 Hrs)

Concept of magnetic field 'B' and magnetic flux, Biot-Savart's law, B due to a straight current carrying conductor. Force on a point charge in a magnetic field. Properties of B, curl and divergence of B, solenoidal field. Integral form of Ampere's law, Applications of Ampere's law: field due to straight, circular and solenoidal currents. Energy stored in magnetic field. Magnetic energy in terms of current and inductance. Magnetic force between two current carrying conductors. Magnetic field intensity. Ballistic Galvanometer:- Torque on a current loop in a uniform magnetic field, working principle of B.G., current and charge sensitivity, electromagnetic damping, critical damping resistance.

Unit III: Electromagnetic Induction and Electromagnetic waves (14)

Faraday's laws of induction (differential and integral form), Lenz's law, self and mutual Induction. Continuity equation, modification of Ampere's law, displacement current, Maxwell equations. Maxwell's equations in vacuum and dielectric medium, boundary conditions, plane wave equation: transverse nature of EM waves, velocity of light in vacuum and in medium. Poynting's theorem.

UNIT IV:

Varying and alternating currents (7 Hrs)

Growth and decay of currents in LR, CR and LCR circuits-Critical damping. Alternating current, relation between current and voltage in pure R, C and L-vector diagrams - Power in ac circuits. LCR series and parallel resonant circuit-Q-factor. AC & DC motors-single phase, three phase (basics only).

Network Theorems (7 Hrs)

Passive elements, Power sources, Active elements, Network models: T and π Transformations, Superposition theorem, Thevenin's theorem, Norton's theorem. Reciprocity theorem and Maximum power transfer theorem (Simple problems).

Note: Problems should be solved at the end of every chapter of all units.

Suggested Books:

1. Fundamentals of electricity and magnetism By Arthur F. Kip (McGraw-Hill, 1968)
2. Electricity and magnetism by J.H.Fewkes & John Yarwood. Vol.I (Oxford Univ. Press, 1991).
3. Introduction to Electrodynamics, 3rd edition, by David J. Griffiths, (Benjamin Cummings,1998).
4. Electricity and magnetism By Edward M. Purcell (McGraw-Hill Education, 1986)
5. Electricity and magnetism. By D C Tayal (Himalaya Publishing House,1988)
6. Electromagnetics by Joseph A.Edminister 2nd ed.(New Delhi: Tata McGraw Hill, 2006).

B.Sc. (Physics) – II year
Semester - III
Paper – III: Electromagnetic Theory Practicals
(DSC-3: Compulsory)

1. To verify the Thevenin Theorem
2. To verify Norton Theorem
3. To verify Superposition Theorem
4. To verify maximum power transfer theorem.
5. To determine a small resistance by Carey Foster's bridge.
6. To determine the (a) current sensitivity, (b) charge sensitivity, and (c) CDR of a B.G.
7. To determine high resistance by leakage method.
8. To determine the ratio of two capacitances by De Sauty's bridge.
9. To determine self-inductance of a coil by Anderson's bridge using AC.
10. To determine self-inductance of a coil by Rayleigh's method.
11. To determine coefficient of Mutual inductance by absolute method.
12. LR circuit
13. RC circuit
14. LCR series circuit
15. LCR parallel circuit

Note: Minimum of eight experiments should be performed.

Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Suggested Books:

1. B. L. Worsnop and H. T. Flint, Advanced Practical Physics, Asia Publishing House, New Delhi.
2. InduPrakash and Ramakrishna, A Text Book of Practical Physics, KitabMahal

B.Sc. (Physics) - II Year
Semester – IV
Paper – IV: Waves and Optics
(DSC-4: Compulsory)

Total: 56 Hrs
(4 Hrs / week)

Unit-I: Waves (14 Hrs)

Fundamentals of Waves -Transverse wave propagation along a stretched string, general solution of wave equation and its significance, modes of vibration of stretched string clamped at ends, overtones, energy transport, transverse impedance.

Longitudinal vibrations in bars- wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the midpoint iii) bar free at both ends iv) bar fixed at one end. Transverse vibrations in a bar- wave equation and its general solution. Boundary conditions, clamped free bar, free-free bar, bar supported at both ends, Tuning fork.

Unit II: Interference: (14 Hrs)

Principle of superposition – coherence – temporal coherence and spatial coherence – conditions for Interference of light.

Interference by division of wave front: Fresnel's biprism – determination of wave length of light. Determination of thickness of a transparent material using Biprism – change of phase on reflection – Lloyd's mirror experiment.

Interference by division of amplitude: Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (Cosine law) – Colours of thin films – Non-reflecting films – interference by a plane parallel film illuminated by a point source – Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film) – Determination of diameter of wire-Newton's rings in reflected light with and without contact between lens and glass plate, Newton's rings in transmitted light (Haidinger Fringes) – Determination of wave length of monochromatic light – Michelson Interferometer – types of fringes – Determination of wavelength of monochromatic light, Difference in wavelength of sodium D_1, D_2 lines and thickness of a thin transparent plate.

Unit III: Diffraction: (14 Hrs)

Introduction – Distinction between Fresnel and Fraunhofer diffraction, Fraunhofer diffraction:- Diffraction due to single slit and circular aperture – Limit of resolution – Fraunhofer diffraction due to double slit – Fraunhofer diffraction pattern with N slits (diffraction grating).

Resolving Power of grating – Determination of wave length of light in normal and oblique incidence methods using diffraction grating.

Fresnel diffraction-Fresnel's half period zones – area of the half period zones –zone plate – Comparison of zone plate with convex lens – Phase reversal zone plate – diffraction at a straight edge – difference between interference and diffraction.

Unit IV: Polarization (14 Hrs)

Polarized light : Methods of Polarization, Polarization by reflection, refraction, Double refraction, selective absorption , scattering of light – Brewster's law – Malus law – Nicol prism polarizer and analyzer – Refraction of plane wave incident on negative and positive crystals (Huygen's explanation) – Quarter wave plate, Half wave plate – Babinet's compensator – Optical activity, analysis of light by Laurent's half shade polarimeter.

NOTE: Problems should be solved at the end of every chapter of all units.

Suggested books

1. **Optics** by Ajoy Ghatak. *The McGraw-Hill companies.*
2. **Optics** by Subramaniam and Brijlal. *S. Chand & Co.*
3. **Fundamentals of Physics.** Halliday/Resnick/Walker. *C. Wiley India Edition 2007.*
4. **Optics and Spectroscopy.** R. Murugesan and Kiruthiga Siva Prasath. *S. Chand & Co.*
5. **Second Year Physics** – *Telugu Academy.*
6. **Modern Engineering Physics** by A.S. Vasudeva. *S.Chand & Co. Publications.*
7. **Feynman's Lectures on Physics** Vol. 1,2,3 & 4. *Narosa Publications.*
8. **Fundamentals of Optics** by Jenkins A. Francis and White E. Harvey, *McGraw Hill Inc.*
9. **Physical Optics,** K. Ghatak
10. **Optical and Atomic Physics,** D.P. Khandelwal, Himalaya Publishing House, Bombay, 1988
11. **Fundamental of Optics,** Jenkins and White, McGraw-Hill
12. **Optics,** Smith and Thomson, John Wiley and sons

B.Sc. (Physics) – II year
Semester - IV
Paper – IV: Waves and Optics Practicals
(DSC-4: Compulsory)

1. Thickness of a wire using wedge method.
2. Determination of wavelength of light using Biprism.
3. Determination of Radius of curvature of a given convex lens by forming Newton's rings.
4. Resolving power of grating.
5. Study of optical rotation-polarimeter.
6. Dispersive power of a prism
7. Determination of wavelength of light using diffraction grating minimum deviation method.
8. Wavelength of light using diffraction grating – normal incidence method.
9. Resolving power of a telescope.
10. Refractive index of a liquid and glass (Boys Method).
11. Pulfrich refractometer – determination of refractive index of liquid.
12. Wavelength of Laser light using diffraction grating.
13. Verification of Laws of a stretched string (Three Laws).
14. Velocity of Transverse wave along a stretched string
15. Determination of frequency of a bar- Melde's experiment

Note: Minimum of eight experiments should be performed Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Suggested Books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (Pragati Prakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, Anchal Srivastav.

B.Sc. (Physics)- III Year
Semester – V
Paper – V(A) : Modern Physics
(DSE-1: Elective)

Total : 56 Hrs
(4 Hrs / week)

UNIT - 1 : SPECTROSCOPY (14 Hrs)

Atomic Spectra: Introduction - Drawbacks of Bohr's atomic model - Sommerfeld's elliptical orbits - relativistic correction (no derivation). Stern & Gerlach experiment, Vector atom model and quantum numbers associated with it. L-S and j-j coupling schemes. Spectral terms, selection rules, intensity rules-spectra of alkali atoms, doublet fine structure, Zeeman Effect, Paschen-Back Effect and Stark Effect (basic idea).

Molecular Spectroscopy: Types of molecular spectra, pure rotational energies and spectrum of diatomic molecule. Determination of inter nuclear distance. Vibrational energies and spectrum of diatomic molecule. Raman effect, classical theory of Raman effect. Experimental arrangement for Raman effect and its applications.

UNIT – II : Quantum Mechanics (14 Hrs)

Inadequacy of classical Physics: Spectral radiation - Planck's law (only discussion). Photoelectric effect - Einstein's photoelectric equation. Compton's effect - experimental verification.

Matter waves & Uncertainty principle: de Broglie's hypothesis - wavelength of matter waves, properties of matter waves. Phase and group velocities. Davisson and Germer experiment. Double slit experiment. Standing de Broglie waves of electron in Bohr orbits. Heisenberg's uncertainty principle for position and momentum (x and p_x), Energy and time (E and t). Gamma ray microscope. Diffraction by a single slit. Position of electron in a Bohr orbit. Complementary principle of Bohr.

Schrodinger Wave Equation

Schrodinger time independent and time dependent wave equations. Wave function properties - Significance. Basic postulates of quantum mechanics. Operators, eigen functions and eigen values, expectation values.

Unit - III : Nuclear Physics (14 Hrs)

Nuclear Structure: Basic properties of nucleus - size, charge, mass, spin, magnetic dipole moment and electric quadrupole moment. Binding energy of nucleus, deuteron binding energy, p-p, n-n, and n-p scattering (concepts), nuclear forces. Nuclear models - liquid drop model, shell model.

Alpha and Beta Decays: Range of alpha particles, Geiger – Nuttall law. Gamow's theory of alpha decay. Geiger – Nuttall law from Gamow's theory. Beta spectrum - neutrino hypothesis,

Particle Detectors: GM counter, proportional counter, scintillation counter.

UNIT:IV: Solid State Physics & Crystallography (14 Hrs)

Crystal Structure: Crystalline nature of matter, Crystal lattice, Unit Cell, Elements of symmetry. Crystal systems, Bravais lattices. Miller indices. Simple crystal structures (S.C., BCC, FCC, CsCl, NaCl, diamond and Zinc Blende)

X-ray Diffraction: Diffraction of X-rays by crystals, Bragg's law, Experimental techniques - Laue's method and powder method.

Bonding in Crystals: Types of bonding in crystals - characteristics of crystals with different bondings. Lattice energy of ionic crystals- determination of Madelung constant for NaCl crystal, Calculation of Born Coefficient and repulsive exponent. Born-Haber cycle.

NOTE: Problems should be solved at the end of every chapter of all units.

Suggested books:

1. Modern Physics by G. Aruldas & P.Rajagopal. Eastern Economy Edition.
2. Concepts of Modern Physics by Arthur Beiser. Tata McGraw-Hill Edition.
3. Modern Physics by R. Murugesan and Kiruthiga SivaPrasath.S. Chand & Co.
4. Nuclear Physics by D.C. Tayal, Himalaya PublishingHouse.
5. Molecular Structure and Spectroscopy by G.Aruldas. Prentice Hall of India, New Delhi.
6. Spectroscopy -Atomic and Molecular by Gurdeep R Chatwal and Shyam Anand -Himalaya Publishing House.
7. Third Year Physics – Telugu Academy.
8. Elements of Solid State Physics by J.P. Srivastava. (for chapter on nanomaterials)-Prentice-hall of India Pvt. Ltd.

B.Sc. (Physics) – III year
Semester – V
Paper- V(A) : Modern Physics Practicals
(DSE-1: Elective)

1. Measurement of Planck's constant using black body radiation and photo-detector
2. Photo-electric effect: photo current versus intensity and wavelength of light; maximum energy of photo-electrons versus frequency of light
3. To determine the Planck's constant using LEDs of at least 4 different colors.
4. To determine the ionization potential of mercury.
5. To determine the absorption lines in the rotational spectrum of Iodine vapour.
6. To determine the value of e/m by (a) Magnetic focusing or (b) Bar magnet.
7. To setup the Millikan oil drop apparatus and determine the charge of an electron.
8. To show the tunneling effect in tunnel diode using I-V characteristics.
9. To determine the wavelength of laser source using diffraction of single slit.
10. To determine the wavelength of laser source using diffraction of double slits.
11. To determine (1) wavelength and (2) angular spread of He-Ne laser using plane diffraction grating
12. To determine the value of e/m for electron by long solenoid method.
13. Photo Cell – Determination of Planck's constant.
14. To verify the inverse square law of radiation using a photo-electric cell.
15. To find the value of photo electric work function of a material of the cathode using a photo-electric cell.
16. Measurement of magnetic field – Hall probe method.
17. To determine the dead time of a given G.M. tube using double source.
18. Hydrogen spectrum – Determination of Rydberg's constant
19. Energy gap of intrinsic semi-conductor
20. G. M. Counter – Absorption coefficients of a material.
21. To draw the plateau curve for a Geiger Muller counter.
22. To find the half-life period of a given radioactive substance using a G.M. Counter.

Reference Books:

1. Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House
2. Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers
3. A Text Book of Practical Physics, I. Prakash & Ramakrishna, 11th Edn, 2011, Kitab Mahal

Note: Minimum of eight experiments should be performed.

B.Sc. (Physics) - III Year
Semester – V
Paper – V(B) : Computational Physics
(DSE-1: Elective)

Total: 56 hrs
(4 Hrs / week)

UNIT I: Programming in C (14 Hrs)

Flow charts, algorithms, Integer and floating-point arithmetic, precision, variable types, arithmetic statements, input and output statements, control statements, executable and non-executable statements, arrays, Repetitive and logical structures, Subroutines and functions, operation with files, operating systems, Creation of executable programs.

UNIT II: Numerical methods of Analysis (14 Hrs)

Solution of algebraic and transcendental equation, Newton Raphson method, Solution of simultaneous linear equations. Matrix inversion method, Interpolation, Newton and Lagrange formulas, Numerical differentiation. Numerical integration, Trapezoidal, Simpson and gaussian quadrature methods, Least square curve fitting, Straight line and Polynomial fits.

UNIT III: Numerical solution of ordinary differential equations (14 Hrs)

Eulers and Runge kutta methods, simulation. Generation of uniformly distributed random integers, statistical tests of randomness. Monte-Carlo evaluation of integrals and error analysis, Non-uniform probability distributions, Importance sampling, Rejection method.

UNIT IV: Computational methods (14 Hrs)

Metropolis algorithm, Molecular diffusion and Brownian motions, Random walk problems and their Montecarlo simulation. Finite element and Finite difference methods. Boundary value and initial value problems, density functional methods.

Note: Problems should be solved at the end of every chapter of all units

Suggested Books:

- 1. Computational methods in Physics and Engineering: Wong**
- 2. Computer Oriented Numerical methods: Rajaraman**
- 3. Computer Programming in Fortran 77: Rajaraman**
- 4. Applied Numerical Analysis: Gerald**
- 5. A Guide to Monte - Carlo simulations Statistical Physics: Land**

B.Sc. (Physics) – III year
Semester – V
Paper – V(B) : Computational Physics Practicals
(DSE-1: Elective)

1. Jacobi Method of Matrix diagonalization
2. Solution of Transcendental or Polynomial equations by the Newton Raphson method
3. Linear curve fitting and calculation of linear correlation coefficients
4. Matrix Simulation: Subtraction and Multiplication.
5. Matrix Inversion and solution of simultaneous equations
6. Lagrange interpolation based on given input data
7. Numerical integration using the Simpsons method.
8. Numerical integration using the Gaussian quadrature method.
9. Solution of first order Differential Equation using Runge-kutta method.
10. Numerical first order differentiation of a given function.
11. Fast Fourier transform
12. Monte Carlo Integration
13. Use of a package for data generation and graph plotting.
14. Test of Randomness for random numbers generators.

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

B.Sc. (Physics) - III Year
Semester – VI
Paper – VI(A) : Electronics
(DSE-2: Elective)

Total: 56 hrs
(4 Hrs / week)

Unit - I: (14 Hrs)

- 1. Band theory of P-N junction:** Energy band in solids (band theory), valence band, conduction band and forbidden energy gap in solids, insulators, semi conductors and pure or intrinsic semiconductors and impure or extrinsic semi-conductors. N-type semi-conductors, P-type semi-conductors, Fermi level, continuity equation.
- 2. Diodes:** P-N junction diode, Half-wave, full-wave and bridge rectifier. Zener diode & its characteristics. Zener diode as voltage regulator.

Unit-II: (14 Hrs)

- 1. Bipolar Junction Transistor (BJT)** – p-n-p and n-p-n transistors, current components in transistors, CB, CE and CC configurations – transistor as an amplifier -RC coupled amplifier – Frequency response (Qualitative analysis).
- 2. Feedback concept & Oscillators:** Feedback, General theory of feedback–Concepts of oscillators, Barkhausen’s criteria, Phase shift oscillator – Expression for frequency of oscillation.

Unit-III: (14 Hrs)

Special devices- Construction and Characteristics: Photo diode - Shockley diode -Solar cell, Opto-couplers - Field Effect Transistor (FET) - FET as an Amplifier - Uni Junction Transistor (UJT), UJT as a relaxation oscillator - Silicon controlled rectifier (SCR) - SCR as a switch.

Unit-IV: (14 Hrs)

1. Digital Electronics

Binary number system, conversion of binary to decimal and vice-versa. Binary addition and subtraction (1’s and 2’s complement methods).Hexadecimal number system. Conversion from binary to hexadecimal and vice-versa, Decimal to hexadecimal and vice-versa.

2. Logic gates:

OR, AND, NOT gates, truth tables, realization of these gates using discrete components. NAND, NOR as universal gates, Exclusive – OR gate (EX-OR). De Morgan’s Laws – Verification.

NOTE: Problems should be solved from every chapter of all units.

Suggested Books:

1. Electronic devices and circuits – Millman and Halkias. *Mc.Graw-Hill Education*.
2. Principles of Electronics by V.K. Mehta – *S. Chand & Co.*
3. Basic Electronics (Solid state) – B. L. Theraja, S. Chand & Co.
4. A First Course in Electronics- Anwar A. Khan & Kanchan K. Dey, PHI.
5. Physics of Semiconductor Devices- S. M. Sze
6. Physics of Semiconductors- Streetman.
7. Basic Electronics – Bernod Grob.
8. Basic Electronics for B.Sc (Physics) III Year, 2019, Telugu Academy
9. Digital Principles & Applications – A.P. Malvino and D.P. Leach

B.Sc. (Physics) – III year
Semester – VI
Paper-VI(A) : Electronics Practicals
(DSE-2: Elective)

1. Construction of logic gates (AND, OR, NOT, gates) with discrete components– Truth table Verification
2. AND, OR, NOT – gates constructions using universal gates – Verification of truth tables.
3. Construction of NAND and NOR gates with discrete components and truth table verification
4. Characteristics of a Transistor in CE configuration
5. R.C. coupled amplifier – frequency response.
6. Verification of De Morgan's Theorem.
7. Zener diode V-I characteristics.
8. P-n junction diode V- I characteristics.
9. Zener diode as a voltage regulator
10. Construction of a model D.C. power supply
11. R C phase shift Oscillator –determination of output frequency

Note: Minimum of eight experiments should be performed.

Suggested Books:

1. B.Sc. Practical Physics – C. L. Arora – S. Chand & Co.
2. Viva-voce in Physics – R.C. Gupta, Pragathi Prakashan, Meerut.
3. Laboratory manual for Physics Course by B.P. Khandelwal.
4. Practical Physics by M. Arul Thakpathi by Comptex Publishers.
5. B.Sc. practical physics – Subbi Reddy.

B.Sc. (Physics)- III Year
Semester – VI
Paper – VI(B) : APPLIED OPTICS
(DSE-2: Elective)

Total: 56 Hrs
(4 Hrs / week)

Unit I: Principles of LASER (14 Hrs)

Emission and absorption of Radiation, -Einstein Relations- Pumping Mechanism- optical feedback- Laser rate equation for two, three and Four level Lasers, pumping threshold condition- Principle of Laser beams. Classification of LASER Systems- Gas, Liquid and Solid Lasers He-Ne and Argon Lasers, their energy level schemes- Ruby Laser and YAG laser, Ga-As Laser and their applications in various fields.

Unit II: Holography (14 Hrs)

Basic principle of Holography- Recording of amplitude and phase. The recording medium- reconstruction of original wave front- Image formation by wave front reconstruction- Gabor Hologram- limitations of Gabor Hologram-Fourier Transform Hologram-Volume Hologram- Applications of holograms.

Unit III: (14 Hrs)

Fourier and Non-Linear Optics: Thin lens as phase transformation-thickness function-various types of lenses- Fourier transforming properties of lenses-Object placed Infront of the lens- Object placed behind the lens.

Non-Linear Optics: harmonic generation- second harmonic generation-phase matching condition- Optical mixing- parametric generation of Light- Self focusing of light.

Unit IV: Optical Fibers (14 Hrs)

Fiber types and their structures.Ray optic representation, Acceptance angle and numerical aperture. Step index and graded index fibers. Single mode and multi-mode fibers. Fiber materials for glass fibers and plastic fibers. Signal attenuation in optical fibers. Absorption, Scattering and bending losses in fibers, core and cladding losses. Material dispersion, wave guide dispersion, intermodes distortion and pulse broadening.

Note:-Problems should be solved at the end of every chapter of all units

Suggested Books:

1. Opto electronics an Introduction-Wilson & JFB Hawkes 2nd edition
2. Introduction to Fourier optics-JW Goodman
3. Lasers and Non linear Optics--BB Laud
4. Optical electronics – Ghatak and Thyagarajan
5. Principles of Lasers- O.Svelto
6. Optical fiber communication -By Geradkeiser
7. Optical fiber communication-by John M Senior (PHI)

B.Sc. (Physics) – III year
Semester – VI
Paper – VI(B) : Applied Optics Practicals
(DSE-2: Elective)

1. Study of the Profile of a laser beam
2. Determination of the diameter of a thin wire using laser
3. Determination of wavelength of He-Ne laser by transmission grating
4. Construction and recording of a Hologram
5. Study of Fourier transforming properties of lenses
6. Study of second harmonic generation by KDP crystal
7. Measurement of numerical aperture of an optical fiber
8. Measurement of coupling losses in optical fiber
9. Measurement of bending losses in optical fiber
10. Study of audio signal transmission through optical fiber
11. To study the interference of light using optical fiber

Note: Minimum of eight experiments should be performed.

Suggested Books:

1. Introduction to fourier Optics- J Goodman
2. Optical Fiber Communication- John M senior
3. Principles of Lasers-by O.Svelto
4. Modern Optics by Grant Fowles
5. Principles of Optics by Born & Wolf
6. Fundamentals of Optics by Jekins & White

B.Sc. (Physics) - II Year
Semester – III
Experimental methods & Error analysis
(SEC - I)

Total: 28 Hrs
(2 Hrs / week)

Unit I: Experimental Methods (14 Hrs)

Least count of an instruments, Instruments for measuring mass, length, time, angle, current, voltage. Fundamental Units. Precision and accuracy of measurements, source of error in measurements, necessity of estimating errors, types of errors, reading error of instrument, Calibration error, random error, system error, Significant digits, order of magnitude and rounding of numbers, rounding error, absolute and relative error. Errors of computation- addition, subtraction, multiplication, division error in power and roots, propagation errors, analysis of data, standard deviation, calculation of mean value.

Unit II: I Statistical analysis of errors (14 Hrs)

Mean, mode and standard deviation, Standard deviation of mean, Least squares fitting, Normal distribution, covariance and correlation, Binomial distribution, poisson distribution, chi-square test.

Note:-Problems should be solved at the end of every chapter of all units

Suggested Book:

1. The theory of errors in Physical Measurements JC Pal New central book agency -2010

B.Sc. (Physics) - II Year
Semester – III
Electrical circuit Networking
(SEC - II)

Total: 28 Hrs
(2 Hrs / week)

Unit I: (16 Hrs)

Basic electricity principles: Voltage, current, resistance and power – Ohm’s law – Series, parallel and series-parallel combinations of resistances – AC electricity and DC electricity – Familiarization with multimeter, voltmeter and ammeter

Electrical circuits: Main electric circuit elements and their combination – Rules to analyze DC sourced electrical circuits – current and voltage drop across the DC circuit elements – single-phase and three-phase alternating current sources – Rules to analyze AC sourced electrical circuits – Real, imaginary and complex power components of AC source – Power factor – saving energy and money

Electrical drawing and symbols: Drawing symbols – Blueprints – Reading schematics – Ladder diagrams

Electrical schematics: Power circuits – Control circuits – Reading of circuit schematics – Tracking the connections of elements and identification of current flow and voltage drop

Generators and Transformers: DC power sources, AC/DC generators – Inductance, capacitance and impedance – Operation of transformers.

Electric motors: Single-phase, three phase & DC motors-Basic design – Interfacing DC or AC sources to control heaters and motors – Speed & power of AC motor

Solid state devices: Resistors, inductors and capacitors – Diode and rectifiers – Components in series or parallel – Response inductors and capacitors with DC or AC sources

Unit-II: (12 Hrs)

Electrical protection: Relays, fuses and disconnect switches – Circuit breakers – Overload devices – Ground-fault protection – Grounding and isolating – Phase reversal – Surge protection – Interfacing DC or AC sources to control elements (Relay protection device)

Electrical wiring: Different types of conductors and cables – Basics of wiring – Star and Delta connection – voltage drop and losses across cables and conductors – Instruments to measure current, voltage and power in DC and AC circuits – Insulation – Solid and stranded cable, conduit, cable trays – Splices: wire nuts, crimps, terminal blocks, split bolts and solder – Preparation of extension board.

Note: Problems should be solved at the end of every chapter of all units

Suggested Books:

1. A text book in electrical technology – B. L. Thereja – S. Chand & Co.
2. A text book of electrical technology – A. K. Thereja
3. Performance and design of AC machines – M. G. Say – ELBS Edn

**B.Sc. (Physics)- II Year
Semester – IV
Basic Instrumentation
(SEC - III)**

Total: 28 Hrs
(2 Hrs / week)

Unit I: (14 Hrs)

Basics of measurement: Instruments accuracy, precision, sensitivity, resolution, range, etc – Errors in measurements and loading effects – Multimeter: Principles of measurement of dc voltage and dc current, ac voltage and ac current, resistance – Specifications of a multimeter and their significance

Electronic voltmeter: Advantage over conventional multimeter for voltages measurement with respect to input impedance and sensitivity – Principles of voltage measurement (Block diagram only) – Specifications of an Electric voltmeter, multimeter and their significance - AC millivoltmeter: Types of AC millivoltmeters – Block diagram of AC millivoltmeter Amplifier-rectifier and Rectifier-amplifier – Specifications and their significance

Cathode Ray Oscilloscope (CRO): Block diagram of CRO – construction of CRT – electron gun – electrostatic focusing and acceleration (Qualitative only) – Brief description of screen phosphor, visual persistence and chemical composition – Time-base operation – synchronization – front panel controls – specifications of CRO and their significance – Use of CRO for the measurement of voltage dc and ac frequency, time period – Special features of dual trace – Introduction to digital oscilloscope – Probes – Digital storage oscilloscope: Block diagram and principle of working

Unit II: (14 Hrs)

Signal generators and Analysis instruments: Block diagram, explanation and specifications of low frequency signal generator, pulse generator and function generator – Concept of testing – Specifications – Distortion factor meter – wave analysis.

Impedance Bridges & Q-meters: Block diagram of bridge – working principles of basic (balancing type) RLC bridge – Specifications of RLC bridge – Block diagram & working principles of a Q-meter – Digital LCR bridges

Digital Instruments: Principle and working of digital meters – Comparison of analog & digital instruments – characteristics of digital meter – working principles of digital voltmeter.

Digital multimeter: Block diagram and working of digital multimeter – working principle - time interval, frequency and period measurement using universal counter/frequency counter – time-base stability, accuracy and resolution.

Note: Problems should be solved at the end of every chapter of all units.

Suggested Books:

1. A text book in electrical technology – B. L. Thereja – S. Chand & Co.
2. Performance and design of AC machines – M. G. Say – ELBS Edn
3. Digital circuits and systems – Venugopal, Tata McGraw Hill, 2011
4. Logic circuit design – Shimon P. Vingron, Springer, 2012
5. Digital electronics – Subrata Ghoshal, Cengage Learning, 2012
6. Electronic devices and circuits – S. Salivahanan & N. S. Kumar, 3rd Edn, 2012, Tata McGraw Hill
7. Electronic circuits: Hand Book of design and applications – U. Tietze & Ch. Schenk, Springer, 2012
8. Electronic devices – Thomas L. Floyd, 7th Edn., Pearson India, 2008

B.Sc. (Physics) - II Year
Semester – IV
Digital Electronics
(SEC - IV)

Total: 28 Hrs
(2 Hrs / week)

Unit I (14 Hrs)

Number Systems: Decimal, Binary, Octal and Hexadecimal.

Conversion: Binary to Decimal, Octal to Decimal, Hexadecimal to Decimal, Decimal to Binary, Decimal to Octal and Decimal to Hexadecimal.

Binary coded decimal, Excess-3 code, grey code, ASCII code.

Logic gates: OR, AND, NOT, EX-OR, NAND, NOR, Universal gates.

Half adder and Full adder.

Unit II: (14 Hrs)

Boolean algebra: Boolean laws, DeMorgan's theorems, Sum of products, Product of sums and Karnaugh maps. Multiplexers and Demultiplexers.

Flip-Flops: RS flip-flop, D flip-flop, JK flip-flop and MS flip-flop.

Registers: Types of Registers.

Counters: Synchronous and Asynchronous counters and their differences.

NOTE: Problems should be solved at the end of every chapter of all units.

References:

1. Digital Electronics by Gothman
2. Digital principles and applications by Malvino and Leach

Suggested Books:

1. Electronic Devices and circuits - Jacob Milliman, Christos C. Haikais and satyabrata Jit, Mc Graw Hill (India) Pvt. Ltd, 2010
2. Op-Amps and Linear Integrated circuits – P. Ramakanth and Gaykward, 4th edition PHI, 2000
3. Electronic measurements and instrumentation Technology - William D cooper and Ad Helfrick, PHI, 2002
4. Electronic devices and circuits – S. Shalivahan and N. Sureshkumar 2nd Edn, Mc Graw Hill, Pvt. Ltd., 2007.
5. Basic Electronics for B.Sc (Physics) III Year, 2019, Telugu Academy

**B.Sc. (Physics)- III Year
Semester – V
Renewal energy & Energy harvesting
(GE)**

Total: 56 Hrs
(4 Hrs / week)

Unit I: Principles of Solar Radiation and Collection (Qualitative only) (14Hrs)

Non-renewable energy resources – Principles of power generation and transmission. A model of conventional thermal power plant. Advantages and disadvantages of conventional power plants. Role and potential of new and renewable sources, the solar energy option, environmental impact of solar power, physics of the sun, the solar constant, solar radiation on tilted surface, instruments for measuring solar radiation and sun shine, solar radiation data.

Unit II: Solar Energy Storage and Applications (14Hrs)

Solar energy collectors - Flat plate and concentration collectors, classification of concentration collectors and orientation, advanced collectors. Different sensible, latent heat and stratified storage, solar ponds. Solar Applications – solar heating/ cooling technique, solar distillation and drying, photovoltaic energy conversion.

Unit III: Wind and Bio-Mass Energy (14Hrs)

Resources and potentials, horizontal and vertical axis windmills, performance characteristics. Principles of Bio-Conversion, Energy from waste, types of bio-gas digesters, gas yield, combustion characteristics of bio-gas, utilization for cooking, LPG and CNG.

Unit IV: Geothermal and Ocean Energy (14Hrs)

Resources, types of wells, methods of harnessing the energy, potential in India. OTEC, principles of utilization, setting of OTEC plants, thermodynamic cycles. Tidal and wave energy, Potential and conversion techniques, mini-hydel power plants, land and their economics.

Suggested Books:

1. Non-Conventional Energy Sources - G.D Rai, Khanna Publishers
2. Renewable Energy Resources - Twidell & Wier, CRC Press (Taylor & Francis)
3. Renewable energy resources - Tiwari and Ghosal, Narosa.
4. Renewable Energy Technologies - Ramesh & Kumar, Narosa
5. Non-Conventional Energy Systems - K Mittal, Wheeler
6. Renewable energy sources and emerging technologies - D.P. Kothari, K.C. Singhal.

**B.Sc. (Physics)- III Year
Semester – VI
Nano Science
(Paper in lieu of project)**

Total: 56 Hrs
(4 Hrs / week)

Unit I: (12 Hrs)

Length scales in physics and Nano structures: 1D, 2D and 3D nano structures (nanodots, thin films, nanowires, nanorods), Band structure and density of states of materials at nano scale – Size effects in nano systems – Quantum confinement in 3D, 2D and 1D nano structures and its consequences

Unit II: (16 Hrs)

Synthesis of Nano structure materials: Top-down and Bottom-up approach – Photolithography – Ball milling – Gas phase condensation – Vacuum deposition – Physical vapor deposition (PVD) – Thermal evaporation – E-beam evaporation – Pulsed Laser deposition – Chemical vapor deposition (CVD) – Sol-Gel – Electro deposition – Spray pyrolysis – Hydrothermal synthesis – Preparation through colloidal methods – MBE growth of quantum dots

Characterization: X-Ray diffraction – Optical microscopy – Scanning Electron Microscope (SEM) – Transmission Electron Microscope (TEM) – Atomic Force Microscope (AFM) – Scanning Tunneling Microscope

Unit III: (14 Hrs)

Optical properties: Coulomb interaction in nano structures – concept of dielectric constant for nano structures and charging of nano structure – Quasi-particles and excitons – Excitons in direct and indirect band gap semiconductor nanocrystals – Quantitative treatment of quasi-particles and excitons – Charging effects – Radiative processes: general formalization – absorption, emission and luminescence – Optical properties of hetero structures and nano structures

Electron Transport: Carrier transport in nano structures – Coulomb blockade effect – thermionic emission – tunneling and hopping conductivity – Defects and impurities: Deep level and surface defects

Unit IV: (14 Hrs)

Applications: Applications of nano particles, quantum dots, nanowires and thin films for photonic devices (LED, solar cells) – Single electron devices (Qualitative only) – CNT based transistors – Nano material devices: Quantum dots – hetero structure Lasers

Optical switching and optical data storage – Magnetic quantum well – magnetic dots – magnetic data storage – Micro Electromechanical Systems (MEMS), Nano Electromechanical Systems (NEMS)

Suggested Books:

1. Introduction to Nanotechnology – C.P. Poole, Jr. Frank, J. Owens – Wiley India Pvt, Ltd.
2. Nanotechnology: Principles & Practices – S.K. Kulkarni – Capital Publishing Co.)
3. Introduction to Nanoscience and Technology – K.K. Chatopadhyay, A.N. Benerjee – PHI Learning Pvt. Ltd.
4. Nanotechnology – Richard Booker, Earl Boysen – John Wiley and Sons
5. Nanoparticle Technology Handbook – M. Hosokawa, K. Nogi, M. Naita, T. Yokoyama, Elsevier, 2007.
6. Springer Handbook of Nanotechnology – Bharath Bhushan, Springer-Verlag, Berlin, 2004.

SCHEME OF QUESTION PAPER

**B.Sc. (PHYSICS) I/II/III Year Examination
Semester: I/II/III/IV/V/VI**

**Paper:
(For DSC, DSE, GE & Paper in lieu of project)**

Time: 3 Hours]

[Marks: 80

SECTION A: SHORT ANSWER QUESTIONS (8 X 4 = 32)

Answer Any EIGHT questions. Each question carries equal marks

1. From Unit 1
2. From Unit 1
3. From Unit 1 (Problem)
4. From Unit 2
5. From Unit 2
6. From Unit 2 (Problem)
7. From Unit 3
8. From Unit 3
9. From Unit 3 (Problem)
10. From Unit 4
11. From Unit 4
12. From Unit 4 (Problem)

SECTION B: ESSAY TYPE ANSWER QUESTIONS (4 X 12 = 48)

Answer Any FOUR questions. All questions carry equal marks

13. (a) From Unit 1
OR
(b) From Unit 1
14. (a) From Unit 2
OR
(b) From Unit 2
15. (a) From Unit 3
OR
(b) From Unit 3
16. (a) From Unit 4
OR
(b) From Unit 4

SCHEME OF QUESTION PAPER

B.Sc. (PHYSICS) II Year Examination

Semester: III/IV

Paper:

(For SEC)

Time: 2 Hours]

[Marks: 40

SECTION A: SHORT ANSWER QUESTIONS (4 X 4 = 16)

Answer Any FOUR questions. Each question carries equal marks

1. From Unit 1
2. From Unit 1
3. From Unit 1 (Problem)
4. From Unit 2
5. From Unit 2
6. From Unit 2 (Problem)

SECTION B: ESSAY TYPE ANSWER QUESTIONS (2 X 12 = 24)

Answer Any TWO questions. All questions carry equal marks

7. (a) From Unit 1

OR

- (b) From Unit 1

8. (a) From Unit 2

OR

- (b) From Unit 2

DEPARTMENT OF ENGLISH
SATAVAHANA UNIVERSITY
UG GENERAL ENGLISH (CBCS) 2017-18



LESSON ONE (SHORT FICTION)	TEXT	THE TOUCH BY ABBURI CHAYADEVI
	GRAMMAR	CONCORD
	ETYMOLOGY	WORD ORIGIN
	READING COMPREHENSION	P V NARASIMHA RAO
	WRITING	LETTER WRITING
	LANGUAGE SKILLS	LISTENING SKILLS: TIPS TO IMPROVE LISTENING SKILLS, BARRIES TO LISTENING
	SOFT & COMMUNICATION SKILLS	BRAIN STORMING
LESSON TWO (PROSE)	TEXT	TO STUDENTS BY M K GANDHI
	GRAMMAR	WORDS AND THEIR FORMS
	VOCABULARY	STORY ABOUT THE ORIGIN OF WORDS
	READING COMPREHENSION	TEMPLE STORY
	WRITING	NOTE MAKING / NOTE TAKING
	LANGUAGE SKILLS	EFFECTIVE LISTENING: CONVERSATION SKILLS
	SOFT & COMMUNICATION SKILLS	JAM
LESSON THREE (POETRY)	TEXT	THE BAT MESSANGER BY JASHUVA
	GRAMMAR	SPOTTING THE ERRORS
	VOCABULARY	WORDS IN ENGLISH FROM OTHER LANGUAGES
	READING COMPREHENSION	PERINI, THE PROUD HERITAGE OF TELANGANA
	WRITING	PROVERB EXPANSION

	LANGUAGE SKILLS	READING SKILLS: SKIMMING AND SCANNING
	SOFT & COMMUNICATION SKILLS	ORAL PRESENTATION
LESSON FOUR (DRAMA)	TEXT	RAMANUJAN BY PARTAP SEHGAL
	GRAMMAR	PUTTING JUMBLED WORDS AND SENTENCES IN ORDER
	VOCABULARY	DERIVATION
	READING COMPREHENSION	MIMICRY
	WRITING	PARAGRAPH WRITING / ESSAY WRITING
	LANGUAGE SKILLS	CONVERSATION SKILLS
	SOFT & COMMUNICATION SKILLS	DIALOGUE WRITING
LESSON FIVE (SHORT FICTION)	TEXT	ARJUN BY MAHASWETHA DEVI
	GRAMMAR	SENTENCE COMPLETION
	VOCABULARY	WORD FORMATION
	READING COMPREHENSION	YADI SADASHIVA, A GENIUS PAR EXCELLENCE
	WRITING	E-CORRESPONDENCE: E-MAILS
	LANGUAGE SKILLS	TELEPHONE CONVERSATION
	SOFT & COMMUNICATION SKILLS	ROLE PLAY
LESSON SIX (PROSE)	TEXT	WOMEN (AURAT) BY ISMAT CHUGHTAI
	GRAMMAR	CLOSE TEST
	VOCABULARY	SPOONERISM, TONGUE TWISTERS, MALAPROPISM, OXYMORON
	READING COMPREHENSION	ELAGANDAL FORT, VEMULAWADA
	WRITING	REPORT WRITING
	LANGUAGE SKILLS	PUBLIC SPEAKING
	SOFT & COMMUNICATION SKILLS	DEBATES

LESSON SEVEN (POETRY)	TEXT	FATHER RETURNING HOME BY DILIP CHITRE
	GRAMMAR	SYNTHESIS OF SENTENCES
	VOCABULARY	ONOMATOPOEIA
	READING COMPREHENSION	ART FORMS: PEMBARTHY, NIRMAL
	WRITING	CREATIVE WRITING
	LANGUAGE SKILLS	READING: INTENSIVE AND EXTENSIVE READING
	SOFT & COMMUNICATION SKILLS	GROUP DISCUSSIONS (GDS)
LESSON EIGHT (DRAMA)	TEXT	JATRA BY ARJUN DEO CHARAN
	GRAMMAR	TRANSFORMATION OF SENTENCES
	VOCABULARY	ORIGIN OF PHRASES
	READING COMPREHENSION	JANAPADA JATARA. OGGU KATHA
	WRITING	CURRICULUM VITAE
	LANGUAGE SKILLS	PARAPHRASING
	SOFT & COMMUNICATION SKILLS	MOCK INTERVIEW

UG GENERAL ENGLISH (CBCS) 2016-17

LESSON ONE (SHORT FICTION)	TEXT	OLD MAN AT THE BRIDGE by Ernest Hemingway
	PRONUNCIATION	CONSONANTAL SOUNDS
	GRAMMAR	ARTICLES
	VOCABULARY	SYNONYMS
	SPELLING	PICK OUT THE MISSPELT WORDS
	CONVERSATIONS	ICE-BREAKING
	READING PASSAGE	RUDRAMA DEVI
	LIFE SKILLS	SELF-AWARENESS

LESSON TWO (PROSE)	TEXT	INDIA AND DEMOCRACY by Dr.B.R.AMBEDKAR
	PRONUNCIATION	VOWEL SOUNDS: MONOPHTHONGS
	GRAMMAR	PREPOSITIONS
	VOCABULARY	ANTONYMS
	SPELLING	USE OF 'UN' OR 'DIS'
	CONVERSATIONS	INTRODUCING
	READING PASSAGE	MEDARAM JATARA
	LIFE SKILLS	EMPATHY
LESSON THREE (POETRY)	TEXT	THE SCRIBE by WALTER DE LA MARE
	PRONUNCIATION	VOWEL SOUNDS: DIPHTHONGS
	GRAMMAR	TENSES
	VOCABULARY	HOMOPHONES & HOMONYMS
	SPELLING	USE OF 'TION' OR 'SION'
	CONVERSATIONS	DESCRIBING A PERSON/PLACE/EVENT
	READING PASSAGE	KALOJI
	LIFE SKILLS	CRITICAL THINKING & CREATIVE THINKING SKILLS
LESSON FOUR (DRAMA)	TEXT	THE NEVER-NEVER NEST by CEDRIC MOUNT
	PRONUNCIATION	PLOSIVES
	GRAMMAR	FRAMING QUESTIONS
	VOCABULARY	ONE-WORD SUBSTITUTES
	SPELLING	USE OF 'MENT'
	CONVERSATIONS	GIVING DIRECTIONS
	READING PASSAGE	KUNTALA WATERFALL
	LIFE SKILLS	DECISION-MAKING SKILL
LESSON FIVE (SHORT FICTION)	TEXT	THE RELUCTANT PHILANTHROPIST by GOLLAPUDI SRINIVASA RAO
	PRONUNCIATION	FRICATIVES
	GRAMMAR	DISCOURSE MARKERS
	VOCABULARY	IDIOMS & PHRASES
	SPELLING	USE OF 'IE' AND 'EI'
	CONVERSATIONS	SEEKING INFORMATION
	READING PASSAGE	BATHUKAMMA
	LIFE SKILLS	PROBLEM-SOLVING SKILL
LESSON SIX (PROSE)	TEXT	ON READING BOOKS by VIRGINIA WOOLF
	PRONUNCIATION	AFFRICATES & NASALS
	GRAMMAR	VOICE & DEGREES OF COMPARISON

	VOCABULARY	PHRASAL VERBS
	SPELLING	USE OF 'ABLE' & 'IBLE'
	CONVERSATIONS	ORGANIZING A MEETING/INVITING GUESTS
	READING PASSAGE	RAMAPPA
	LIFE SKILLS	EFFECTIVE COMMUNICATION SKILL
LESSON SEVEN (POETRY)	TEXT	AFTER BLENHEIM by ROBERT SOUTHEY
	PRONUNCIATION	LATERALS, SEMI-VOWELS
	GRAMMAR	REPORTING SPEECH & QUESTION TAGS
	VOCABULARY	LEXIS/WORD-BUILDING
	SPELLING	USE OF PREFIXES & SUFFIXES
	CONVERSATIONS	ORGANIZING A MEETING/PROPOSING A VOTE OF THANKS
	READING PASSAGE	BONALU
	LIFE SKILLS	INTER-PERSONAL RELATIONSHIPS
LESSON EIGHT (DRAMA)	TEXT	THE INFORMER by BERTOLT BRECHT
	PRONUNCIATION	SYLLABIC STRUCTURE
	GRAMMAR	COMMON ERRORS
	VOCABULARY	COLLOCATIONS
	SPELLING	
	CONVERSATIONS	
	READING PASSAGE	KINNERASANI
	LIFE SKILLS	COPING WITH STRESS AND EMOTIONS

SYLLABUS COMPONENTS OF M.A. ENGLISH
(With effect from the academic year 2017-18)

Previous

Semester I (25 Credits)

Paper I ENG 101: The English Language: History, Description and Practice (5C)

Paper II ENG 102: English Poetry (5 Credits)

Paper III ENG 103: English Drama (5 Credits)

Paper IV ENG 104: (A) English Lg and Phonetics or (B) Discourse Analysis (4 C)

Paper V ENG 105: (A) Modern Indian Literatures in Translation or (B) Cultural Studies (4 Credits)

Seminars: 2 Hours per week (2 Credits) on approved topics

Semester II (25 Credits)

Paper I ENG 201: English Lg Teaching: History, Approaches and Methods (5C)

Paper II ENG 202: English Prose (5 Credits)

Paper III ENG 203: English Fiction (5 Credits)

Paper IV ENG 204: (A) Women's Writing OR (B) Gender Studies (4 Credits)

Paper V ENG 205: Twentieth Century Literary Criticism and Theory or (B) Translation Studies (4 Credits)

Seminars: 2 Hours per week (2 Credits) on approved topics

Final Year

Semester III (25 Credits)

Paper I ENG 301: English Language Teaching: Classroom Techniques and Practical English (5 Credits)

Paper II ENG 302: American Literature- I (5 Credits)

Paper III ENG 303: Indian Writing in English-I (5 Credits)

Paper IV ENG 304: (A) Postcolonial Literature OR (B) Modern European Literature in Translation (4 Credits)

Paper V ENG 305: (Inter-disciplinary) - (A) Literature and Film or (B) Computer Assisted Language Learning (CALL) (4 Credits)

Seminars: 2 Hours per week (2 Credits) on approved topics

Semester IV (25 Credits)

Paper I ENG 401: English Lg Teaching: Major Developments in L1 and L2 (5C)

Paper II ENG 402: American Literature-II (5 Credits)

Paper III ENG 403: Indian Writing in English—II (5 Credits)

Paper IV ENG 404: (A) Academic Writing and Research Methodology OR (B) Fourth World Literatures (4 Credits)

Paper V ENG 405: (A) Project Work or (B) South Asian Literature (4 Credits)

Seminars: 2 Hours per week (2 Credits) on approved topics

Total Credits of 4 Semesters = 100

Semester I

Paper 1 ENG 101: The English Language: History, Description and Practice (5 Credits)

Unit I

Indo-European Family of Languages and its Branches; Grimm's Law
Descent of English: Important features of Old English—Spelling and Pronunciation, Vocabulary
Middle English and Modern English: the Norman conquest, Major Changes in the English Language during Middle English Period, The Rise of Standard English; General Characteristics of Modern English

Unit II

Foreign Contribution to the Growth of Vocabulary: Influence of Greek, Latin, French and German on the English language
Word Formation—Different Processes
Change of Meaning—Different Processes

Unit III

Structure of the English Noun Phrase
Structure of the English Verb Phrase
The Simple Sentence—its types, constituents and organization; Coordination and Subordination—their semantic implications

Unit IV

Dialect: 'The Standard' Dialect; Idiolect; Register
Style; Jargon; Slang
British English and American English: Differences in Spelling and Pronunciation

Unit V

Functional Grammar: Transformations: Direct and Reported Speech (Use of Reporting Verbs), Degrees of Comparison
Functional English-I: Introducing oneself and others, Asking questions and giving polite replies, Complaining and Apologizing, Persuading people, Taking the initiative/Turn Taking
Functional English-II: Seeking permission, Inviting friends / colleagues, Complimenting, Expressing sympathy, Telephone etiquette

Suggested Reading

Baugh, A. C., & Cable, T. (2002). *A History of the English Language*. London: Routledge.
Bradley, H. (1964). *The Making of English*. New York, NY: Macmillan & Co. Ltd.
Crystal, D. (2004). *The Language Revolution*. Malden, MA: Polity Press.
Harmer, J. & Arnold, J. (1979). *Advanced Speaking Skills*. London: Longman.
Jespersen, O. (1991). *Growth and Structure of the English Language*. Oxford: Blackwell.
Klippel, F. (1984). *Keep Talking*. London: Cambridge University Press.

Krishnaswamy, N. (1978). *Modern English: A book of grammar, usage & composition*. Madras: Macmillan India Limited.

Quirk, R., & Greenbaum, S. (1973) *A University Grammar of English*. (Abridged). London: Longman.

Sood, S.C., Bose, N., Jani, N., Krishnan, G., Sawhney, S., Singh, M.S. Varma. P. (eds). (2005). *Developing Language Skills*. New Delhi: Foundation Books.

Wood, F T. (2000). *An Outline History of the English Language*. Chennai, TN: Macmillan

India Yule, G. (1995). *The Study of Language*. Cambridge: Cambridge University Press.

Paper II ENG 102 English Poetry (5 credits)

Unit I	Background Renaissance-Reformation; Neo-Classicism; Fancy and Imagination; Pre-Raphaelites; War Poetry; Modernism-Postmodernism	
Unit II	Geoffrey Chaucer John Milton John Donne Alexander Pope	<i>The General Prologue to the Canterbury Tales</i> (Tran. Nevill Coghill) lines 1-42 (“When in April ... I therefore will begin”) <i>Paradise Lost</i> (Book One) “A Valediction”, “The Canonization”, “The Rape of the Lock” (Canto One)
Unit III	William Blake William Wordsworth P B Shelley John Keats	From <i>Songs of Innocence</i> (“The Lamb”, “The Chimney Sweeper”) From <i>Songs of Experience</i> (“The Tyger”, “London”) “Tintern Abbey”, “Anecdote for Fathers” “Ode to the West Wind”, “To a Skylark” “Ode on a Grecian Urn”, “Ode to a Nightingale”
Unit IV	Elizabeth Barrett Browning Alfred Lord Tennyson Robert Browning Matthew Arnold	<i>Sonnets from the Portuguese</i> 14 (“If thou must love me ...”) 43 (“How do I love thee ...”) “Ulysses”, “The Sailor Boy” “My Last Duchess”, “The Lost Leader” “Self-Dependence”, “Dover Beach”
Unit V	T S Eliot Phillip Larkin Seamus Heaney Carol Ann Duffy	<i>The Waste Land</i> “Best Society”, “Churchgoing” “Digging”, “Alphabets” “Originally”, “Havisham”

Suggested Reading

Boulton, Marjorie. *The Anatomy of Poetry*. London: Routledge and Kegan Paul, 1953.
Childs, Peter. *Modernism*. New Critical Idiom Series. London: Routledge, 2003.
Day, Aidan. *Romanticism*. New Critical Idiom Series. London: Routledge, 2003.
Eagleton, Terry. *How to Read a Poem*. Oxford: Blackwell, 2007.
Featherstone, Simon. Ed. *War Poetry: An Introductory Reader*. London: Routledge, 1995.
Gardner, Helen. Ed. *Metaphysical Poets*. New York: Penguin, 1957.
Kreutzer, James. *Elements of Poetry*. New York: Macmillan, 1971.
Leavis, FR. *New Bearings in English Poetry*. London: Penguin, 1939.
Lewis, CS. *A Preface to Paradise Lost*. Oxford: OUP, 1942.
---. *The Allegory of Love: A Study in Medieval Tradition*. Oxford: Clarendon, 1936.
Newman Brooks, Peter. Ed. *Reformation Principle and Practice*. London: Scholar Press, 1980.
Seturaman, VS, et al. Ed. *Practical Criticism*. Madras: Macmillan, 2000.

Paper III ENG 103 English Drama (5 Credits)

Unit I	Background Origin and Development of British Drama (till the 17th Century); Tragedy; Comedy; Restoration Drama; Theatre of the Absurd
Unit II	Christopher Marlowe <i>Doctor Faustus</i> William Shakespeare <i>King Lear</i> William Shakespeare <i>The Tempest</i>
Unit III	Aphra Behn <i>The Rover</i> (Part I) Oscar Wilde <i>The Importance of Being Earnest</i> GB Shaw <i>Saint Joan</i>
Unit IV	John Osborne <i>Look Back in Anger</i> Caryl Churchill <i>Top Girls</i> Tom Stoppard <i>Indian Ink</i>
Unit V	One-act Plays JM Synge “Riders to the Sea” Harold Pinter “The Dumb Waiter” Alan Ayckbourn “Mother Figure”

Suggested Reading

Boulton, Marjorie. *The Anatomy of Drama*. London: Routledge and Kegan Paul, 1960.
 Bradbrook, MC. *Themes and Conventions of Elizabethan Theatre*. Cambridge: CUP, 1935.
 Bradley, AC. *Shakespearean Tragedy*. 1904. London: Penguin, 1991.
 Chaudhuri, Sukanta. Ed. *Renaissance Essays*. Oxford: OUP, 1995.
 Dollimore, Jonathan and Alan Sinfield. Eds. *Political Shakespeare*. Manchester: MUP, 1985.
 Esslin, Martin. *The Theatre of the Absurd*. New York: Penguin, 1969.
 Nagarajan, S and S Viswanathan. Eds. *Shakespeare in India*. New Delhi: OUP, 1987.
 Nicoll, Allardyce. *British Drama*. New York: Barnes & Noble, 1963.
 Pollard, AW. *English Miracle Plays, Moralities and Interludes*. Oxford: Clarendon, 1954.
 Steiner, George. *The Death of Tragedy*. London: Faber and Faber, 1961.
 Styan, JL. *The Elements of Drama*. Cambridge: CUP, 1969.
 ---. *Modern Drama: Theory and Practice*. 3 vols. Cambridge: CUP, 1981.
 Williams, Raymond. *Drama: From Ibsen to Brecht*. London: Chatto & Windus, 1965.

Paper IV ENG 104 A English Language and Phonetics (4 Credits)

Unit I

Language as a System of Communication: Features of Human Communication, Differences between Animal and Human Communication.
 Verbal Communication: Formal vs Informal Communication, One way vs Two way Communication.
 Non-verbal Communication: Aspects relating to body language.

Unit II

Phonetics: Articulatory Phonetics: Definition, Organs of Speech, Speech Mechanism (air-stream mechanism)
 Phonetic sounds vs Phonemic sounds; Classification of Phonemic Sounds IPA, Phonemic transcription (word and sentence levels)
 Description of Consonant sounds and Vowel Sounds

Unit III

Word Accent/Stress: Syllable, Syllabification, Primary and Secondary Stress, Rules of Word Stress, Consonant clusters
 Aspects of Connected Speech: Weak forms and Elision
 Intonation: Tones of intonation and meaning making

Unit IV

Levels of Language Description - Phonology: Definition, Scope and Other Aspects
 Morphology: Definition, Scope and Other Aspects
 Syntax: Definition, Scope and Other Aspects

Suggested Reading

Bansal, R. K., & Harrison J.B. (2006). *Spoken English*. Hyderabad: Orient Longman.
 Balasubramanian, T. (2008). *A Textbook of English Phonetics for Indian Students*. Chennai: Macmillan.
 Hedwig, L. (1998). *Body Language: A Guide for Professionals*. New Delhi: Response Books.
 Hockett, C. (1960). *A Course in Modern Linguistics*. London: Macmillan.
 Jones, D. (1992). *The Pronunciation of English*. Cambridge: Cambridge University Press.
 O' Connor, J.D. (1997). *Better English Pronunciation*. New Delhi: UBS.
 Roach, P. (1990). *English Phonetics and Phonology: A Practical Course*. Cambridge: Cambridge University Press.
 Sethi J., Sadanand. K., & Jindal, D. V. (2004). *A Practical Course in English Pronunciation*. New Delhi: PHI.
 Yule, G. (1995). *The Study of Language*. Cambridge: Cambridge University Press.

Paper IV ENG 104 B Discourse Analysis (4 Credits)

Unit I

Discourse analysis- Definition and Approaches, Theoretical traditions
 Characteristics of Discourse /Speech

Unit II

Coherence: Definition and its Contributing Factors
 Cohesion: Definition and its Contributing factors, Speech Act theory

Unit III

The Cooperative principle, The Politeness principle
 Conversation analysis -Implicatures

Unit IV

Genre analysis, Corpus-based approaches, Critical Discourse Analysis

Suggested Reading

Cook, G. (1989). *Discourse*. Oxford: Oxford University Press.
 Fairclough, N. (2010). *Critical discourse analysis: The critical study of language*. London: Longman.
 Flowerdew, J. (2013). *Discourse in English language education*. London: Routledge.
 Grice, H.P. (1975). "Logic and conversation". Peter Cole and Jerry L. Morgan, (Eds.) *Syntax and Semantics*, 3. New York, NY: Academic Press. 41-58.
 Halliday and Hasan. (1976). *'Cohesion in English'*. Longman: London.
 Jones, R. (2012). *Discourse analysis: A resource book for students*. Oxford: Blackwell.
 Levinson, S.C. (1993), *Pragmatics*, Cambridge: Cambridge University Press.
 Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge University Press, Cambridge.
 Widdowson, H. G. (1995). "Discourse analysis: A critical view". *Language and Literature*, 4 (3):157-172.

Paper V ENG 105 A Modern Indian Literatures in Translation (4 Credits)

Unit I Background

Concept of Sahitya; Indian Concept of Translation; Tradition-Modernity; Progressive Writers Movement; Indian Dramatic Traditions; Dalit Aesthetics

Unit II Poetry

Jibanananda Das	“Banalata Sen”, “Naked Solitary Hand”, “This Earth”
Makhdoom Mohiuddin	“The Heart of Silence”, “Prison”, “Darkness”
Gajanan Madhav Muktibodh	“The Orang-Outang”, “The Void Within”, “A Single Shooting Star”
Namdeo Dhasal	“The Day She Was Gone”, “New Delhi, 1985”, “On the way to the dargah”

Unit III Fiction

U R Ananthamurthy	<i>Samskara: A Rite For A Dead Man</i>
Mahasweta Devi	<i>Mother of 1084</i>
Bama	<i>Karukku</i>

Unit IV Drama

Rabindranath Tagore	<i>Chandalika</i>
Vijay Tendulkar	<i>Silence! The Court is in Session</i>
Girish Karnad	<i>Hayavadana</i>

Suggested Reading

Devy, GN. *After Amnesia: Tradition and Change in Indian Literary Criticism*. Bombay: Orient Longman, 1992.

---. Ed. *Indian Literary Criticism: Theory and Interpretation*. Hyderabad: Orient Longman, 2002. Kapoor, Kapil. *Literary Theory: Indian Conceptual Framework*. New Delhi: West Press, 1998.

Limbale, Sharankumar. *Towards an Aesthetic of Dalit Literature*. Hyderabad: Orient Longman, 2004. Mukherjee, Sujit. *A Dictionary of Indian Literature*. Vol I (Beginnings to 1850). Hyderabad: OL, 1998.

---. *Towards a Literary History of India*. Simla : Indian Institute of A Study, 1975.

---. *Translation as Discovery*. 1981. Hyderabad: Orient Longman, 1994.

---. *Translation as Recovery*. New Delhi: Pencraft, 2004.

Paniker, Ayyappa. *Indian Narratology*. New Delhi: Indira Gandhi Centre for the Arts, 2003.

Radhakrishnan, S. *The Hindu View of Life*. 1926 Delhi: Harper Collins, 2014.

Rege, Sharmila. *Writing Caste, Writing Gender: Reading Dalit Women’s Testimonios*. New Delhi: Zuban, 2006.

Satchidanandan, K, ed. *Signatures: One Hundred Indian Poets*. Delhi: NBT, 2003.

Vatsyayan, SH. *A Sense of Time: An Exploration of Time in Theory, Experience and Art*. Delhi: OUP, 1981.

Paper V ENG 105 B Cultural Studies (4 Credits)

Unit I

Cultural Studies: An Introduction, Understanding Cultural Studies
Modernity-Postmodernity, Hegemony-Resistance, Colonialism-Post-colonialism

Reading

Baldwin E. *Introducing Cultural Studies*

During, S. *The Cultural Studies Reader*

Williams, Raymond. *The Analysis of Culture: Culture and Society*

Unit II

Power-Agency, Identity-Subjectivity, Ideologies, Symbol-Semiotics, Gender-Feminism

Reading

Hall, Stuart. *What Is Culture? (Cultural Studies and Its Theoretical Legacies)*

During, S. *Cultural Studies: An Introduction*

Unit III

Race, Ethnicity, Nation, Orientalism, Subaltern

Globalization, Diaspora, Multiculturalism

Reading

Hooks, Bell. *A Revolution of Values: The Promise of Multicultural Change*

Tomlinson, John. *Globalization and Culture*

Said, Edward. *Orientalism*

Spivak, Gayatri. "Can the Subaltern Speak?"

Unit IV

Popular Culture- Culture Industry- The Commodity

Media, Television- Representation, Consumerism

Science, Technology and Cultural Studies, Cyber-culture

Reading

Ross, Andrew. *The Challenge of Science*

Fiske, J. *Understanding Popular Culture*

MA (Previous)

2017-2018

**Semester
II**

**Paper I ENG 201 English Language Teaching: History, Approaches and
Methods

(5 Credits)**

Unit I

- a) History of English Language Teaching in India: Some Important Pre-Independence Landmarks: Macaulay's Minute-a critique; Woods Despatch (1854); Indian Education Commission (1882); Indian Universities Commission (1902)
- b) Landmarks in English Education in India after Independence: Radhakrishnan Commission (University Education Commission, 1948); Kothari Commission - Three Language Formula (1964-66), Curriculum Development Commission, Acharya Ramamurti Commission (1990); The National Knowledge Commission Report (2006- 10)
- c) Teaching English as a second language: Role of English in India; Objectives of Teaching English as a Second Language in India

Unit II

- a) Behaviourism and its Implications for ELT: Pavlov's Classical Conditioning, Thorndike's Connectionism, Skinner's Operant conditioning
- b) Cognitivism and its Implications for ELT: Gestalt Theory; Chomsky's Cognitive Theory-Competence vs Performance; Dell Hymes' Communicative Competence
- c) Language Acquisition Process: Differences between First Language Acquisition and Second Language Learning

Unit III

- a) Approaches and Methods: Grammar Translation method, Direct Method, Reading Method, Audio-Lingual Method, Bilingual Method, Eclectic Method
- b) Communicative Language Teaching (CLT), Task Based Learning and Teaching
- c) Humanistic Approaches: Community Language Learning, Suggestopedia

Unit IV

- a) Teaching LSRW and their Sub-skills
- b) Curriculum and Syllabus: Components, Needs Analysis, Goals and Objectives; Course Evaluation
- c) Types of Syllabi: Structural Syllabus, Notional - Functional Syllabus, Task-based Syllabus

Unit V

- a) Language Testing: Definition and Types of Language Testing
- b) Characteristic Features of an Effective Test: Validity, Reliability, Feasibility

- c) Testing Language Skills: Listening, Speaking, Reading, Writing, Vocabulary, Grammar

Suggested Reading

- Aggarwal, J.C. (2010). *Landmarks in the history of modern Indian education*. New Delhi: Vikas Pub.
- Agnihotri.R.K., & Khanna, A.L. (1995). *English language teaching in India: Issues and innovations*. New Delhi: Sage Publications.
- Allen, H. B., & Campbell. (1972). *Teaching English as a second language*. New Delhi: McGraw-Hill.
- Ghosh, R. N. (1977). *Introduction to English language teaching: Methods at the college level* (Vol.3).Hyderabad: CIEFL.
- Heaton, J. B. (1975). *Writing English language tests*. London: Longman.
- Hughes, A. (2003). *Testing for language teachers*. Cambridge: Cambridge UP.
- Krishnaswamy, N. (2005). *Teaching English: Approaches, methods and techniques*. India: Macmillan.
- Krishnaswamy, N., & Lalita Krishna Swamy. (2006). *The story of English in India*. New Delhi:Foundation Books Pvt. Ltd.
- Krishnaswamy, N., & Sriraman, T. (2006). *English teaching in India*. Madras: T.R. Publications.

MA (Previous) Semester II

Paper II	ENG 202	English Prose	(5 Credits)
Unit I	Background Origin and Development of the English Essay; Utopia; Translation of the Bible; Allegory; Satire		
Unit II	Philip Sidney Francis Bacon John Bunyan	<i>An Apologie for Poetrie</i> “Of Studies”, “Of Truth”, “Of Revenge” <i>The Pilgrim’s Progress</i> (from “As I walked through the wilderness of this world ...” till the paragraph ending with the line “The name of the one was Simple, another Sloth, and the third Presumption.”)	
Unit III	Jonathan Swift Joseph Addison Samuel Johnson	“The Battle of the Books” “Sir Roger in Church”, “The Aims of the Spectator” <i>Preface to Shakespeare</i> (Up to the paragraph beginning “So careless was this great poet...”)	

Unit IV	Charles Lamb William Hazlitt John Ruskin	“Dream Children”, “Old China” “The Indian Jugglers”, “On People with One Idea” <i>Unto This Last</i> (Section I)
Unit V	Bertrand Russell Virginia Woolf George Orwell	“The Ethics of War”, “Education and Discipline” <i>A Room of One’s Own</i> “Politics and the English Language”, “Reflections on Gandhi”

Suggested Reading

Boulton, Marjorie. *The Anatomy of Prose*. London: Routledge and Kegan Paul, 1954.
 Chaudhuri, Sukanta. Ed. *Bacon’s Essays: A Selection*. New Delhi: OUP, 1977.
 Daniel, David. *The Bible in English: Its History and Influence*. Yale: Yale University Press, 2003.
 Gross, John. Ed. *The New Oxford Book of English Prose*. Oxford: OUP, 2000.
 Read, Herbert. *English Prose Style*. 1928. New York: Pantheon Books, 1952.
 Robinson, Ian. *The Establishment of Modern English Prose in the Reformation and the Enlightenment*. Cambridge: CUP, 1998.
 Saintsbury, George. *A History of English Prose Rhythm*. London: Macmillan, 1912.
 Shklovsky, Victor. *Theory of Prose*. London: Dalkey Archive Press, 1991.

Paper III ENG 203 English Fiction (5 Credits)

Unit I	Background The Rise of Novel; The Gothic Novel; Realism-Naturalism; Bildungsroman; Stream of Consciousness; Magic Realism	
Unit II	Daniel Defoe Jane Austen Charlotte Brontë	<i>Robinson Crusoe</i> <i>Emma</i> <i>Jane Eyre</i>
Unit III	Charles Dickens Thomas Hardy Joseph Conrad	<i>Hard Times</i> <i>Tess of the d’Urbervilles</i> <i>Heart of Darkness</i>
Unit IV	DH Lawrence William Golding Zadie Smith	<i>Sons and Lovers</i> <i>Lord of the Flies</i> <i>White Teeth</i>
Unit V	Short Stories	

Rudyard Kipling	“Lispeth”, “Thrown Away”
HG Wells	“The New Accelerator”, “The Man Who Could Work Miracles”
Roald Dahl	“The Umbrella Man”, “Lamb to the Slaughter”

Suggested Reading

- Auerbach, Eric. *Mimesis: The Representations of Reality in Western Literature*. Princeton: Princeton UP, 2003.
- Booth, Wayne C. *The Rhetoric of Fiction*. Chicago: University of Chicago Press, 1961.
- Boulton, Marjorie. *The Anatomy of the Novel*. London: Routledge and Kegan Paul, 1975.
- Eagleton, Terry. *The English Novel: An Introduction*. Oxford: Blackwell, 2004.
- Forster, EM. *Aspects of the Novel*. London: Edward Arnold, 1927.
- Lodge, David. *The Art of Fiction*. New York: Viking, 1992.
- Lubbock, Percy. *The Craft of Fiction*. London: Jonathan Cape, 1921.
- Lukacs, Georg. *The Theory of the Novel*. Cambridge: MIT Press, 1971.
- Scholes, Robert. *Elements of Fiction*. Oxford, OUP, 1968.
- Schorer, Mark. “Technique as Discovery”. *The Hudson Review*. 1. 1 (1948): 67-87.
- Watt, Ian. *The Rise of the Novel*. London: Peregrine, 1970.

Paper IV ENG 204 A Women’s Writing (4 Credits)

Unit I	Background Sex and Gender; Women’s Liberation Movement; Feminisms; Women and the Canon; Gyno-criticism	
Unit II	Poetry Aemilia Lanyer Sylvia Plath Grace Nichols Luci Tapahonso	“Eve’s Apology in Defense of Women” “Lady Lazarus”, “The Applicant”, “Daddy” “Waterpot”, “A Praise Song for Mother”, “The Fat Black Woman Goes Shopping” “Blue Horses Rush In”, “Leda and the Cowboy”, “Raisin Eyes”
Unit III	Fiction Jean Rhys Toni Morrison Chimamanda Adichie	<i>Wide Sargasso Sea</i> <i>The Bluest Eye</i> <i>Americanah</i>
Unit IV	Prose Mary Wollstonecraft Adrienne Rich Suniti Namjoshi	<i>Vindication of the Rights of Women</i> (Introduction and Chapter 2) “When We Dead Awaken: Writing as Re-Vision” From <i>Feminist Fables</i>

1. From the Panchatantra
2. The Little Princess
3. The Gods
4. Perseus and Andomeda
5. Case History
6. The Runner

Suggested Reading

- Beauvoir, Simone De. *The Second Sex*. New York: Vintage, 1974.
- Christian, Barbara. *Black Feminist Criticism*. New York: Pergamon Press, 1985.
- Friedan, Betty. *The Feminine Mystique*. New York: Dell, 1983.
- Gilbert, Sandra M. and Susan Gubar. *The Madwoman in the Attic: The Woman Writer and the Nineteenth-Century Literary Imagination*. New Haven: Yale UP, 1979.
- Elizabeth Kowalski Wallace, ed. *Encyclopedia of Feminist Literary Theory*. New York: Garland, 1997.
- Jain, Jasbir. *Indigenous Roots of Feminism: Culture, Subjectivity and Agency*. New Delhi: Sage, 2011.
- Lerner, Gerda. *The Creation of Patriarchy*. New York: OUP, 1986.
- Millet, Kate. *Sexual Politics*. Garden City, New York: Doubleday, 1970.
- Mohanty, Chandra Talpade. *Feminism Without Borders: Decolonizing Theory, Practicing Solidarity*. London: Duke University Press, 2003.
- Showalter, Elaine. *A Literature of Their Own: From Charlotte Brontë to Doris Lessing*. Rev. and expanded ed. London: Virago, 1999
- Wolf, Naomi. *The Beauty Myth: How Images of Beauty are Used Against Women*. London: Vintage, 1990. Web
- Adichie, Chimamanda. “We should all be Feminists”. *TEDx*.
- . “The Danger of a Single Story”. *TED. Feminism and Women’s Studies*.

Paper IV ENG 204 B Gender Studies (4 Credits)

Unit I	Background Femininity-Masculinity; Knowledge, Power, and Gender; Body Theory; Queer Theory, Queer Theory	
Unit II	Poetry Agha Shahid Ali Etal Adnan Maya Angelou Chris Mansell	<i>Leaving your City</i> <i>Five Senses for One Death</i> <i>Phenomenal Women</i> <i>The Bee Keeper</i>
Unit III	Fiction Yukio Mishima Patrick White	<i>Confessions of a Mask</i> <i>Flaws in the Glass</i>

	Gloria Naylor ShyamSelvadurai	<i>Mama Day</i> <i>Funny Boy</i>
Unit IV	Prose Michel Foucault Eve Kosofsky Sedgwick Jose Esteban Muñoz Roderick Ferguson	<i>The History of Sexuality</i> (Part One: “We ‘Other Victorians’”) <i>The Epistemology of the Closet</i> (Chapter 1) <i>Disidentification</i> (“Introduction”) <i>Aberrations in Black</i> (“Introduction”)

Suggested Reading

Beam, Joseph. Ed. *In the Life: A Black Gay Anthology*. Boston: Alyson Books, 1986. Print.

Birkby, Phyllis. Ed. *Amazon Expedition: A Lesbian/Feminist Anthology*. New Jersey: Times Change Press, 1973.

Browning, Frank. *The Culture of Desire*. New York: Crown Publishers, 1993.

Butler, Judith. *Gender Trouble*. United States: Routledge, 1990.

Dessaix, Robert. Ed. *Australian Gay & Lesbian Writing: An Anthology*. Melbourne: Oxford University Press. 1993.

Hennessy, Rosemary. *Profit and Pleasure*. New York: Routledge, 1997. Kingston, Maxine Hong. *The Woman Warrior*. United States: Knopf, 1976.

Lorde, Audre. *Sister Outsider*. Berkeley: Crossing Press, 2007.

Ratti, Rakesh. Ed. *The Lotus of Another Colour: An Unfolding of the South Asian Gay and Lesbian Experience*. Boston: Alyson Publication, 1993.

Warner, Michael. *The Trouble with Normal*. United States: The Free Press, 1999.

Paper V ENG 205 A Twentieth Century Literary Criticism and Theory (4 Credits)

Unit I	Background New Criticism; New Historicism; Structuralism and Poststructuralism; Reader Response Theories; Psychoanalytical Criticism	
Unit II	Cleanth Brooks Northrop Fry Mikhail Bakhtin	“The Language of Paradox” (from <i>The Well-Wrought Urn</i>) “Archetypes of Literature” (from <i>Fables of Identity</i>) “Discourse in the Novel” (from <i>The Dialogic Imagination</i>)
Unit III	Michel Foucault Roland Barthes Raymond Williams	“The Unities of Discourse” (from <i>The Archaeology of Knowledge</i>) “The Death of the Author” (from <i>Image-Music-Text</i>) “Literature” (from <i>Marxism and Literature</i>)

Unit IV	Edward Said	“Introduction” (from <i>Orientalism</i>)
	Elaine Showalter	“Feminist Criticism in Wilderness” (from <i>The New Feminist Criticism</i>)
	Henry Louis Gates Jr.	“Editor’s Introduction: Writing ‘Race’ and the Difference It Makes” (Sec 1-5)

Suggested Reading

- Ahmad, Aijaz. *In Theory: Classes, Nations, Literatures*. New Delhi: Oxford UP, 1993.
- Adorno, Theodor and Max Horkheimer. *Dialectic of Enlightenment*. London: Verso, 1986.
- Belsey, Catherine. *Critical Practice*. London: Methuen, 1980.
- Eagleton, Terry. *Literary Theory: An Introduction*. Oxford: Blackwell, 1983.
- Fish, Stanley. *Is There a Text in This Class?* Cambridge: Harvard University Press, 1980.
- Foucault, Michel. *The Order of Things: An Archaeology of Human Sciences*. New York: Pantheon, 1970.
- Jameson, Fredric. *Marxism and Form*. New Jersey: Princeton University Press, 1971.
- Leitch, Vincent B, ed. *The Norton Anthology of Theory and Criticism*. New York: Norton, 2001.
- Lodge, David and Nigel Wood, eds. *Modern Criticism and Theory: A Reader*. London: Pearson, 2000.
- Richards, IA. *Principles of Literary Criticism*. London: Routledge, 2003.
- Said, Edward. *The World, the Text, and the Critic*. Cambridge: Harvard University Press, 1983.
- Seldan, Raman and Peter Widdowson. *A Reader’s Guide to Contemporary Literary Theory*. London: Longman, 2005.
- Sturrock, John. *Structuralism and Since: from Levi Strauss to Derrida*. Oxford: OUP, 1979.
- Warren, Austen and Rene Wellek. *Theory of Literature*. New York: Harcourt, 1956.
- Wagh, Patricia. *Literary Theory: An Oxford Guide*. Oxford: Oxford UP, 2006.
- , and Philip Rice, eds. *Modern Literary Theory: A Reader*. London: Arnold, 2001.

Paper V ENG 205 B Translation Studies (4 Credits)

- Unit I What is Translation?
- Definition
 - History
 - Source language and target language
 - Recreation/Transcreation/ Interpretation
 - Purpose and importance of translation

Unit II Specialized types of translation, Administrative translation

Commercial Translation, General Translation, Legal translation
Literary translation

Unit III Tools of Translation

Cognitive, Command over source and target language

Language and society

Non- Cognitive, Dictionaries/ encyclopedia/ indices/ machine, etc

Unit IV Problems of Translation

General Problems: Incompetence, Ambiguity, Cultural gap, Structural difference,

Language Specific problems: Idioms, Contextual meaning

MA (Final) (For 2016-2017 Batch)

Semester III

**Paper I ENG 301 English Language Teaching: Classroom Techniques
and Practical English (5 Credits)**

Unit I

- d) Error Analysis Theory; Identifying and dealing with Common Learner Errors;
Remedial Teaching
- e) Techniques of Teaching Grammar and Vocabulary
- f) Techniques of Teaching Prose, Poetry and Drama;

Unit II

- d) Classroom Techniques: Lecture Method-Advantages and Disadvantages
- e) Learner Centred Approach: Classroom Discussion, Pair Work, Group Work, Role
Play
- f) Team Teaching and Teaching Large Classes

Unit III

- d) Teaching Aids: Use of the Blackboard, Flip Charts, Realia
- e) Audio-visual Aids: OHP, PPT
- f) Using technology: Computer Aided Language Learning (CALL), Importance
of English Language Laboratory

Unit IV

- d) Teaching of Literature: Teaching Language through Literature: Important
Techniques
- e) Stylistic Approach to the Teaching of Literature: Norm, Deviation and
Foregrounding
- f) Designing language tasks from literary texts.

Unit V

- d) Practical English I: Essentials of Presentation Skills, Elocution, Debate,

Compeering, Interviews, Group Discussions

- e) Practical English II: Corporate/business communication: Inter Office Memos (IOMs), Notices, Agenda and Minutes of Meeting
- f) Practical English III: Business Letters: Letter of enquiry, Letter of complaint, Letter of reply.

Suggested Reading

- Broughton, G. (1974). *Success with English: The Penguin course*. Harmondsworth: Penguin Books.
- Indira, CT. (1995). *Resource book for teachers of English: Teaching poetry at the advanced level*. Madras: T.R. Publications.
- Jay, A., & Jay, R. (1999). *Effective presentation: How to be a top-class presenter*. New Delhi: Universities Press (India) Limited.
- Krishnaswamy, N. (2005). *Teaching English: Approaches, methods and techniques*. India: Macmillan.
- Monippally, M.M. (2001). *Business communication strategies*. New Delhi: TataMc Graw-Hill.
- Raman, M.& Sharma, S. (2012). *Technical communication: Principles and practice*. New Delhi: Oxford University Press.
- Raman, M., & Singh, P. (2012). *Business communication*. New Delhi: Oxford University Press.
- Richards, J. C., & Rodgers, T. S. (1986). *Approaches and methods in language teaching: A description and analysis*. Cambridge: CUP.
- Rizvi, A. M. (2005). *Effective technical communication*. New Delhi: Tata McGraw-Hill.
- Tickoo, M. L. (2003). *Teaching and learning English: A source book for teachers and teacher trainers*. Hyderabad: Orient Longman.
- Ur, Penny. (2002). *A course in language teaching*. Cambridge: Cambridge UP.
- Widdowson, H. G. (1975). *Stylistics and the teaching of literature*. London: Pearson Education.

Paper II ENG 302 American Literature—I (5 Credits)

Unit I Background
Antebellum and Postbellum America; Puritanism; Transcendentalism; The American Romantics; American Frontier

Unit II Poetry

William Cullen Bryant	“A Forest Hymn”, “The Yellow Violet”, “America”
Edgar Allen Poe	“Raven”, “Dream Land”
Emily Dickinson	“Because I could not stop for death”, “I taste a

		liquor never brewed”, “‘Hope’ is the thing with feathers”
Unit III	Fiction Nathaniel Hawthorne Herman Melville Mark Twain	<i>The Scarlet Letter</i> <i>Billy Budd</i> <i>The Adventures of Huckleberry Finn</i>
Unit IV	Drama Eugene O’Neill Tennessee Williams Arthur Miller	<i>Desire Under the Elms</i> <i>The Glass Menagerie</i> <i>All My Sons</i>
Unit V	Prose and Short Fiction Ralph Waldo Emerson Henry David Thoreau William Faulkner	“The American Scholar” “Civil Disobedience” “Wealthy Jew”

Suggested Reading

- Abbotson, Susan C. W. “A Contextual Study of the Causes of Paternal Conflict Arthur Miller’s *All My Sons*.” *Hungarian Journal of English and American Studies*. 11. 2 (2005): 29-44.
- Downing, Pat Bromilow, et al. “Global O’Neill: A Portfolio of Photographs from the Baxter Theatre Centre Production of *Desire under the Elms*.” *Eugene O’Neill Review* 36.1(2015): 73-79.
- Emerson, Ralph Waldo. “The American Scholar” An Oration delivered before the Phi Beta Kappa Society, at Cambridge, August 31, 1837 Mr. President and Gentlemen.” *The American Scholar* 1. 1 (1932): 4.
- Herr, William A. “Thoreau: A Civil Disobedient?” *Ethics* 85. 1 (1974): 87-91.
- Hurley Harold, C. “‘But Bryant? What of Bryant in Bryant?’: The Religious Implications of the Allusion to ‘A Forest Hymn’ in *The Sun Also Rises*.” *The Hemingway Review* 20.2 (2001): 76-89.
- Person Jr. Leland S. “Poe’s Composition of Philosophy: Reading and Writing ‘The Raven’.” *Arizona Quarterly: A Journal of American Literature, Culture, and Theory* 46.3 (1990): 1-15.
- Rosenthal, Bianca. “Paul Celan’s Translation of Emily Dickinson’s “Because I could not stop for Death.” *The Emily Dickinson Journal* 6.2 (1997): 133.
- Wenke, John. “Complicating Vere: Melville’s Practice of Revision in *Billy Budd*.” *Leviathan* 1.1. (1999): 83-88.
- Zwart, Jane. “Initial Misgivings: Hawthorne’s *Scarlet Letter* and the Forgery of American Origin.” *ESQ: A Journal of the American Renaissance* 59.3 (2013): 411-438.

Paper III	ENG 303	Indian Writing in English—I (5 Credits)
Unit I	Background 19 Century Reform Movements in India; The Indian National Movement; Rise of the Indian Novel; Caste-Class; The New Indian Woman	
Unit II	Poetry Henry Derozio Toru Dutt Sri Aurobindo Sarojini Naidu	“The Harp of India”, “To My Native Land” “Sita”, “Our Casuarina Tree”, “My Vocation” “Silence is all”, “Is this the end?”, “The Dual Being” “The Pardah Nashin”, “Ghanashyam”, “The Gift of India”
Unit III	Fiction Bankimchandra Chatterjee Krupabai Satthianadhan Zeenuth Futehally	<i>Rajmohan’s Wife</i> <i>Kamala: a Story of Hindu Life</i> <i>Zohra</i>
Unit IV	Fiction Mulk Raj Anand Raja Rao R K Narayan	<i>Untouchable</i> <i>Kanthapura</i> <i>The Man-Eater of Malgudi</i>
Unit V	Prose B R Ambedkar Jawaharlal Nehru Arundhati Roy	“The Annihilation of Caste” “The Quest” (Chapter 3; <i>The Discovery of India</i>) “The Ladies Have Feelings, So...Shall We Leave It To The Experts?”

Suggested Reading

- Clark, TW, ed. *The Novel in India: Its Birth and Development*. London: George Allen & Unwin Ltd, 1970.
- Devy, GN. *In Another Tongue: Essays on Indian English Literature*. 1993. Madras: Macmillan, 1994.
- Gandhi, MK. *Hind Swaraj or Indian Home Rule*. 1938. Ahmedabad: Navajivan Publishing House, 2003.
- Harrex, SC. *The Fire and the Offering: The English-Language Novel of India 1935-1970*. 2 vols. Calcutta: Writers Workshop, 1977-78.

- Iyengar, Srinivasa. *Indian Writing in English*. 1962. New Delhi: Sterling, 1995.
- Mukherjee, Meenakshi. *The Twice Born Fiction: Themes and Techniques of the Indian Novel in English*. 1971. New Delhi: Pencraft, 2005.
- . *Realism and Reality: The Novel and Society in India*. Delhi: OUP, 1985.
- Mund, Subhendu. *The Indian Novel in English: Its Birth and Development*. Bhubaneswar: Prachi Prakashan, 1997.
- Naik, MK. *A History of Indian English Literature*. New Delhi: Sahitya Akademi, 1982.
- Nair, Ramachandran, KR. *Three Indo-Anglian Poets: Henry Derozio, Toru Dutt, and Sarojini Naidu*. New Delhi: Sterling Publishers, 1987.
- Narasimhaiah, CD. *The Swan and the Eagle: Essays on Indian English Literature*. Shimla: Indian Institute of Advance Studies, 1969.
- . *Makers of Indian English Literature*. New Delhi: Pencraft, 2000.
- Ramamurti, KS. *Rise of the Indian Novel in English*. New Delhi: Sterling, 1987.
- Srinivas, MN. *Caste in Modern India*. Bombay: Asia Publishing House, 1962.
- Williams, HM. *Indo-Anglian Literature, 1800-1970: A Survey*. New Delhi: Orient Longman, 1976.

Paper IV	ENG 304 A	Postcolonial Literatures	(4 Credits)
Unit I	Background Colonialism-Post-colonialism; Decolonization-Neocolonialism; Mimicry-Hybridity; Universalism-Euro-centrism; Myth-History		
Unit II	Poetry Judith Wright Phyllis Webb Kamau Brathwaite Christopher Okigbo	 “Eve to Her Daughters”, “Bullocky”, “Request to a Year” “Marvel’s Garden”, “Breaking”, “Ah Ghalib ...” “Calypso”, “Bread”, “Limbo” “Overture”, “Elegy For Alto”, “Banks of Reed”	
Unit III	Fiction Chinua Achebe VS Naipaul Margaret Atwood	 <i>Things Fall Apart</i> <i>The Mimic Men</i> <i>The Edible Woman</i>	
Unit IV	Drama Wole Soyinka	 <i>Kongi’s Harvest</i>	

Derek Walcott
Drew Hayden
Taylor

Dream on Monkey Mountain
alterNatives

Suggested Reading

- Ashcroft, Bill, Gareth Griffiths, Helen Tiffin, eds. *The Empire Writes Back: Theory and Practice in Post-Colonial Literatures*. London: Routledge, 1989.
- . *Key Concepts in Post-Colonial Studies*. London: Routledge, 1998. Bhabha, Homi K, ed. *Nation and Narration*. London: Routledge, 1990.
- Boehmer, Elleke. *Colonial and Postcolonial Literature: Migrant Metaphors*. Oxford: OUP, 2005.
- Fanon, Frantz. *The Wretched of the Earth*. 1963. Trans. Richard Philcox. New York: Grove Press, 2005.
- Gandhi, Leela. *Postcolonial Theory: A Critical Introduction*. New Delhi: OUP, 1998.
- Gilbert, Helen, and Joanne Tompkins. *Post-Colonial Drama: Theory, Practice, Politics*. London: Routledge, 1996.
- King, Bruce. *Post-Colonial English Drama: Commonwealth Drama Since 1960*. New York: St. Martin's Press, 1992.
- . *New National and Post-Colonial Literatures: An Introduction*. New York: Clarendon Press, 1996.
- Lomba, Ania. *Colonialism/Postcolonialism*. The New Critical Idiom Series. London: Routledge, 1998. Mongia, Padmini. *Contemporary Postcolonial Theory: A Reader*. London: Bloomsbury Academic, 1996.
- Ngugi wa Thiong'o. *Decolonizing the Mind: The Politics of Language in African Literature*. London: J. Currey, 1986.
- Rutherford, Anna, Holst Petersen, and H. Maes Jelinek, eds. *From Commonwealth to Post-colonial*. Sydney: Dangaroo Press, 1992.
- Said, Edward. *Orientalism*. New York: Pantheon Books, 1978.
- Spivak, Gayatri Chakravorty. "Can the Subaltern Speak?" *Marxism and the Interpretation of Culture*. Ed. Cary Nelson and Lawrence Grossberg. Urbana: U of Illinois Press, 1988. 271-313.
- Trivedi, Harish and Meenakshi Mukherjee. *Interrogating Post-Colonialism: Theory, Text and Context*. Shimla: Indian Institute of Advanced Studies, 1996.
- Young, Robert JC. *Postcolonialism: A Very Short Introduction*. Oxford: OUP, 2003.

Paper IV **ENG 304 B Modern European Classics in Translation (4 Credits)**

Unit I **Background**
The Enlightenment; Epic Theater; Avant-garde; Realism-Naturalism; Holocaust Experience

Unit II **Poetry**

	Charles Baudelaire	“To the Reader”, “ Even She Who Was Called Beatrice” (from <i>The Flowers of Evil</i>)
	Federico García Lorca	“Lament for Ignacio Sanchez”, “Crucifixion”
	Paul Celan	“Fugue of Death”, “ Tenebrae”
	Joseph Brodsky	“Nunc Dimittis”, “Odysseus to Telemachus”
Unit III	Drama	
	Anton Chekhov	<i>The Cherry Orchard</i>
	Bertolt Brecht	<i>Mother Courage</i>
	Luigi Pirandello	<i>Six Characters in Search of an Author</i>
Unit IV	Fiction	
	Fyodor Dostoevsky	<i>Notes from the Underground</i>
	Albert Camus	<i>The Stranger</i>
	Thomas Mann	<i>Death in Venice</i>

Suggested Reading

- Adorno, Theodor. *Prisms*. Cambridge: MIT Press, 1983.
- Alvarez, A. Ed. *Paul Celan: Selected Poems*. Middlesex: Penguin, 1972.
- Bakhtin, Mikhail. *Problems of Dostoevsky’s Poetics*. Minnesota: University of Minnesota Press, 1984. Benjamin, Walter. *The Writer of Modern Life: Essays on Baudelaire*. Cambridge MA: Harvard UP, 2001. Eliot, T.S. *What is a Classic?* London: Faber, 1945.
- Jones, Malcom V. Ed. *The Cambridge Companion to the Classic Russian Novel*. Cambridge: Cambridge UP, 1998.
- Kermode, Frank. *The Classic: Literary Images of Permanence and Change*. London: Faber, 1983. Steiner, George. *Tolstoy or Dostoevsky?* London: Faber, 2010.
- Styan J L. *Modern Drama: Theory and Practice*. 3vols. Cambridge: Cambridge UP, 1981.
- Willet, John. Ed. *Brecht on Theatre*. London: Methuen, 1964.

	Literature and	
Paper V	ENG 305 (A) Film	(Inter-disciplinary) (4 Credits)
Unit I	Background	
	Narrative Elements (Plot, Character, Point of View, Setting); Mise-en-scene; Cinematography; Montage, Film Genres	

Unit II	Essays Chidananda Das Gupta Francesco Casetti	“Indian Cinema Today” “Adaptation and Mis-adaptations: Film, Literature, and Social Discourses” (from <i>A Companion to Literature and Film</i>) “Film Language” (from <i>The Subject of Cinema</i>)
	Gaston Roberge	
Unit III	Drama and Film William Shakespeare Orson Welles Henrik Ibsen Patrick Garland	<i>Macbeth</i> <i>Macbeth</i> <i>A Doll’s House</i> <i>A Doll’s House</i>
Unit IV	Fiction and Film E M Forster David Lean Daphne du Maurier Alfred Hitchcock	<i>A Passage to India</i> <i>A Passage to India</i> “The Birds” <i>The Birds</i>

Suggested Reading

- Abrams, M H. *A Glossary of Literary Terms*. 10th Edn. New Delhi: Cengage Learning, 2011. Bazin, Andre. *What is Cinema?* Vols 1 & 2. Berkley: Univ of California Press, 1967.
- Beja, Morris. *Film and Literature: An Introduction*. New York: Longman, 1979.
- Bluestone, George. *Novels into Film*. Baltimore: Johns Hopkins Press, 1957.
- Benyahia, Sarah Casey and John White. *Film Studies: The Essential Introduction*. London: Routledge, 2006.
- Boyum, Joy Gould. *Double Exposure: Fiction into Film*. Calcutta: Seagull Books, 1989.
- Cahir, Linda Constanzo. *Literature into Film: Theory and Practical Approaches*. London: Macfarland, 2006.
- Cartmell, Deborah, ed. *A Companion to Literature, Film and Adaptation*. Oxford: Blackwell, 2012.
- Cartmell, Deborah and Imelda Whelehan, ed. *The Cambridge Companion to Literature on Screen*. Cambridge: Cambridge University Press, 2007.
- Das Gupta, Chidananda. *Talking About Films*. New Delhi: Orient Longman, 1981.
- Desmond, John and Peter Hawkes. *Adaptation: Studying Film and Literature*. Boston: McGraw, 2006. Elliott, Kamilla. *Rethinking the Novel/Film Debate*. Cambridge: CUP, 2003.

- Gaston, Roberge. *The Subject of Cinema*. Calcutta: Seagull, 1985.
- McFarlane, Brian. *Novel to Film: An Introduction to the Theory of Adaptation*. Oxford: Clarendon, 1996.
- Rajadhyaksha, Ashish and Soyoung Kim. *Cinema, Culture Industry and Political Societies*. London: Routledge, 2003.
- Ray, Satyajit. *Our Films and Their Films*. New Delhi: Orient Longman, 1976.
- Sikov, Ed., ed. *Film Studies: An Introduction*. New York: Columbia University Press, 2010.
- Stam, Robert and Alessandra Raengo, eds. *A Companion to Literature and Film*. London: Blackwell, 2006.
- Vaidyanathan, T G. *Hours in the Dark: Essays on Cinema*. New Delhi: Oxford UP, 1999.

Paper ENG 305: V (B) Computer Assisted Language Learning (4 Credits)

Unit I: Multimedia and Internet, Virtual Learning Environment, Speech Synthesis and Recognition, Text to Speech (TTS), Automatic Speech Recognition (ASR). Web-based Distance Learning.

Unit II: Behavioristic CALL, Structural CALL, Communicative CALL, Integrative CALL, Restricted CALL, Open CALL, Integrated CALL

Unit III: Computational Linguistics, Corpora and Concordancers, Interactive Whiteboards, Computer Mediated Communication (CMC), Mobile Assisted Language Learning (MALL).

Unit IV: Technology Enhanced Language Learning (TELL), Blended Learning. Use of Blogs, Wikis, Social Networking, Podcasting, Web 2.0 Applications, Software Design and Pedagogy, Designing and Creating CALL Software

Books, Web Sources:

- Levy M. (1997) *CALL: Context and Conceptualisation*, Oxford: OUP.
- Lamy M.-N. & Hampel R. (2007) *Online communication in language learning and teaching*, Houndmills: Palgrave Macmillan.
- Davies G. & Higgins J. (1982) *Computers, language and language learning*, London: CILT.
- Bush M. & Terry R. (1997) (eds.) *Technology-enhanced language learning*, Lincolnwood, Illinois: National Textbook Company.
- Pegrum M. (2009) *From blogs to bombs: The future of digital technologies in education*, Perth: University of Western Australia Press.
- Levy, M.; Hubbard, P. (2005). "Why call CALL "CALL"?". *Computer Assisted Language Learning*. 18 (3): 143-149. doi:10.1080/09588220500208884.
- Davies G. (2005) *Computer Assisted Language Learning: Where are we now and where are we going?* [Online]:
http://www.camsoftpartners.co.uk/docs/UCALL_Keynote.htm
- Hubbard P. (2009) (ed.) *Computer-assisted language learning*, Volumes I-IV,

- Routledge: London and New York: <http://www.stanford.edu/~efs/callcc/>
- Davies G. & Higgins J. (1985) *Using computers in language learning: a teacher's guide*, London: CILT.
- Jones C. & Fortescue S. (1987) *Using computers in the language classroom*, Harlow: Longman.
- Hardisty D. & Windeatt S. (1989) *CALL*, Oxford: Oxford University Press.
- Thomas M. (2008) *Handbook of research on Web 2.0 and second language learning*, Hershey, Pennsylvania, USA: IGI Global.
- Richardson W. (2006) *Blogs, Wikis, Podcasts and the Powerful Web Tools for Classrooms*. Thousand Oaks: Corwin Press.
- Sinclair J. (ed.) (2004) *How to use corpora in language teaching*, Amsterdam: John Benjamins
- Language Lab: <http://www.languagelab.com/en/>
- Networked Interaction in Foreign Language Acquisition and Research (NIFLAR): <http://niflar.ning.com>
- Access to Virtual and Action Learning live ONline (AVALON): <http://avalon-project.ning.com/>
- Leakey J. (2011) *Evaluating Computer Assisted Language Learning: an integrated approach to effectiveness research in CALL*, Bern: Peter Lang.
- Chapelle, C.A., & Sauro, S. (Eds.). (2017). *The handbook of technology and second language teaching and learning*. Oxford: Wiley-Blackwell.
- Son, J.-B. (2018). *Teacher development in technology-enhanced language teaching*. London: Palgrave Macmillan.

MA (Final) Semester IV

Paper I ENG 401 English Language Teaching: Major Developments in L1 and L2 (5 credits)

Unit I

- g) The Human Brain and its Functions - Language Acquisition and Learning
- h) First Language Acquisition - Stages of Language Development in a Child
- i) Learning Disabilities with special focus on Aphasia

Unit II

- g) Major Findings in L2 Research
- h) Models of Second Language Acquisition I: The Linguistic Process Focus: The Monitor Model, The Conscious Reinforcement Model, The Strategy Model
- i) Models of Second Language Acquisition II: The Social Process Focus: The Social Psychological Model, The Acculturation Model, The Social Context Model, The Intergroup Model

Unit III

- g) Language Learning Strategies (LLS) : Definition, Early Research on LLS, The Good Language Learner Research

- h) Modern Research on LLS: Rebecca Oxford's Classification of LLS: Direct Strategies: Memory Strategies, Cognitive Strategies, Compensation Strategies; Indirect Strategies: Meta-cognitive Strategies, Affective Strategies, Social Strategies
- i) Mind Mapping, Learner Autonomy, Learning Styles

Unit IV

- g) Socio-Linguistics: Language, Society and Culture: Their Relationship
- h) World Englishes: Braj Kachru and Tom McArthur models; New Englishes: Current trends in the spread of English
- i) Beyond Methods: Kumaravadivelu's Concept of Postmethod Pedagogy, Macrostrategic Framework

Unit V

- g) Principles of Designing ESP courses: English for Academic Purposes (EAP), English for Science and Technology (EST), English for Occupational Purposes (EOP)
- h) Teaching and testing Group Discussion (GD) and Interviews
- i) Steps to design a Standard test, Designing objective type tests, Study of the Samples of TOEFL and IELTS, Competitive Tests at State and National Levels

Suggested Reading

- Allen, H.B., & Campbell, R.N. (eds). (1972). *Teaching English as a second language*. Bombay-New Delhi: Tata McGraw-Hill Publishing Company Ltd.
- Buzan, T & Buzan, B. (1996). *The mind map book: How to use radiant thinking to maximize your brain's untapped potential*. USA: Penguin.
- Davies, A. (1990). *Principles of language testing*. Oxford: Blackwell.
- Gardner, R.C. (1985). *Social psychology and second language learning*. USA: Edward Arnold.
- Hutchinson, T., & Waters, A. (1987). *English for specific purposes: A learning centred approach*. Cambridge: CUP.
- Jones, D. (1992). *The pronunciation of English*. Cambridge: Cambridge University Press.
- Kachru, B. B. (1986). *The alchemy of English: The spread, functions, and models of non-native Englishes*. Oxford: Pergamon Press.
- Kumaravadivelu, B. (2003). *Beyond methods: Macrostrategies for language teaching*. Hyderabad: Orient Longman.
- Mesthrie, R., & Rakesh, M.B. (2008). *World Englishes: The study of new linguistic varieties*. Cambridge: CUP.
- Nagarajan, G. (1996). *English language teaching: Approaches, methods, and techniques*. Hyderabad: Orient Long.
- Oxford, R.L. (1990). *Language learning strategies: What every teacher should*

know. Boston: Heinle & Heinle. Reid, J. (1995). *Learning styles in the ESL/EFL classroom*. Boston: Heinle & Heinle.

Scharle, A., & Anita S. (2000). *Learner autonomy: A guide to developing learner responsibility*. Cambridge: CUP.

Paper II	ENG 402	American Literature—II	(5 Credits)
Unit I	Background		
		American Dream; Race; Ethnicity; Multiculturalism; Realism	
Unit II	Poetry		
	Walt Whitman		“Out of the Cradle Endlessly Rocking”, “When Lilacs Last in the Dooryard Bloom’d”
	Robert Frost		“Home Burial”, “Birches”, “After Apple Picking” “Emperor of Ice-cream”, “Showman”, “Thirteen Ways of Looking at a Blackbird”
	Wallace Stevens		
Unit III	Fiction		
	Scott Fitzgerald		The Great Gatsby
	Ernest Hemingway		The Old Man and the Sea
	Saul Bellow		Seize the Day
Unit IV	Drama		
	Lorraine Hansberry		A Raisin in the Sun
	Edward Albee		Who’s Afraid of Virginia Woolf?
	August Wilson		The Piano Lesson
Unit V	Prose and Short Fiction		
	Alice Walker		“In Search of our Mother’s Gardens”
	Bernard Malamud		“The Magic Barrel”
	Issac Asimov		“Bicentennial Man”

Suggested Reading

- Brown, Lloyd W. “Lorraine Hansberry as Ironist: A Reappraisal of A Raisin in the Sun.” *Journal of Black Studies*. 4. 3 (Mar. 1974): 237-247.
- Butler, Robert. “The Loeb and Leopold Case: A Neglected Source for Richard Wright’s Native Son.” *African American Review* 39. 4 (2005): 555-567.
- Carreiro, Amy E. “Ghosts of the Harlem Renaissance: “Negrotarians” in Richard Wright’s Native Son.” *The Journal of Negro History* 84.3 (1999): 247-259.
- Carrier, Warren. “Commonplace Costumes and Essential Gaudiness: Wallace Stevens’ ‘Emperor of Ice-Cream’.” *College Literature* 1. 3 (1974): 230-235.
- Deb, Joyshree. “Materialism Precedes Murder: Saul Bellow’s Seize the Day.” *Journal of Humanities and Social Science* 19.1 (2014): 59-64.
- French, William C. “Character and Cruelty In Huckleberry Finn: Why The Ending Works

- Soundings.” *An Interdisciplinary Journal* 81. 1/2 (1998): 157-179.
- Longmire, Samuel E. “Hemingway’s Praise of Dick Sisler in *The Old Man and the Sea*.” *American Literature* 42.1 (1970): 96-98.
- Mansell, Darrell. “The Old Man and the Sea and the Computer.” *Computers and the Humanities* 8. 4 (1974): 195-206.
- McLennan, Dean Scotty. “Sowing Seeds in Bellow’s *Seize The Day*: A Sermon.” *Stanford Memorial Church* July 17, 2011.
- Phelan, James. “Rhetorical Literary Ethics and Lyric Narrative: Robert Frost’s ‘Home Burial’.” *Poetics Today* 25. 4 (2004): 627-651.
- Ray, Laura Krugman. “Dickens and ‘The Magic Barrel’.” *Studies in American Jewish Literature* 4. 1 (1978): 35-40.
- Robertson, David. “Fish and The Book off Tobit in Malamud’s ‘The Magic Barrel’” *Studies in American Jewish Literature* 28 (2009): 73-81.
- Spitzer, Leo. “Explication de Texte Applied to Walt Whitman’s Poem ‘Out of the Cradle Endlessly Rocking’.” *ELH* 16. 3 (1949): 229-249.
- Sylvester, Bickford. “Hemingway’s Extended Vision: *The Old Man and the Sea*.” *PMLA* 81. 1 (1966): 130-138.
- Walcutt, Charles C. “Whitman’s ‘Out of the Cradle Endlessly Rocking’”. *College English* 10.5 (1949): 277-279.

Paper III	ENG 403	Indian Writing in English—II	(5 Credits)
Unit I	Background Partition Literature; Nation-Nationalism; Counter Discourse; Subalternity; Identity Movements		
Unit II	Poetry Nissim Ezekiel A K Ramanujan Kamala Das Arun Kolatkar	“Enterprise”, “Poet, Lover, Birdwatcher”, “Philosophy” “Love Poem for a Wife-1”, “Obituary”, “Small-scale Reflections on a Great House” “An Introduction”, “The Old Playhouse”, “Words” “Scratch”, “A Low Temple”, “An Old Woman”	
Unit III	Fiction Anita Desai Salman Rushdie Shashi Deshpande	Voices in the City Midnight’s Children The Binding Vine	
Unit IV	Short Stories Bharti Mukherjee	“Management of Grief” (from <i>The Middleman and Other Stories</i>)	

Rohinton Mistry	“Swimming Lessons” (from Tales from Firozsha Baag)
Jhumpa Lahiri	“Interpreter of Maladies”(from Interpreter of Maladies)

Unit V	Drama	
	Asif Currimbhoy	Goa
	Mahesh Dattani	“Final Solutions”
	Manjula Padmanabhan	Harvest

Suggested Reading

- Gopal, Priyamvada. The Indian English Novel: Nation, History and Narration. New Delhi: OUP, 2009.
- Guha, Sumit. Beyond Caste: Identity and Power in South Asia, Past and Present. Leiden: Brill, 2013.
- Guru, Gopal and Sundar Sarukkai. The Cracked Mirror: An Indian Debate on Experience and Theory. New Delhi: Oxford UP, 2012.
- Joshi, Priya. In Another Country: Colonialism, Culture, and the English Novel in India. 2002. Delhi: OUP, 2003.
- Khair, Tabish. Babu Fictions: Alienation in Contemporary Indian English Novels. New Delhi: OUP, 2001.
- King, Bruce. Three Indian Poets: Nissim Ezekiel, A.K. Ramanujan, Dom Moraes. New Delhi: OUP, 1991.
- . Modern Indian Poetry in English. Rev ed. New Delhi: OUP, 2001.
- Mehrotra, Arvind Krishna. An Illustrated History of Indian Literature in English. Delhi: Perma Black, 2003.
- Mukherjee, Meenakshi. The Perishable Empire: Essays on Indian Writing in English. New Delhi: OUP, 2000.
- Naik, MK and Shankar Mokashi-Punekar, eds. Perspectives on Indian Drama in English. Delhi: OUP, 1977.
- Paranjape, Makarand. In-Diaspora: Theories, Histories, Texts. New Delhi: Indialog, 2001.
- Prasad, GJV. Continuities in Indian English Poetry: Nation, Language, Form. New Delhi: Pencraft, 1999.
- Omvedt, Gail. Understanding Caste: From Buddha to Ambedkar and Beyond. New Delhi: Orient Black, 2011.

Paper IV ENG 404 (A) Academic Writing and Research Methodology (4 Credits)

Unit I

Factors Influencing Effective Writing: Mechanics of Writing, Purpose of writing, Audience/reader, Organisation- Cohesion and Coherence
Features of Academic Writing: Introduction, Complexity, Formality, Precision, Objectivity, Explicitness, Accuracy and Appropriacy, Relevance, Hedging
Academic Writing Forms: Paragraph Development, Précis Writing, Building Argument, Making Counter Argument, Managing tone and tenor

Unit II

Study Skills and Academic Skills: Note Taking, Note Making, Information Transfer and Reference Skills, Paraphrasing (Change of parts of speech, word order, synonyms, using passive form), Summarizing (Steps in summarising)
Essay and Report Writing: Descriptive Writing, Narrative Writing; General Reports, Feasibility reports, Progress reports, Evaluation reports, Writing for Media
Writing Book Reviews and Film Reviews

Unit III

Criteria of Good Research; Avoiding Plagiarism
Types of Research: Primary and Secondary Research; Research Design: Statement of the Problem, Survey of relevant literature, Making hypotheses, developing objectives; Research Tools
Analysis and Data Interpretation (Collecting the data, analysing and interpreting the data, testing the hypotheses)

Unit IV

Preparing an outline for Research Articles and Thesis
Documentation Format: APA style
Documentation Format: MLA style

Suggested Reading

Gillett, A., Hammond, A., & Martala, M. (2009). *Inside track: Successful academic writing*. Essex: Pearson Education Limited.
Griffin, G. (2006). *Research methods for English studies*. Edinburgh: Edinburgh University Press.
Gupta, R. (2010). *A course in academic writing*. New Delhi: Orient BlackSwan.
Krishnaswamy, N. (1974). *Modern English: A Book of grammar, usage, & composition*. Hyderabad: Macmillan India Limited
Leki, I. (1998). *Academic writing: Exploring processes and strategies*. NY: CUP.
The MLA handbook for writers of research papers (7thed.). New York, NY: Modern Language Association.
Monippally, M.M., & Pawar, B.S. (2010). *Academic writing: A guide for management students and researchers*. New Delhi: Sage Publications.
Monippally, M.M. (2001). *Business communication strategies*. New Delhi: Tata McGraw-Hill.
Murray & Hughes, G. (2008). *Writing up your university assignments and research projects: A practical handbook*. New York: Open University Press.

Narayanaswami, V.R. (1979). *Strengthen your writing*. Hyderabad: Orient Longman.

Rossiter, J. (2007). *The APA pocket handbook: Rules for format & documentation*. Augusta GA: DwPublishing Company.

Sealy, J. (2013). *Writing for media*. In *Guide to effective writing and speaking*. (pp.) Oxford: Oxford University Press.

Sharma, R.C, & Krishnamohan. (2011). *Business correspondence and report writing*. New Delhi: TataMcgrawHill.

Sinha, M.P. (2007). *Research methods in English*. New Delhi: Atlanta Publishers.

Swales, J. M., & Feak, C. B. (1994). *Academic writing for graduate students: A course for non-native speakers of English*. Ann Arbor: University of Michigan Press.

Swales, J. M., & Feak, C. B. (2000). *English in today's research world: A writing guide*. Ann Arbor: University of Michigan Press.

Wallace. (2013). *Study skills in English: Student book*. Cambridge: Cambridge University Press.

Wallwork. (2013). *English for academic research: Writing exercises*. New York, NY: Springer.

Weissberg, R., & Buker, S. (1990). *Writing up research: Experimental research report writing for students of English*. Englewood Cliffs, NJ: Prentice Hall.

Yakhontova, T. (2003). *English academic writing for students and researchers*.

Paper IV ENG 404 (B) Fourth World Literatures

Unit I	Laxman Mane P Sivakami	Upara: An Outsider The Grip of Change
Unit II	N Scott Momaday Leslie Marmon Silko	House Made of Dawn Ceremony
Unit III	Maria Campbell Thomas King	Half Breed Green Grass, Running Water
Unit IV	Oodgeroo Noonuccal (Kath Walker) Kim Scott	Selected poems from We are Going and My People Benang

Suggested Reading

Episknew, Jo-Ann. *Taking Back Our Spirits: Indigenous Literature, Public Policy, and Healing*. Univ. of Manitoba Press, 2009.

Limbale, Sharankumar. *Towards an Aesthetic of Dalit Literature*. Hyderabad: Orient Longman, 2004.

Shoemaker, Adam. *Black Words, White Page: Aboriginal Literature 1929-1988*. Canberra: ANU E, 2004.

Wheeler, Belinda, ed. *A Companion to Australian Aboriginal Literature*. New York: Camden House, 2013.

Paper 5 ENG 405 (A) South Asian Literature (4 Credits)

Unit I Background

South Asia—History and Geography; South Asian Diaspora; Migration and Exile; South Asia and Globalization; Ethnicity-Gender

Unit II Poetry

Lakshmi Prasad Devkota
Jean Arasanaygam

“Lunatic”
“Apocalypse”, “Durga Pooja”,
“Nallur”

Kaiser Haq

“As Usual”, “Liking It”, “Poor Man Eating”

Imtiaz Dharker

“Purdah I”, “The right word”, “A century later”

Unit III Fiction

Bapsi Sidhwa
Michael Ondaatje
Khaled Hosseini

Ice Candy Man
Anil’s Ghost
The Kite Runner

Unit IV Prose

Hanif Kureishi

Romesh Gunesekera
Manjushree Thapa

“Something Given: Reflections on Writing”
“A long, slow descent into hell”
“Educating the Influential Foreigner”,
“The Difficulty of Being Nepali” (from
The Lives We Have Lost)

Suggested Reading

Ali, N, VS Kalra, and S Sayyid, eds. *A Postcolonial People: South Asians in Britain*. London: Hurst and Co., 2006.

Ballard, Roger. *Desh Pardesh: The South Asian Presence in Britain*. London: Hurst and Co., 1994.

Bates, Crispin. *Subalterns and Raj: South Asia since 1600*. New York: Routledge, 2007.

Brass, Paul R., and Achin Vanaik. *Competing Nationalisms in South Asia: Essays for Asghar Ali Engineer*. Hyderabad: Orient Longman, 2002.

Breckenridge, Carol A., and Peter van der Veer, eds. *Orientalism and the Postcolonial Predicament: Perspectives on South Asia*. Philadelphia: University of Pennsylvania Press, 1993.

Brown, Judith M. *Global South Asians: Introducing the Modern Diaspora*. Cambridge: CUP, 2006.

Engineer, Asghar Ali. *Ethnic Conflict in South Asia*. Delhi: Ajanta Publications, 1987.

Goonetilleke, D.C.R.A. *Images of the Raj: South Asia in the Literature of Empire*. London: Macmillan, 1988.

Ludden, David. *Reading Subaltern Studies: Critical History, Contested Meaning and the Globalization of South Asia*. London: Anthem Press, 2002.

Maloney, Clarence. *Peoples of South Asia*. New York: Holt, Rinehart and Winston, 1974.

Nasta, Susheila. *Home Truths: Fictions of the South Asian Diaspora in Britain*. London: Palgrave, 2001.

Pollock, Sheldon, ed. *Literary Cultures in History: Reconstructions from South Asia*. Berkeley: Univ of California, 2003.

Raj, Kapil. *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650-1900*. New York: Palgrave Macmillan, 2007.

Sanga, Jaina C. *South Asian Literature in English: An Encyclopedia*. London: Raintree, 2004.

Sareen, S. K., Kapil Kapoor, eds. *South Asian Love Poetry*. New Delhi. Affiliated East-West Press. 1994.

Seminars: 2 Hours per week (2 credits)

Foundation Course (P.G.)

PROFESSIONAL COMMUNICATION

(Common Paper for all First Semester P.G. Courses w.e.f. Academic Year 2016-17)
Under Choice Based Credit System, Number of Hours: 30, Credits: 02)

The main objective of the paper is to improve the oral and written communication skills of post-graduate students of different faculties to make them employable.

Unit 1:

- a) Verbal Communication (Objectives, Types, Patterns, Barriers); Non-Verbal Communication (Body Language)
- b) Presentation Skills (Power Point Presentation (PPP), Formats, Designing); Tele Conferencing; Debates and Group Discussions; Public Speaking; Interviews; Role Plays (Formal and Informal); Mobile (Telephone) Etiquette

Unit 2:

- a) Writing Skills; Principles of Good Writing; Paragraph Writing (Topic Sentence, Order, Coherence and Unity); Essay Writing (Five Types: Descriptive, Narrative, Expository, Critical, Contemporary)
- b) Corporate Writing: Resume Writing; Letter Writing (Structure, Styles, Applications, E-mails); Memoranda, Notices, Agenda, Minutes, Instructions, Proposals); Report Writing; Thesis Writing (Structure and Formats)

References:

Analysing Talk, David Lngford-Macmillan

The A to Z of presentations, Eric Gamer
Paragraph Writing. H.S.Bhatia, Ramesh Publishing House, New Delhi.
Essay Writing. Modern Essays. Uma Kant Singh
A Book of School Essays, Letter Writing, Summary, Reporting. Sangram Keshari Rout\
Applications of Non-Verbal Communications. Ronald E.Riggio, Robert s Feldman,
Lawrence Eribalum

SATAVAHANA UNIVERSITY
Foundation Course
Professional Communication
Under Choice Based Credit System 2016-17

Model Question Paper
Common Paper for all I Semester P.G. Courses
Internal Assessment
Time: 30 mts Maximum Marks: 10

10 multiple choice questions to be set. Each question carries half mark
(10x1/2=5marks)

10 Questions to be set (Filling in the blanks). Each question carries half mark
(10x1/2=5marks)

SATAVAHANA UNIVERSITY
Foundation Course
Professional Communication
Under Choice Based Credit System 2016-17
Common Paper for all I Semester P.G.Courses
Model Question Paper

SEMESTER EXAMINATION

Maximum Marks: 40

I) Answer any two out of four questions (2x5=10)

i)

ii)

iii)

iv)

II) Answer any two questions with one each from two units (2x15=30)

A or B

A or B

**APPROVED TOPICS FOR SEMINARS AND PROJECT WORK
FOR THE STUDENTS OF M.A. ENGLISH OF SU
(with effect from the academic year 2018-19)**

“Project Work” in the Fourth Semester for Paper V ENG 405 as B (4 Credits)

Semester I

Paper 1 ENG 101: The English Language: History, Description and Practice

1. Indo-European Family of Languages and its Branches
2. Modern English: Spelling, Pronunciation, Vocabulary
3. Major Changes in the English Language during Middle English Period
4. The Rise of Standard English
5. Foreign Contribution to the Growth of Vocabulary: Influence of Greek, Latin, French and German on the English language
6. Word Formation, Different Processes
7. Change of Meaning, Different Processes
8. Structure of the English Noun Phrase and Verb Phrase
9. Sentence Types
10. Coordination and Subordination
11. The Standard Dialect
12. Registers
13. Jargons and Slangs
14. British English and American English
15. Functional Grammar: Transformations
16. Functional Usage: Introductions, Questions, Polite replies, Complaints, Apologies, Turn Takings, Permissions, Invitations, Compliments, Sympathies
17. Telephone Etiquette

Semester I: Paper II ENG 102 English Poetry

18. John Donne's poems (open ended)
19. William Blake's poems (open ended)
20. PB Shelley's poems (open ended)
21. John Keats's poems (open ended)

22. Browning's poems (open ended)
23. Tennyson's poems (open ended)
24. Matthew Arnold's poems (open ended)
25. TS Eliot's poems (open ended)

Paper III ENG 103

English Drama

26. Shakespeare's Dramas (open ended)
27. Enactment of select scenes with recitation (open ended)
28. Collection of celebrated lines from the plays (open ended)

Paper IV ENG 104 A

English Language and Phonetics (4 Credits)

29. Language and its Features
30. Differences between Animal and Human Communication
31. Types of Verbal Communication
32. Non-verbal Communication Aspects
33. Phonetics, Organs of Speech, Speech Mechanism
34. Phonetic Sounds, Classification, IPA,
35. Phonemic Transcription (from A to Z from Daniel Jones's EPD) (open ended)
36. Description of Consonant Sounds and Vowel Sounds
37. Word Accent and Stress
38. Consonant Clusters
39. Aspects of Connected Speech
40. Intonation
41. Levels of Language Description
42. Morphology
43. Syntax

Paper IV ENG 104 B

Discourse Analysis (4 Credits)

44. Discourse Analysis and Approaches
45. Coherence and Cohesion
46. Corpus-based Approaches
47. Critical Discourse Analysis

Paper V ENG 105 A

Modern Indian Literatures in Translation (4 Credits)

48. Indian Concept of Translation
49. Indian Dramatic Traditions
50. Dalit Aesthetics
51. Enactment of select scenes from *Chandalika*, *Silence! The Court is in Session* and *Hayavadana* (open ended)

Paper V ENG 105 B

Cultural Studies (4 Credits)

52. Cultural Studies
53. Modernity
54. Postmodernity
55. Gender-Feminism
56. Globalization
57. Diaspora
58. Multiculturalism
59. Popular Culture
60. Culture Industry, Media, Television, Consumerism
61. Science, Technology and Cultural Studies
62. Cyber-culture

M.A. (Previous) Semester II

Paper I: ENG 201 English Language Teaching: History, Approaches and Methods (5 credits)

63. History of English Language Teaching in India
64. Teaching English as a Second Language
65. Teaching English as a Foreign Language
66. Behaviourism and its Implications
67. Cognitivism and its Implications for ELT
68. Language Acquisition Process
69. Differences between FL Acquisition and SL Learning Approaches and Methods
70. Communicative Language Teaching (CLT)
71. Task Based Learning and Teaching
72. Humanistic Approaches
73. Community Language Learning
74. Suggestopedia
75. Teaching LSRW and their Sub-skills
76. Types of Syllabi: Structural, Notional, Functional, Task-based
77. Language Testing
78. Characteristic Features of an Effective Test
79. Testing Language Skills

Paper II ENG 202 English Prose (5 credits)

80. Origin and Development of the English Essay

Paper II ENG 203 English Fiction (5 credits)

81. The Rise of Novel

Paper IV ENG 204 A Women's Writing (4 credits)

82. Women's Liberation Movement
83. Gyno-criticism

Paper IV ENG 204 B Gender Studies (4 credits)

- 84. Femininity
- 85. Masculinity

Paper V ENG 205 A 20th Century Literary Criticism and Theory (4 credits)

- 86. New Criticism
- 87. Structuralism
- 88. Post-structuralism
- 89. Reader Response Theories
- 90. New Historicism
- 91. Psychoanalytical Criticism

Paper V ENG 205 B Translation Studies (4 Credits)

- 92. Purpose and Importance of Translation
- 93. Source Language and Target Language
- 94. Recreation, Trans-creation, Interpretation
- 95. Specialized Types of Translation
- 96. Tools of Translation
- 97. Problems of Translation

Semester III

Paper I ENG 301 English Language Teaching: Classroom Techniques and Practical English (5 Credits)

- 98. Error Analysis Theory
- 99. Remedial Teaching
- 100. Techniques of Teaching Grammar
- 101. Techniques of Teaching Vocabulary
- 102. Techniques of Teaching Prose
- 103. Techniques of Teaching Poetry
- 104. Techniques of Teaching Drama
- 105. Classroom Techniques
- 106. Team Teaching
- 107. Teaching Large Classes
- 108. Teaching Aids
- 109. Computer Aided Language Learning (CALL)
- 110. Importance of English Language Laboratory
- 111. Teaching of Literature
- 112. Practical English
- 113. Presentation Skills
- 114. Techniques of Teaching Elocution
- 115. Techniques of Teaching Debates
- 116. Techniques of Teaching Compeering
- 117. Techniques of Conducting Interviews

- 145. Multimedia
- 146. Internet
- 147. Speech Synthesis
- 148. Types of CALL Packages
- 149. Computer Mediated Communication (CMC)
- 150. Mobile Assisted Language Learning (MALL)
- 151. Technology Enhanced Language Learning

M.A. (FINAL) SEMESTER IV

Paper I ENG 401 English Language Teaching: Major Developments in L1 and L2 (5 credits)

- 152. Language Acquisition and Learning
- 153. Learning Disabilities
- 154. Major Findings in L2 Research
- 155. Models of Second Language Acquisition
- 157. Language Learning Strategies (LLS)
- 158. Modern Research on LLS
- 159. World Englishes
- 160. Principles of Designing ESP courses
- 161. Socio-Linguistics
- 162. English for Academic Purposes (EAP)
- 163. English for Science and Technology (EST)
- 164. English for Occupational Purposes (EOP)
- 165. Testing GDs and Interviews
- 166. Designing Objective Type Tests
- 167. Study of the Samples of TOEFL
- 168. Study of the Samples of IELTS
- 169. Competitive Tests at State and National Levels

Paper II ENG 402 American Literature—II (5 credits)

- 170. American Dream
- 172. Multiculturalism
- 173. Realism

Paper II ENG 403 Indian Writing in English—II (5 credits)

- 174. Partition Literature
- 175. Nation-Nationalism
- 176. Counter Discourse
- 177. Subalternity

178. Identity Movements

Paper IV ENG 404 A Academic Writing and Research Methodology (4 Credits)

- 179. Factors Influencing Effective Writing
- 180. Mechanics of Writing
- 181. Features of Academic Writing
- 182. Study Skills
- 183. Academic Skills
- 184. Essay Writing
- 185. Report Writing
- 186. Evaluation Reports
- 187. Writing for Media
- 188. Writing Book Reviews
- 189. Writing Film Reviews
- 190. Criteria of Good Research
- 191. Avoiding Plagiarism
- 192. Types of Research
- 193. Research Tools
- 194. Writing a Thesis / Dissertation
- 195. Preparing an outline for Research Articles
- 196. Documentation Formats, APA style
- 197. Documentation Formats, MLA style

Paper IV ENG 404 B Fourth World Literatures

- 198. Indigenous Literature
- 199. Aesthetics of Dalit Literature
- 200. Australian Aboriginal Literature
- 201. Interviews of Living Authors (open ended)

Paper V ENG 405 A South Asian Literature (4 Credits)

- 202. South Asian Diaspora
- 203. Migration and Exile
- 204. South Asia and Globalization
- 205. Ethnicity

Seminars on all the above topics: 2 Hours per week (2 credits)

Foundation Course (P.G.):

PROFESSIONAL COMMUNICATION

(Common Paper for all First Semester P.G. Courses from 2017 onwards. Number of Hours: 30, Credits: 02)

1. Agenda
2. Applications
3. Corporate Writing
4. E-mails
5. Debates and Group Discussions
6. Essay Writing
7. Instructions
8. Interviews
9. Letter Writing
10. Memoranda
11. Minutes
12. Mobile (Telephone) Etiquette
13. Non-Verbal Communication (Body Language)
14. Notices
15. Paragraph Writing
16. Principles of Good Writing
17. Presentation Skills (Power Point Presentation (PPP), Formats, Designing Proposals)
18. Public Speaking
19. Report Writing
20. Resume Writing
21. Role Plays (Formal and Informal)
22. Tele Conferencing
23. Thesis Writing
24. Verbal Communication
25. Writing Skills

Guidelines for completing the Project Work:

- a) A Monograph in 20 to 30 pages under the guidance of the teacher concerned has to be submitted for evaluation.
- b) The Monograph should be based on the above approved topics.
- c) The Monograph will be evaluated by an external examiner from affiliated colleges to SU.
- d) 70 marks for the Monograph and 30 marks for the Viva are allotted.

Guidelines for conducting the Classroom Seminars:

- a) A written paper in 5 to 6 pages has to be submitted on the above approved topics.
- b) Presentation, preferably with PPP, should be done in the presence of teachers and the students present.
- c) A Registrar has to be maintained with the signatures of the presenter and the participants by the Coordinator to be decided by the Head.
- d) One Seminar in the Third Semester and another one in the Fourth Semester are to be conducted after completion of the second internals.
- e) Each Presentation earns 2 credits equivalent to 20 marks, 10 marks for the paper and 10 marks for the presentation with PPP.

The above things were approved by the following members of BoS in English (UG & PG) on February 4, 2019:

1. Prof G. Damodar, Chairman, BoS in English, SU
2. Prof K. Purushotham, KU (External Member for PG)
3. Dr B. Deepa Jyothi, KU (External Member for UG)
4. Dr M. Prabhakar, Member, KU
5. Dr V. Pradeep Raj, HoD, SU
6. Mr D. Vijay Prakash, Member, SU
7. Dr S. Odelu Kumar, Member SRRGASC, Karimnagar
8. Mrs J. Uma Maheswari, SRRGASC, Karimnagar
9. Mrs P.D. Sujatha, GDC, Jammikunta
10. Mrs A. Meenakshi, GDCW, Karimnagar



October 23, 2018, revised on September 6, 2019 with CALL paper, GDR

SYLLABUS
B.A. (ECONOMICS) –III year
SEMESTER-V,VI
CHOICE BASED CREDIT SYSTEM (CBCS)
2018-19



Department of Economics
Satavahana University
Karimnagar
Telangana State-India

B.A III Year

Semester - V	Course - V	Indian Economy (Core Course)	5
Semester - V	Course - VI (Discipline Specific Electives)		4
		(a) Quantitative Methods for Economic Analysis	OR
		b) Economics of Development and Infrastructure	OR
		c) Agricultural Economics	
Semester - VI	Course - VII	Telangana Economy	5
Semester-VI	Course-VIII (Discipline Specific Electives)		4
		a) Industrial Economics	OR
		b) Project Work	OR
		c) Computer Applications in Economic Analysis	

***Note:** The syllabus may be prepared by the respective Boards of Studies of the Universities where these electives are offered.

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – V : CORE COURSE (Credits - 5)

COURSE – V: INDIAN ECONOMY

Unit – I: Basic Structure of the Indian Economy

Concepts of Development, Underdevelopment, Deprivation & Growth with reference to India(in brief) – Basic Features of Indian Economy: Growth and Structural Changes in Indian Economy – Demographic Features – Population: Size, Growth, Composition and their Implications on Indian Economy – Concept of Demographic Dividend – Occupational Distribution of Population in India – Population Policy of India – Development of Socio-Economic Infrastructure: Education and Health

Unit – II: National Income, Poverty and Unemployment

Estimation of National Income – Trends and Composition of National Income in India – Income Inequalities in India: Magnitude, Causes, Consequences and Remedial Measures – Poverty in India: Concept, Types, Trends, Causes and Consequences – Unemployment in India: Concept, Types, Trends, Causes and Consequences – Poverty Alleviation and Employment Generation Programmes in India

Unit – III: Planning and Public Policy

Five Year Plans: Concept and Objectives – Review of Five Year Plans – 12th Five Year Plan – NITI Aayog – Economic Reforms: Liberalisation, Privatisation and Globalisation – A Critical Evaluation – Impact of GATT and WTO on Indian Economy

Unit – IV: Agricultural Sector

Importance and Role of Agriculture in Indian Economy – Trends in Agricultural Production and Productivity – Land Reforms – Green Revolution – Agricultural Finance – Agricultural Marketing – Agricultural Pricing – Food Security in India

Unit – V: Industrial and Service Sector

Structure, Growth, Importance and Problems of Indian Industry – Large, Medium and Small Scale Industries: Role and Problems – Industrial Policies of 1948, 1956 and 1991 – FEMA and Competition Commission of India – Disinvestment Policy – Concept and Components of Service Sector – Infrastructural Development: Transport, Banking, Insurance, Information Technology, Communication and Tourism – Foreign Direct Investment

Reference Books

- SK Misra and Puri** : **Indian Economy, Himalaya Publishing House**
Ishwar C Dhigra : **The Indian Economy: Environment and
Policy, SC Chand & Sons, New Delhi**
Dutt and Sundaram : **Indian Economy**

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – V: DISCIPLINE SPECIFIC ELECTIVE COURSE (Credits: 4)

**COURSE – VI (a) : QUANTITATIVE METHODS FOR ECONOMIC
ANALYSIS**

Unit – I: Basic Concepts:

Need for quantitative methods in Economics. Basic concepts: Constant, Variables, And Functions: Linear, Non-Linear Functions, Equations and their functions. Linear, Quadratic. Concept of Derivative, Rules of Differentiation. MR, MC, MPC, Price and Income Elasticities.

Unit – II: Introduction to Statistics

Meaning and Basic Concepts of Statistics – Population and Sample, Frequency Distribution, Cumulative Frequency – Graphic and Diagrammatic Representation of Data – Types of Data: Primary and Secondary Data – Methods of Collecting Data: Census and Sampling Methods (Random, Non-random Sampling Methods)

Unit – III: Measures of Central Tendency and Dispersion

Measures of Central Tendency: Mean, Median, Mode. Measures of Dispersion – Absolute and Relative Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation and Variance.

Unit – IV: Correlation and Regression

Correlation: Meaning and Types – Karl Pearson's Correlation Co-efficient – Spearman's Rank Correlation – Regression: Meaning and Uses of Regression – Estimation and Interpretation of Regression Line

Readings:

- Allen, RGD : Mathematical Analysis for Economists, Macmillan Press, London.
Bhardwaj RS : Mathematics for Economics and Business, Excel Books, New Delhi
Bose : Mathematics for Economics, Himalaya Publishing, New Delhi
Chiang, AC : Fundamental Methods of Mathematical Economics McGraw Hill,
New Delhi
Nagar & Das : Basic Statistics
S.P. Gupta : Statistics

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – V: DISCIPLINE SPECIFIC ELECTIVE COURSE (Credits: 4)

COURSE – VI (b) : ECONOMICS OF DEVELOPMENT AND INFRASTRUCTURE

Unit – I: Economic Development and Growth

Concepts of Economic Growth, Development Underdevelopment and Deprivation – Objectives of Economic Development – Indicators of Economic Development: National Income, Per Capita Income, Physical Quality of Life Index, Human Development Index, Multi-Dimensional Poverty Index and other Indices – Characteristics of Underdeveloped Countries

Unit – II: Factors of Economic Development

Factors Hindering Economic Development – Factors Promoting Economic Development – Population and Economic Development – Concept of Population Explosion – Theories of Demographic Transition – Human Resource Development and Economic Development – International Aspects of Economic Development: Benefits of Trade – Concept of Unequal Exchange

Unit – III: Theories of Economic Development

Rosenstien Rodan's Big Push Theory – Ragnar Nurkse's Balanced Growth Strategy – Hirschman's Unbalanced Growth Strategy – Lewis Theory of Economic Development with Unlimited Supplies of Labour – Schumpeter's Theory of Economic Development – Choice of Techniques

Unit – IV: Infrastructure and Economic Development

Infrastructure and Economic Development – Infrastructure as a Public Good – Concepts and Components of Social and Physical Infrastructure – Special Characteristics of Public Utilities – Social Infrastructure: Education and Health

Reference Books:

- Mier, Gerald, M** : **Leading Issues in Economic Development, OUP, Delhi**
Todaro, Micheal P : **Economic Development in the Third World, Orient Longman, Hyderabad**
- Ghatak Subrata** : **Introduction to Development Economics**
Sukumoy Chakravarthy : **Development Planning - Indian Experience, OUP, Delhi**
- Misra & Puri** : **Economic Development and Planning: Theory and Practice**
- Crew, M.A & P.R. Kleindorfer:** **Public Utility Economics, Macmillian, London.**
- Kneafsey, J.T** : **Transportation Economic Analysis, Lexington, Torouts.**
McCrakis, M.S.(Ed.) : **Energy, Demand Conservation and Institution Problems, Macmillan, London.**
- Norton, HS** : **Modern Transport Economics, CE Merrill, London.**
Panchamukhi, P.R. : **Economics of Health: A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure, Allied, Delhi.**
- Tilak, J.B.G.** : **Education for Development in Asia, Sage Publications, New Delhi**
- Indian Council of Social Sciences Research (ICSSR)** : **Economics of Infrastructure, Vol. VI (1976), New Delhi**
- National Council of Applied Economic Research (NCAER)** : **India Infrastructure Report; Policy Implications for Growth and Welfare, NCAER (1996), New Delhi**

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – V: DISCIPLINE SPECIFIC ELECTIVE COURSE (Credits: 4)

COURSE – VI (c) : AGRICULTURAL ECONOMICS

Unit-I: Agriculture and Economic Development:

Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Agricultural development during the plans- Trends in Agricultural growth

Unit-II: Agricultural Production and Productivity:

Agricultural production – Resource use and efficiency; Production function analyses in agriculture; Factor combination and resource substitution,

Unit-III: Agricultural Farm size and productivity:

Factors influencing the size of firm- measures of firm size, relationship between farm size and productivity. Land Reforms – New Agricultural Strategy- its impact on production and productivity. Trends in Agricultural production and productivity-Low levels of productivity-Causes of low productivity.

Unit- IV: Agricultural Marketing and Prices:

Marketing and state policy; Agricultural markets; Regulated markets; Marketed and marketable surplus; Marketing channels, Mechanization of Agriculture – Merits and Demerits. Co-operative marketing system-Govt. Measures to improve the system of agricultural marketing.

Basic Reading List:

1. Bhaduri, A. (1984) The Economic Structure of Backward Agriculture, Macmillan, Delhi.
2. Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.
3. Dantwala M.L. Et al, (1991) Indian Agricultural Development since Independence, Oxford & IBH New Delhi.
4. Gulati, A. and t. Kelly (1999), Trade Liberalisation and Indian Agriculture, Oxford University Press, New Delhi.
5. Joshi. P.C. (1975), Land Reforms in India: Trends and Prospects, Allied Publishers, Bombay.

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – VI : CORE COURSE (Credits - 5)

COURSE – VII : TELANGANA ECONOMY

UNIT – I: Telangana Economy: Human Resources

Economic History of Telangana – Demographic Features of Telangana – Occupational Distribution of Population in Telangana – Sectoral Distribution of Population – Migration - Social Infrastructural Development: Education and Health

UNIT – II: Gross State Domestic Product, Poverty and Unemployment

Trends in Gross State Domestic Product and Per Capita Income in Telangana – Sectoral Contribution to Gross State Domestic Product – Inequalities in the Distribution of Income and Wealth – Poverty in Telangana: Trends, Causes & Consequences – Unemployment in Telangana: Trends, Causes & Consequences – Poverty Alleviation & Employment Generation Programmes in Telangana – Other Welfare Programmes in Telangana

UNIT – III: Agricultural Sector

Growth of Agriculture in Telangana Economy – Trends in Agricultural Production and Productivity – Determinants of Agricultural Productivity – Cropping Pattern – Agrarian Structure and Land Reforms – Irrigation: Sources and Trends – Mission Kakatiya – Agricultural Credit and Rural Indebtedness – Agricultural Marketing – Food Security in Telangana

UNIT – IV: Industrial Sector

Structure of Telangana Industry – Growth and Pattern of Industrial Development in Telangana – Industrial Policy of Telangana – Special Economic Zones (SEZ) – Role of Small Scale Industries in Telangana Economy – Problems & Remedial Measures of Small Scale Industries: Issue of Sickness – Industrial Finance in Telangana

UNIT – V: Service and Infrastructural Sectors

Importance of Tertiary Sector in Telangana – Growth and Pattern of Development of Service Sector in Telangana – Infrastructural Development in Telangana: Transport, Energy, Communication & Information Technology and Tourism Development – Regional Imbalances: Causes, Consequences & Remedial Measures

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

**SEMESTER – VI : DISCIPLINE SPECIFIC ELECTIVE
COURSE (Credits:4)**

COURSE – VIII (a) : INDUSTRIAL ECONOMICS

UNIT – I: Meaning and classification of Industries:

Use-based, Resource Based and ASI Two and Three Digit classification. Industrial Location theories: Weber, Sargent Florence, and Losch - factors affecting industrial location.

UNIT – II: Market Structure and Market Performance:

Types of Markets based on Place, Time and Competition. Concepts & Organization of a firm. Market Structure; Sellers Concentration; Product Differentiation; Entry Conditions; Economics of Scale.

UNIT – III: Industrial Pattern under Five Year Plan:

Industrial economic concentration and remedial measures. Industrial Policy 1991: Role of Public and Private Sector, LPG Program. Recent Trends in Industrial growth.

UNIT – IV: Industrial Finance:

Industrial Finance: Owned, External and other Components of Funds; Role, Nature, Volume and types of Institutional Finance – State Level Financial Institutions and Commercial Banks.

Basic Reading List:

1. Ahuliwalia, I.J. (1985) Industrial Growth in India, Oxford University Press, New Delhi.
2. Barthwal, R.R. (1985), Industrial Economics, Wiley Eastern Ltd., New Delhi.
3. Chernuliam, F. (1994), Industrial Economics: Indian Perspective (3RD Edition), Himalaya Publishing House, Mumbai.
4. Desai, B. (1999), Industrial Economy in India (3rd Edition,) Himalaya Publishing House, Mumbai.
5. Divine, P.J. and R.M. Jones Et. Al (1976), An Introduction to Industrial Economics, George Allen and Unwin Ltd., London.
6. Hay, D. and D.J.Morris (1979), Industrial Economics: theory and evidence, Oxford University Press, New Delhi.
7. Kuchhal, S.C. (1980), Industrial Economy of India (5th Edition), Chaitanya Publishing House, Allahabad.

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – VI : DISCIPLINE SPECIFIC ELECTIVE COURSE (Credits:4)

COURSE – VIII (b) : Project Work

Project work is aimed at providing practical skills and hands on experience to the students in the domain areas related to Economics. The work details and reporting may be designed by the Boards of Studies of all the Universities where these electives are offered.

**SATAVAHANA UNIVERSITY,
KARIMNAGAR**

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

**SEMESTER – VI : DISCIPLINE SPECIFIC ELECTIVE COURSE (Credits:4)
COURSE – VIII (c): COMPUTER APPLICATIONS IN ECONOMIC ANALYSIS**

Unit – I: Fundamentals of Computers

Fundamentals of Computers – Components – Input-Output Devices – Central Processing Unit (CPU) – Types of Memory: RAM and ROM – Storage Devices – Software and Hardware – Operating System – Windows User Interface – Importance of Computers in Economic Analysis

Unit – II: Word Processing with MS-Word

Starting MS-Word – Main Menu - Text Manipulations: Editing, Formatting, Copy, Cut and Paste – Working with Tables – Spell Checking and Grammar Checking – Saving and Retrieving Documents – Printing a Document

Unit – III: Spreadsheets with MS-Excel

Opening Menu of MS-Excel – Rows and Columns of Spread Sheet – Types of Data – Entering Data – Formatting Data – Data Analysis with Excel: Sorting – Formulas and Functions – Basic Statistical Functions – Statistical and Business Charts – Saving, Retrieving and Printing

Unit – IV: MS-Power Point

Opening Menu – Selecting a Slide – Inserting Objects into the Slide – Text, Graphical Shapes, Videos etc., Setting Attributes – Animation Effects – Setting Slide Show – Slide Transition – Delay – Presenters Pen – Saving, Retrieving and Printing Power Point Files

SATAVAHANA UNIVERSITY



Scheme of Instruction and Syllabus

**B.Sc Physics (I – VI Semesters)
Under CBCS scheme
(from the academic year 2016-2017)**

**B.Sc. PHYSICS SYLLABUS UNDER CBCS SCHEME
SCHEME OF INSTRUCTION**

Semester	Paper [Theory and Practical]	Instructions Hrs/week	Marks	Credits
I sem	Paper – I : Mechanics	4	100	4
	Practicals – I : Mechanics	3	50	1
II sem	Paper – II: Waves and Oscillations	4	100	4
	Practicals – II : Waves and Oscillations	3	50	1
III sem	Paper – III : Thermodynamics	4	100	4
	Practicals – III : Thermodynamics	3	50	1
IV sem	Paper – IV : Optics	4	100	4
	Practicals – IV :Optics	3	50	1
V sem	Paper –V : Electromagnetism	3	100	3
	Practicals – V: Electromagnetism	3	50	1
	Paper – VI : Elective – I Solid state physics/ Quantum Mechanics and Applications	3	100	3
	Practicals – VI : Elective – I Practical Solid state physics/ Quantum Mechanics and Applications	3	50	1
VI sem	Paper – VII : Modern Physics	3	100	3
	Practical – VII : Modern Physics Lab	3	50	1
	Paper – VIII : Elective – II Basic Electronics/ Physics of Semiconductor Devices	3	100	3
	Practicals – VIII : Elective – II Practical Basic Electronics/ Physics of Semiconductor Devices	3	50	1

Total Credits

36

**B.Sc. (Physics) Semester I-Theory Syllabus
Paper – I : Mechanics**

56 hrs

**(W.E.F the academic year 2016-2017)
(CBCS)**

Unit – I

1. Vector Analysis (14)

Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems. Vector integration, line, surface and volume integrals. Stokes, Gauss and Greens theorems-simple applications.

Unit – II

2. Mechanics of Particles (07)

Laws of motion, motion of variable mass system, motion of a rocket, multi-stage rocket, conservation of energy and momentum. Collisions in two and three dimensions, concept of impact parameter, scattering cross-section,

3. Mechanics of rigid bodies (07)

Definition of Rigid body, rotational kinematic relations, equation of motion for a rotating body, angular momentum and inertial tensor. Euler's equation, precession of a top, Gyroscope,

Unit – III

4. Central forces (14)

Central forces – definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy, equation of motion under a central force, gravitational potential and gravitational field, motion under inverse square law, derivation of Kepler's laws, Coriolis force and its expressions.

Unit – IV

5. Special theory of relativity (14)

Galilean relativity, absolute frames, Michelson-Morley experiment, Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction, addition of velocities, mass-energy relation. Concept of four vector formalism.

NOTE: Problems should be solved at the end of every chapter of all units.

Textbooks

1. Berkeley Physics Course. Vol.1, **Mechanics** by C. Kittel, W. Knight, M.A. Ruderman - *Tata-McGraw hill Company Edition 2008.*
2. **Fundamentals of Physics.** Halliday/Resnick/Walker *Wiley India Edition 2007.*
3. **First Year Physics** - *Telugu Academy.*
4. **Introduction to Physics for Scientists and Engineers.** F.J. Ruche. *McGraw Hill.*

Reference Books

1. **Fundamentals of Physics** by Alan Giambattista et al *Tata-McGraw Hill Company Edition, 2008.*
2. **University Physics** by Young and Freeman, *Pearson Education, Edition 2005.*
3. **Sears and Zemansky's University Physics** by Hugh D. Young, Roger A. Freedman *Pearson Education Eleventh Edition.*
4. **An introduction to Mechanics** by Daniel Kleppner& Robert Kolenkow. *The McGraw Hill Companies.*
5. **Mechanics.** Hans &Puri. *TMH Publications.*
6. **Engineering Physics.** R.K. Gaur & S.L. Gupta. *DhanpatRai Publications.*
7. R P Feynman, RB Lighton and M Sands - The Feynman Lectures in Physics, Vol.-1, BI Publications,
8. J.C. Upadhyay - Mechanics.
9. P.K. Srivastava - Mechanics, New Age International.

FIRST SEMISTER PRACTICALS

42 hrs
(3 hrs / week)

Practical Paper – I : Mechanics

1. Study of a compound pendulum determination of 'g' and 'k'.
2. Y' by uniform Bending
3. Y by Non-uniform Bending.
4. Moment of Inertia of a fly wheel.
5. Measurement of errors –simple Pendulum.
6. 'Rigidity moduli by torsion Pendulum.
7. Determine surface tension of a liquid through capillary rise method.
8. Determination of Surface Tension of a liquid by different methods.
9. Determine of Viscosity of a fluid.

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Text and reference books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (Pragati Prakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, Anchal Srivastava

B.Sc. (Physics) Semester II-Theory Syllabus
Paper – II : Waves and Oscillations

56 hrs

(W.E.F the academic year 2016-2017)
(CBCS)

Unit – I

1. Fundamentals of vibrations (14)

Simple harmonic oscillator, and solution of the differential equation– Physical characteristics of SHM, torsion pendulum, - measurements of rigidity modulus , compound pendulum, measurement of ‘g’, combination of two mutually perpendicular simple harmonic vibrations of same frequency and different frequencies, Lissajous figures

Unit – II

2. Damped and forced oscillations (14)

Damped harmonic oscillator, solution of the differential equation of damped oscillator. Energy considerations, comparison with undamped harmonic oscillator, logarithmic decrement, relaxation time, quality factor, differential equation of forced oscillator and its solution, amplitude resonance, velocity resonance. Coupled Oscillators.

Unit – III

3. Vibrating Strings (14)

Transverse wave propagation along a stretched string, general solution of wave equation and its significance, modes of vibration of stretched string clamped at ends, overtones, energy transport, transverse impedance

Unit – IV

4. Vibrations of bars (14)

Longitudinal vibrations in bars- wave equation and its general solution. Special cases (i) bar fixed at both ends ii) bar fixed at the mid point iii) bar free at both ends iv) bar fixed at one end. Transverse vibrations in a bar- wave equation and its general solution. Boundary conditions, clamped free bar, free-free bar, bar supported at both ends, Tuning fork.

NOTE: Problems should be solved at the end of every chapter of all units.

Textbooks

1. **Fundamentals of Physics.** Halliday/Resnick/Walker *Wiley India Edition 2007.*
2. **First Year Physics - Telugu Academy.**
3. **Introduction to Physics for Scientists and Engineers.** F.J. Ruche. *McGraw Hill.*
4. **Fundamentals of Acoustics by Kinsler and Fray, Meer publishers.**

Reference Books

1. **Fundamentals of Physics** by Alan Giambattista et al *TMH Company Edition, 2008.*
2. **University Physics** by Young and Freeman, *Pearson Education, Edition 2005.*
3. **An introduction to Mechanics** by Daniel Kleppner & Robert Kolenkow. *The McGraw Hill Companies.*
4. **Engineering Physics.** R.K. Gaur & S.L. Gupta. *Dhanpat Rai Publications.*

SECOND SEMISTER PRACTICALS**Practical Paper – II : Waves and Oscillations**

1. Study of damping of an oscillating disc in Air and Water logarithmic decrement.
2. Study of Oscillations under Bifilar suspension.
3. Study of oscillations of a mass under different combination of springs.
4. Verification of Laws of a stretched string (Three Laws).
5. Determination of frequency of a Bar-Melde's experiment.
6. Observation of Lissajous figures from CRO.
7. Volume Resonator –determination of frequency of a tuning fork.
8. Velocity of Transverse wave along a stretched string.
9. Study of damping of a bar pendulum
10. Study of coupled oscillator.

Note: Minimum of eight experiments should be performed. .
Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Text and reference books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (PragatiPrakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, AnchalSrivastava

Subject: Physics **B.Sc. Semester III-Theory Syllabus**
Paper – III : Thermodynamics
(W.E.F the academic year 2017-2018)

56 hrs

Unit – I

1. Kinetic theory of gases: (6)

Introduction – Deduction of Maxwell’s law of distribution of molecular speeds, Transport Phenomena – Viscosity of gases – thermal conductivity – diffusion of gases.

2. Thermodynamics: (8)

Basics of thermodynamics-Kelvin’s and Clausius statements – Thermodynamic scale of temperature – Entropy, physical significance – Change in entropy in reversible and irreversible processes – Entropy and disorder – Entropy of universe – Temperature-Entropy (T-S) diagram – Change of entropy of a perfect gas-change of entropy when ice changes into steam.

Unit – II

3. Thermodynamic potentials and Maxwell’s equations: (7)

Thermodynamic potentials – Derivation of Maxwell’s thermodynamic relations – Clausius-Clayperon’s equation – Derivation for ratio of specific heats – Derivation for difference of two specific heats for perfect gas. Joule Kelvin effect – expression for Joule Kelvin coefficient for perfect and Vanderwaal’s gas.

4. Low temperature Physics: (7)

Joule Kelvin effect – liquefaction of gas using porous plug experiment. Joule expansion – Distinction between adiabatic and Joule Thomson expansion – Expression for Joule Thomson cooling – Liquefaction of helium, Kapitza’s method – Adiabatic demagnetization – Production of low temperatures – Principle of refrigeration, vapour compression type.

Unit – III

5. Quantum theory of radiation: (14)

Black body-Ferry’s black body – distribution of energy in the spectrum of Black body – Wein’s displacement law, Wein’s law, Rayleigh-Jean’s law – Quantum theory of radiation - Planck’s law – deduction of Wein’s distribution law, Rayleigh-Jeans law, Stefan’s law from Planck’s law.

Measurement of radiation using pyrometers – Disappearing filament optical pyrometer – experimental determination – Angstrom pyroheliometer - determination of solar constant, effective temperature of sun.

Unit – IV

6. Statistical Mechanics: (14)

Introduction, postulates of statistical mechanics. Phase space, concept of ensembles and some known ensembles, classical and quantum statistics and their differences, concept of probability, Maxwell-Boltzmann's distribution law -Molecular energies in an ideal gas- Maxwell-Boltzmann's velocity distribution law, Bose-Einstein Distribution law, Fermi-Dirac Distribution law, comparison of three distribution laws, Application of B-E distribution to Photons-planks radiation formula, Application of Fermi-Dirac statistics to white dwarfs and Neutron stars.

Textbooks

1. **Fundamentals of Physics.** Halliday/Resnick/Walker.C. *Wiley India Edition 2007.*
2. **Second Year Physics – Telugu Academy.**
3. **Modern Physics** by R. Murugesan and Kiruthiga Siva Prasath (for statistical Mechanics) S. Chand & Co.
4. **Heat and Thermodynamics** by Mark W.Zemansky 5th edition Mc Graw - Hill
5. **Heat and Thermodynamics** by D.S. Mathur.

Reference Books

1. **Modern Physics** by G. Aruldas and P. Rajagopal, *Eastern Economy Education.*
2. Berkeley Physics Course. Volume-5. **Statistical Physics** by F. Reif. *The McGraw-Hill Companies.*
3. **An Introduction to Thermal Physics** by Daniel V. Schroeder. *Pearson Education Low Price Edition.*
4. **Thermodynamics** by R.C. Srivastava, Subit K. Saha&Abhay K. Jain *Eastern Economy Edition.*
5. **Modern Engineering Physics** by A.S. Vasudeva. *S.Chand& Co. Publications.*
6. **Feynman's Lectures on Physics** Vol. 1,2,3& 4. *Narosa Publications.*
7. **Fundamentals of Optics** by Jenkins A. Francis and White E. Harvey, *McGraw Hill Inc.*
8. B.B. Laud **"Introduction to statistics Mechanics"**(Macmillan 1981)
9. F.Reif: **"Statistical Physics "**(Mcgraw-Hill,1998)
- 10.K.Haug: **"Statistical Physics "**(Wiley Eastern 1988)

42 hrs
(3 hrs / week)

III SEMESTER Practicals Paper – III :
Thermodynamics

1. Co-efficient of thermal conductivity of a bad conductor by Lee's method.
2. Measurement of Stefan's constant.
3. Specific heat of a liquid by applying Newton's law of cooling correction.
4. Heating efficiency of electrical kettle with varying voltages.
5. Determination of Thermo emf
6. Cooling Curve of a metallic body (Null method)
7. Resistance thermometer. To Determine temp coeff resistance
8. Thermal expansion of solids
9. Study of mechanical energy to heat.
10. Determine the Specific of a solid (graphite rod)
11. Thermistor Characteristics. Calculation of A and B

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Text and reference books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (PragatiPrakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, AnchalSrivastava

Unit I

1 Interference: (14)

Principle of superposition – coherence – temporal coherence and spatial coherence – conditions for Interference of light

Interference by division of wave front: Fresnel's biprism – determination of wave length of light. Determination of thickness of a transparent material using Biprism – change of phase on reflection – Lloyd's mirror experiment.

Interference by division of amplitude: Oblique incidence of a plane wave on a thin film due to reflected and transmitted light (Cosine law) – Colours of thin films – Non reflecting films – interference by a plane parallel film illuminated by a point source – Interference by a film with two non-parallel reflecting surfaces (Wedge shaped film) – Determination of diameter of wire-Newton's rings in reflected light with and without contact between lens and glass plate, Newton's rings in transmitted light (Haidinger Fringes) – Determination of wave length of monochromatic light – Michelson Interferometer – types of fringes – Determination of wavelength of monochromatic light, Difference in wavelength of sodium D_1, D_2 lines and thickness of a thin transparent plate.

Unit II:

2 Diffraction: (14)

Introduction – Distinction between Fresnel and Fraunhofer diffraction Fraunhofer diffraction:- Diffraction due to single slit and circular aperture – Limit of resolution – Fraunhofer diffraction due to double slit – Fraunhofer diffraction pattern with N slits (diffraction grating)

Resolving Power of grating – Determination of wave length of light in normal and oblique incidence methods using diffraction grating.

Fresnel diffraction-Fresnel's half period zones – area of the half period zones –zone plate – Comparison of zone plate with convex lens – Phase reversal zone plate – diffraction at a straight edge – difference between interference and diffraction.

Unit III:

3 Polarization (14)

Polarized light : Methods of Polarization, Polarization by reflection, refraction, Double refraction, selective absorption , scattering of light – Brewsters law – Malus law – Nicol prism polarizer and analyzer – Refraction of plane wave incident on negative and positive crystals (Huygen's explanation) – Quarter wave plate, Half wave plate – Babinet's compensator – Optical activity, analysis of light by Laurent's half shade polarimeter.

Unit IV:

4 Aberrations and Fiber Optics : (14)

Introduction – Monochromatic aberrations, spherical aberration, methods of minimizing spherical aberration, coma, astigmatism and curvature of field, distortion. Chromatic aberration – the achromatic doublet – Removal of chromatic aberration of a separated doublet.

Fiber Optics : Introduction – Optical fibers – Principles of fiber communication – Step and graded index fibers – Rays and modes in an optical fiber – Fiber material – Types of optical fibers and advantages of fiber communication.

NOTE: Problems should be solved at the end of every chapter of all units.

Textbooks

1. **Optics** by Ajoy Ghatak. *The McGraw-Hill companies.*
2. **Optics** by Subramaniam and Brijlal. *S. Chand & Co.*
3. **Fundamentals of Physics.** Halliday/Resnick/Walker.C. *Wiley India Edition 2007.*
4. **Optics and Spectroscopy.** R. Murugesan and Kiruthiga Siva Prasath. *S. Chand & Co.*
5. **Second Year Physics** – *Telugu Academy.*

Reference Books

1. **Modern Engineering Physics** by A.S. Vasudeva. *S.Chand & Co. Publications.*
2. **Feynman's Lectures on Physics** Vol. 1,2,3& 4. *Narosa Publications.*
3. **Fundamentals of Optics** by Jenkins A. Francis and White E. Harvey, *McGraw Hill Inc.*
4. K. Ghatak, **Physical Optics'**
5. D.P. Khandelwal, **Optical and Atomic Physics'** (Himalaya Publishing House, Bombay,1988)
6. Jenkins and White: **'Fundamental of Optics'** (McGraw-Hill)
7. Smith and Thomson: **'Optics'** (John Wiley and sons)

IV SEMESTER Practicals Paper – IV :
Optics

1. Thickness of a wire using wedge method.
2. Determination of wavelength of light using Biprism.
3. Determination of Radius of curvature of a given convex lens by forming Newton's rings.
4. Resolving power of grating.
5. Study of optical rotation-polarimeter.
6. Dispersive power of a prism
7. Determination of wavelength of light using diffraction grating minimum deviation method.
8. Wavelength of light using diffraction grating – normal incidence method.
9. Resolving power of a telescope.
10. Refractive index of a liquid and glass (Boys Method).
11. Pulfrich refractometer – determination of refractive index of liquid.
12. Wavelength of Laser light using diffraction grating.

Note: Minimum of eight experiments should be performed .

Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Text and reference books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (Pragati Prakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, AnchalSrivastava

B.Sc. Semester V-Theory Syllabus
Subject : (Physics) Paper – V : Electromagnetism
(DSE- Compulsory)
(W.E.F the academic year 2018-2019)

42 hrs

Unit I :

Electrostatics (11 hrs)

Electric Field:- Concept of electric field lines and electric flux, Gauss's law (Integral and differential forms), application to linear, plane and spherical charge distributions. Conservative nature of electric field E, irrotational field. Electric Potential:- Concept of electric potential, relation between electric potential and electric field, potential energy of a system of charges. Energy density in an electric field. Calculation of potential from electric field for a spherical charge distribution.

Unit II :

Magnetostatics (12 hrs)

Concept of magnetic field B and magnetic flux, Biot-Savart's law, B due to a straight current carrying conductor. Force on a point charge in a magnetic field. Properties of B, curl and divergence of B, solenoidal field. Integral form of Ampere's law, applications of Ampere's law: field due to straight, circular and solenoidal currents. Energy stored in magnetic field. Magnetic energy in terms of current and inductance. Magnetic force between two current carrying conductors. Magnetic field intensity. Ballistic Galvanometer:- Torque on a current loop in a uniform magnetic field, working principle of B.G., current and charge sensitivity, electromagnetic damping, critical damping resistance.

Unit III:

Electromagnetic Induction (9 hrs)

Faraday's laws of induction (differential and integral form), Lenz's law, self and mutual Induction. Continuity equation, modification of Ampere's law, displacement current, Maxwell equations

Unit IV :

Electromagnetic waves (10 hrs)

Maxwell's equations in vacuum and dielectric medium, boundary conditions, plane wave equation: transverse nature of EM waves, velocity of light in vacuum and in medium, polarization, reflection and transmission. Polarization of EM waves, Brewster's angle, description of linear, circular and elliptical polarization.

Text Books

1. Fundamentals of electricity and magnetism By Arthur F. Kip (McGraw-Hill, 1968)
2. Electricity and magnetism by J.H.Fewkes & John Yarwood. Vol. I (Oxford Univ. Press, 1991).
3. Introduction to Electrodynamics, 3rd edition, by David J. Griffiths, (Benjamin Cummings,1998).

Reference Books

4. Electricity and magnetism By Edward M. Purcell (McGraw-Hill Education, 1986)
5. Electricity and magnetism. By D C Tayal (Himalaya Publishing House,1988)
6. Electromagnetics by Joseph A.Edminister 2nd ed.(New Delhi: Tata Mc Graw Hill, 2006).

V SEMISTER Practicals Paper – V : Electromagnetism

PHYSICS LABORATORY

Marks: 50

1. To verify the Thevenin Theorem
2. To verify Norton Theorem
3. To verify Superposition Theorem
4. To verify maximum power transfer theorem.
5. To determine a small resistance by Carey Foster's bridge.
6. To determine the (a) current sensitivity, (b) charge sensitivity, and (c) CDR of a B.G.
7. To determine high resistance by leakage method.
8. To determine the ratio of two capacitances by De Sauty's bridge.
9. To determine self-inductance of a coil by Anderson's bridge using AC.
10. To determine self-inductance of a coil by Rayleigh's method.
11. To determine coefficient of Mutual inductance by absolute method.

Note: Minimum of eight experiments should be performed.

Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Suggested Books for Reference

1. B. L. Worsnop and H. T. Flint, Advanced Practical Physics, Asia Publishing House, New Delhi.
2. Indu Prakash and Ramakrishna, A Text Book of Practical Physics, Kitab Mahal

B.Sc. Semester V-Theory Syllabus

42 hrs

Subject : (Physics)

(DSE- Elective-I)

Paper-VI-A – Solid State Physics

Unit-I (11hrs)

Crystal Structure: Solids: Amorphous and Crystalline Materials. Lattice Translation Vectors. Lattice with a Basis – Central and Non-Central Elements. Unit Cell. Miller Indices. Types of Lattices, Reciprocal Lattice. Brillouin Zones. Diffraction of X-rays by Crystals. Bragg's Law. Atomic and Geometrical Factor.

Elementary Lattice Dynamics: Lattice Vibrations and Phonons: Linear Monoatomic and Diatomic Chains. Acoustical and Optical Phonons. Qualitative Description of the Phonon Spectrum in Solids. Dulong and Petit's Law, Einstein and Debye theories of specific heat of solids. T₃ law

Unit-II (11 hrs)

Magnetic Properties of Matter: Dia-, Para-, Ferri- and Ferromagnetic Materials. Classical Langevin Theory of dia- and Paramagnetic Domains. Curie's law, Weiss's Theory of Ferromagnetism and Ferromagnetic Domains. Discussion of B-H Curve. Hysteresis and Energy Loss.

Dielectric Properties of Materials: Polarization. Local Electric Field at an Atom. Depolarization Field. Electric Susceptibility. Polarizability. Clausius Mosotti Equation. Classical Theory of Electric Polarizability.

Unit-III (10 hrs)

Elementary band theory: Kronig Penny model. Band Gap. Brillouin zones, effective mass of electron. Conductor, Semiconductor (P and N type) and insulator. Conductivity of Semiconductor, mobility, Hall Effect, Electric Conductivity by four probe method & Hall coefficient.

UNIT IV (10hrs)

Lasers: Einstein's A and B coefficients. Metastable states. Spontaneous and Stimulated emissions. Optical Pumping and Population Inversion. Three-Level and Four-Level Lasers. Ruby Laser and He-Ne Laser.

Superconductivity: Experimental Results. Critical Temperature. Critical magnetic field. Meissner effect. Type I and type II Superconductors, London's Equation and Penetration Depth. Isotope effect. Idea of BCS theory. D.C and A.C Josephson effects.

Text Books:

1. Solid-state Physics, H. Ibach and H. Luth, 2009, Springer
2. Elementary Solid State Physics, 1/e M. Ali Omar, 1999, Pearson India
3. Solid State Physics, M.A. Wahab, 2011, Narosa Publications
4. Solid State Physics – S. O. Pillai (New Age Publication)
5. Modern Physics by R.Murugesham

Reference Books:

1. Introduction to Solid State Physics, Charles Kittel, 8th Edition, 2004, Wiley India Pvt. Ltd.
2. Elements of Solid State Physics, J.P. Srivastava, 2nd Edition, 2006, Prentice-Hall of India
3. Introduction to Solids, Leonid V. Azaroff, 2004, Tata Mc-Graw Hill
4. Solid State Physics, N.W. Ashcroft and N.D. Mermin, 1976, Cengage Learning
5. Solid State Physics- R.K.Puri &V.K. Babbar (S.Chand Publication)2013
6. Lasers and Non linear Optics –B.B.Laud-Wiley Eastern.
7. LASERS: Fundamentals and Applications – Thyagarajan and Ghatak (McMillanIndia)

V SEMISTER Practicals Paper – VI A
Solid State Physics

1. Measurement of susceptibility of paramagnetic solution (Quinck's Tube Method)
2. To measure the Magnetic susceptibility of Solids.
3. To determine the Coupling Coefficient of a Piezoelectric crystal.
4. To measure the Dielectric Constant of a dielectric Materials with frequency
5. To study the PE Hysteresis loop of a Ferroelectric Crystal.
6. To draw the BH curve of Fe using Solenoid & determine energy loss from Hysteresis.
7. To measure the resistivity of a semiconductor (Ge) with temperature by four-probe method (room temperature to 150⁰ C) and to determine its band gap.
8. To determine the Hall coefficient of a semiconductor sample.
9. Calculation of d-values of a given Laue's pattern.
10. Calculation of d-values of powder diffraction method.
12. To study the spectral characteristics of a Photo- Voltaic cell.
13. Verification of Bragg's equation.

Reference Books

- Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House.
- Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers.
- A Text Book of Practical Physics, I.Prakash & Ramakrishna, 11th Ed., 2011, Kitab Mahal
- Elements of Solid State Physics, J.P. Srivastava, 2nd Ed., 2006, Prentice-Hall of India

Paper-VI-B – QUANTUM MECHANICS AND APPLICATIONS**Unit-I (11 hrs)**

Schrodinger equation & the operators: Time dependent Schrodinger equation and dynamical evolution of a quantum state; Properties of Wave Function. Interpretation of Wave Function Probability and probability current densities in three dimensions; Conditions for Physical Acceptability of Wave Functions. Normalization. Linearity and Superposition Principles. Hermitian operator, Eigen values and Eigen functions. Position, momentum and Energy operators; commutator of position and momentum operators; Expectation values of position and momentum. Wave Function of a Free Particle.

Unit II (11 hrs)

Time independent Schrodinger equation-Hamiltonian, stationary states and energy eigen values; expansion of an arbitrary wave function as a linear combination of energy eigen functions; General solution of the time dependent Schrodinger equation in terms of linear combinations of stationary states; Application to spread of Gaussian wave-packet for a free particle in one dimension; wave packets, Fourier transforms and momentum space wave function; Position-momentum uncertainty principle.

Unit-III (10 hrs)

General discussion of bound states in an arbitrary potential- continuity of wave function, boundary condition and emergence of discrete energy levels; application to one-dimensional problem-square well potential; Quantum mechanics of simple harmonic oscillator-energy levels and energy eigen functions ground state, zero point energy & uncertainty principle. One dimensional infinitely rigid box- energy eigen values and eigen functions, normalization; Quantum dot as example; Quantum mechanical scattering and tunnelling in one dimension across a step potential & rectangular potential barrier.

Unit-IV (10 hrs)

Atoms in Electric & Magnetic Fields: Electron angular momentum. Space quantization. Electron Spin and Spin Angular Momentum. Larmor's Theorem. Spin Magnetic Moment. SternGerlach Experiment. Zeeman Effect: Electron Magnetic Moment and Magnetic Energy, Gyromagnetic Ratio and Bohr Magneton. Atoms in External Magnetic Fields:- Normal and Anomalous Zeeman Effect. Paschen Back and Stark Effect (Qualitative Discussion only). (12 Lectures)

Text Books:

1. A Text book of Quantum Mechanics, P. M.Mathews and K.Venkatesan, 2nd Ed., 2010, McGraw Hill
2. Quantum Mechanics, Robert Eisberg and Robert Resnick, 2nd Edn., 2002, Wiley.
3. Quantum Mechanics, Leonard I. Schiff, 3rd Edn. 2010, Tata McGraw Hill.

Reference Books:

1. Quantum Mechanics, G. Aruldhas, 2nd Edn. 2002, PHI Learning of India.
2. Cohen-Tannoudji, B Diu and F Laloë, Quantum Mechanics (2 vols) Wiley-VCH 1977 • Basic Quantum Mechanics –A.Ghatak (Mc Millan India) 2012
3. Introduction to Quantum Mechanics, D.J. Griffith, 2nd Ed. 2005, Pearson • Quantum Physics----S. Gasiorowicz (Wiley India) 2013

V – SEMESTER Practicals Paper – VI C
Quantum Mechanics and Applications

Use C/C++/Scilab for solving the following problems based on Quantum Mechanics like

1. Solve the s-wave Schrodinger equation for the ground state and the first excited state of the hydrogen atom: Here, m is the reduced mass of the electron. Obtain the energy eigenvalues and plot the corresponding wavefunctions. Remember that the ground state energy of the hydrogen atom is ≈ -13.6 eV. Take $e = 3.795$ (eVÅ)^{1/2}, $\hbar c = 1973$ (eVÅ) and $m = 0.511 \times 10^6$ eV/c².
2. Solve the s-wave radial Schrodinger equation for an atom: where m is the reduced mass of the system (which can be chosen to be the mass of an electron), for the screened coulomb potential Find the energy (in eV) of the ground state of the atom to an accuracy of three significant digits. Also, plot the corresponding wavefunction. Take $e = 3.795$ (eVÅ)^{1/2}, $m = 0.511 \times 10^6$ eV/c², and $a = 3$ Å, 5 Å, 7 Å. In these units $\hbar c = 1973$ (eVÅ). The ground state energy is expected to be above -12 eV in all three cases.
3. Solve the s-wave radial Schrodinger equation for a particle of mass m : For the anharmonic oscillator potential for the ground state energy (in MeV) of particle to an accuracy of three significant digits. Also, plot the corresponding wave function. Choose $m = 940$ MeV/c², $k = 100$ MeV fm⁻², $b = 0, 10, 30$ MeV fm⁻³ In these units, $\hbar c = 197.3$ MeV fm. The ground state energy I expected to lie between 90 and 110 MeV for all three cases.
4. Solve the s-wave radial Schrodinger equation for the vibrations of hydrogen molecule: Where μ is the reduced mass of the two-atom system for the Morse potential Find the lowest vibrational energy (in MeV) of the molecule to an accuracy of three significant digits. Also plot the corresponding wave function. Take: $m = 940 \times 10^6$ eV/C², $D = 0.755501$ eV, $\alpha = 1.44$, $r_0 = 0.131349$ Å

Laboratory based experiments:

5. Study of Electron spin resonance- determine magnetic field as a function of the resonance frequency
6. Study of Zeeman effect: with external magnetic field; Hyperfine splitting
7. To show the tunneling effect in tunnel diode using I-V characteristics.
8. Quantum efficiency of CCDs

Reference Books:

1. Schaum's outline of Programming with C++. J.Hubbard, 2000,McGraw---Hill Publication
2. Numerical Recipes in C: The Art of Scientific Computing, W.H. Press et al., 3rd Edn., 2007, Cambridge University Press.
3. An introduction to computational Physics, T.Pang, 2nd Edn.,2006, Cambridge Univ. Press • Simulation of ODE/PDE Models with MATLAB®, OCTAVE and SCILAB: Scientific & Engineering Applications: A. Vande Wouwer, P. Saucez, C. V. Fernández.2014 Springer.
4. Scilab (A Free Software to Matlab): H. Ramchandran, A.S. Nair. 2011 S. Chand & Co.
5. Scilab Image Processing: L.M.Surhone.2010 Betascript Publishing ISBN:978-613345927

B.Sc. Semester VI-Theory Syllabus

42 hrs

Subject : (Physics)

(DSC- Compulsory)

Paper-VII – MODERN PHYSICS

UNIT-I (11hrs)

Atomic Spectra and Models Inadequacy of classical physics:

Brief Review of Black body Radiation , Photoelectric effect, Compton effect, dual nature of radiation, wave nature of particles. Atomic spectra, Line spectra of hydrogen atom, Ritz Rydberg combination principle. Alpha Particle Scattering, Rutherford Scattering Formula, Rutherford Model of atom and its limitations, Bohr's model of H atom, explanation of atomic spectra, correction for finite mass of the nucleus, Bohr correspondence principle, limitations of Bohr model, discrete energy exchange by atom, Frank Hertz Expt. Sommerfeld's Modification of Bohr's Theory.

UNIT-II (11hrs)

Wave Particle Duality de Broglie hypothesis, Experimental confirmation of matter wave, Davisson Germer Experiment, velocity of de Broglie wave, wave particle duality, Complementarity. Superposition of two waves, phase velocity and group velocity , wave packets ,Gaussian Wave Packet , spatial distribution of wave packet, Localization of wave packet in time. Time development of a wave Packet; Wave Particle Duality, Complementarity . Heisenberg Uncertainty Principle, Illustration of the Principle through thought Experiments of Gamma ray microscope and electron diffraction through a slit. Time independent and time dependent Schrodinger wave equation. Estimation of ground state energy of harmonic oscillator and hydrogen atom, non-existence of electron in the nucleus. Uncertainty and Complementarities.

UNIT-III (9 hrs)

Nuclear Physics Size and structure of atomic nucleus and its relation with atomic weight; Impossibility of an electron being in the nucleus as a consequence of the uncertainty principle. Nature of nuclear force, NZ graph, Liquid Drop model: semi-empirical mass formula and binding energy, Nuclear Shell Model and magic numbers.

Unit IV (11 hrs)

Radioactivity: stability of the nucleus; Law of radioactive decay; Mean life and half-life; Alpha decay; Beta decay- energy released, spectrum and Pauli's prediction of neutrino; Gamma ray emission, energy-momentum conservation: electron-positron pair creation by gamma photons in the vicinity of a nucleus. Fission and fusion- mass deficit, relativity and generation of energy; Fission - nature of fragments and emission of neutrons. Nuclear reactor: slow neutrons interacting with Uranium 235; Fusion and thermonuclear reactions driving stellar energy (brief qualitative discussions), Classification of Elementary Particles

Text Books:

1. Concepts of Modern Physics, Arthur Beiser, 2002, McGraw-Hill.
2. Modern Physics ---Murugesan and Sivaprasad --(S. Chand Higher Academics)
3. Introduction to Modern Physics, Rich Meyer, Kennard, Coop, 2002, Tata McGraw Hill
4. Introduction to Quantum Mechanics, David J. Griffith, 2005, Pearson Education.
5. Physics for scientists and Engineers with Modern Physics, Jewett and Serway, 2010, Cengage Learning. •
6. Quantum Mechanics: Theory & Applications, A.K.Ghatak & S.Lokanathan, 2004, Macmillan

Reference Books

1. Modern Physics – Bernstein, Fishbane and Gasiorowicz (Pearson India) 2010
2. Quantum Physics of Atoms, Molecules, Solids, Nuclei and Particles -- R. Eisberg (Wiley India) 2012 Additional Books for Reference
3. Modern Physics, J.R. Taylor, C.D. Zafiratos, M.A. Dubson, 2004, PHI Learning.
4. Theory and Problems of Modern Physics, Schaum`s outline, R. Gautreau and W. Savin, 2nd Edn, Tata McGraw-Hill Publishing Co. Ltd.
5. Quantum Physics, Berkeley Physics, Vol.4. E.H.Wichman, 1971, Tata McGraw-Hill Co.
6. Basic ideas and concepts in Nuclear Physics, K.Heyde, 3rd Edn., Institute of Physics Pub.
7. Six Ideas that Shaped Physics: Particle Behave like Waves, T.A.Moore, 2003, McGraw Hill
8. Modern Physics-Serway (CENGAGE Learnings) 2014
9. Physics of Atoms and Molecules – Bransden (Pearson India) 2003

VI SEMESTER Practicals Paper – VII :
Modern Physics

1. Measurement of Planck's constant using black body radiation and photo-detector
2. Photo-electric effect: photo current versus intensity and wavelength of light; maximum energy of photo-electrons versus frequency of light
3. To determine the Planck's constant using LEDs of at least 4 different colors.
4. To determine the ionization potential of mercury.
5. To determine the absorption lines in the rotational spectrum of Iodine vapour.
6. To determine the value of e/m by (a) Magnetic focusing or (b) Bar magnet.
7. To setup the Millikan oil drop apparatus and determine the charge of an electron.
8. To show the tunneling effect in tunnel diode using I-V characteristics.
9. To determine the wavelength of laser source using diffraction of single slit.
10. To determine the wavelength of laser source using diffraction of double slits.
11. To determine (1) wavelength and (2) angular spread of He-Ne laser using plane diffraction grating
12. To determine the value of e/m for electron by long solenoid method.
13. Photo Cell – Determination of Planck's constant.
14. To verify the inverse square law of radiation using a photo-electric cell.
15. To find the value of photo electric work function of a material of the cathode using a photo-electric cell.
16. Measurement of magnetic field – Hall probe method.
17. To determine the dead time of a given G.M. tube using double source.
18. Hydrogen spectrum – Determination of Ridge berg's constant
19. Energy gap of intrinsic semi-conductor
20. G. M. Counter – Absorption coefficients of a material.
21. To draw the plateau curve for a Geiger Muller counter.
22. To find the half-life period of a given radioactive substance using a G.M. Counter.

Reference Books

1. Advanced Practical Physics for students, B.L. Flint and H.T. Worsnop, 1971, Asia Publishing House
2. Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers

Subject : (Physics)

**B.Sc. Semester VI-Theory Syllabus
(DSE- Elective-II)
Paper-VIII-A : Basic Electronics**

42 hrs

Unit-I: (10 hrs)

Network Elements and Network Theorems

Passive elements, Power sources, Active Elements, Network Models: T and π Transformations, Superposition theorem, Thevenin's Theorem, Norton's theorem. Reciprocity Theorem and Maximum power transfer theorem (Simple problems).

Two-port Networks – Introduction- Z-parameters, Y-parameters, h-parameters and ABCD-parameters (Simple problems).

Unit – II: (10 hrs)

Band theory of P-N junction

1. Energy band in solids (band theory), valence band, conduction band and forbidden energy gap solids, Insulators, semi conductors and, pure or intrinsic semiconductors and impurity or extrinsic semi-conductors. N-type extrinsic semi-conductors, P-type extrinsic semi-conductors, Fermi level, continuity equation.

2. Diodes: P-N junction diode, Bridge rectifier. Zener diode & its Characteristics. Zener diode as voltage regulator.

Unit-III: (11hrs)

1. Bipolar Junction Transistor (BJT) – p-n-p and n-p-n transistors, current components in transistors, CB, CE and CC configurations – transistor as an amplifier -RC coupled amplifier. (Qualitative analysis)

2. Feedback Concept & Oscillators: Feedback, General theory of feedback–Concepts of a Oscillators, Barkhausen's criteria, Phase shift Oscillator.

Unit-IV: (11 hrs)

1. Digital Electronics

Binary number system, converting Binary to Decimal and vice versa. Binary addition and subtraction (1's and 2's complement methods). Hexadecimal number system. Conversion from Binary to Hexadecimal – vice versa and Decimal to Hexadecimal vice versa.

1. Logic gates:

OR, AND, NOT gates, truth tables, realization of these gates using discrete components. NAND, NOR as universal gates, Exclusive – OR gate (EX-OR). De Morgan's Laws – Statement and proof.

NOTE: Problems should be solved from every chapter of all units.

Textbooks

1. Electronic devices and circuits – Millman and Halkias. *Mc.Graw-Hill Education*.
2. Principles of Electronics by V.K. Mehta – *S. Chand & Co.*
3. Basic Electronics (Solid state) – B. L. Theraja , *S. Chand & Co.*
4. A First Course in Electronics- Anwar A. Khan& Kanchan K. Dey, *PHI*.

Reference Books

1. Basic Electronics – Bernod Grob.
2. Third year Electronics – Telugu Academy
3. Digital Principles & Applications – A.P. Malvino and D.P. Leach
4. Circuit theory- Umesh.

VI SEMISTER Practicals Paper – VIII A :
Basic Electronics

1. AND, OR, NOT, gates – Truth table Verification
 2. AND, OR, NOT – gates constructions using universal gates – Verification of truth tables.
 3. NAND and NOR gates truth table verification
 4. Characteristics of a Transistor in CE configuration
 5. R.C. coupled amplifier – frequency response.
 6. Verification of De Morgan's Theorem.
 7. Zener diode V-I characteristics.
 8. Verification Thevenin's theorem.
 9. Maximum Power Transfer theorem
 10. P-n junction diode V- I characteristics.
 11. Zener diode as a voltage regulator
 12. Construction of a model D.C. power supply
 13. R C phase shift Oscillator –determination of output frequency
- ❖ Every student should complete minimum 06 experiments.

Text Books for LAB (Practical 6)

1. B.Sc. Practical Physics – C. L. Arora – S. Chand & Co.
2. Viva-voce in Physics – R.C. Gupta, Pragathi Prakashan, Meerut.
3. Laboratory manual for Physics Course by B.P. Khandelwal.
4. Practical Physics by M. Arul Thakpathi by Comptex Publishers.
5. B.Sc. practical physics – Subbi Reddy.

Paper-VIII-B : Physics of Semiconductor Devices

Unit-I: (11 hrs)

Semiconductor Physics: Conductors, Semiconductors, forbidden orbits, energy levels, crystals and covalent bonds, free electrons and holes, recombination and life-time, energy bands. Intrinsic Semiconductor- intrinsic carrier concentration, density of electrons in conduction band, fermi-level, mass action law. Carrier transport phenomena- mobility, resistivity, diffusivity, Einstein's relation, current density equation. Extrinsic semiconductor- n-type semiconductor, p-type semiconductor, energy band diagram of extrinsic semiconductor. Hall effect- mobility and Hall angle, experiment arrangement for the study of Hall effect, significance of Hall effect.

Unit – II: (11 hrs)

P-N junction-Depletion layer, Energy level diagram of p-n junction, Band structure of an open circuited p-n junction, Biasing of p-n junction, effect of barrier potential on forward bias, reverse leakage current, reverse breakdown, P-n junction under various conditions- thermal equilibrium, forward and reverse bias, current-voltage characteristics. Derivation of ideal diode equation of p-n junction, diode model and its approximations. Forward and reverse resistance of diode. Dynamic characteristic of diode.

Unit-III: (10 hrs)

Special diodes-Zener diode, Light –emitting diode (LED), Photo-diode, Schottky diode, Backward diodes and Tunnel diode.

Transistors- Bipolar junction transistor (BJT), transistor characteristics, transistor equation in active region, field effect transistor (FET), Phototransistor and MOSFETTs.

Unit-IV: (10 hrs)

Control devices- Shockley Diode, Silicon Controlled Rectifier (SCR), Silicon Controlled Switch (SCS), Unijunction transistor (UJT), Solar Cells, Opto-couplers.

Text books

1. A First Course in Electronics- Anwar A. Khan& Kanchan K. Dey, PHI
2. Physics of Semiconductor Devices- S. M. Sze
3. Physics of Semiconductors- Streetman

VI SEMISTER Practicals Paper – VIII-B :

Physics of Semiconductor Devices

1. Characteristics of a Transistor in CE configuration
2. Zener diode V-I characteristics.
3. P-n junction diode V- I characteristics.
4. Zener diode as a voltage regulator
5. Determination of carrier concentration using Hall effect
6. Thermistor characteristics
7. Efficiency of a LED
8. Solar cell: fill factor and efficiency
9. FET characteristics
10. SCR characteristics
11. UJT characteristics

❖ Every student should complete minimum 06 experiments.

Text Books for LAB (Practical 6)

1. Basic electronics Grob
2. Practical Electronics Zbar

B.Sc. Semester III
Skill Enhancement Course (SEC)
(W.E.F the academic year 2016-2017) (CBCS)

RENEWABLE ENERGY AND ENERGY HARVESTING

(Credits: 02)

Theory: 30 Lectures

The aim of this course is not just to impart theoretical knowledge to the students but to provide them with exposure and hands-on learning wherever possible

Fossil fuels and Alternate Sources of energy:

Fossil fuels and Nuclear Energy, their limitation, need of renewable energy, non-conventional energy sources. An overview of developments in Offshore Wind Energy, Tidal Energy, Wave energy systems, Ocean Thermal Energy conversion, solar energy, biomass, biochemical conversion, biogas generation, geothermal energy tidal energy, Hydroelectricity. (3 Lectures)

Solar energy:

Solar energy, its importance, storage of solar energy, solar pond, non-convective solar pond, applications of solar pond and solar energy, solar water heater, flat plate collector, solar distillation, solar cooker, solar green houses, solar cell, absorption air conditioning. Need and characteristics of photovoltaic (PV) systems, PV models and equivalent circuits, and sun tracking systems. (6 Lectures)

Wind Energy harvesting:

Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines. Power electronic interfaces, and grid interconnection topologies. (3 Lectures)

Ocean Energy:

Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices. (3 Lectures)

Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy, Osmotic Power, Ocean Bio-mass. (2 Lectures)

Geothermal Energy:

Geothermal Resources, Geothermal Technologies. (2 Lectures)

Hydro Energy:

Hydropower resources, hydropower technologies, environmental impact of hydro power sources. (2 Lectures)

Piezoelectric Energy harvesting:

Introduction, Physics and characteristics of piezoelectric effect, materials and mathematical description of piezoelectricity, Piezoelectric parameters and modeling piezoelectric generators. Piezoelectric energy harvesting applications, Human power (4 Lectures)

Electromagnetic Energy Harvesting: Linear generators, physics mathematical models, recent applications (2 Lectures)

Carbon captured technologies, cell, batteries, power consumption (2 Lectures)

Environmental issues and Renewable sources of energy, sustainability. (1 Lecture)

Demonstrations and Experiments

1. Demonstration of Training modules on Solar energy, wind energy, etc.
2. Conversion of vibration to voltage using piezoelectric materials
3. Conversion of thermal energy into voltage using thermoelectric modules.

Reference Books:

1. Non-conventional energy sources - G.D Rai - Khanna Publishers, New Delhi
 2. Solar energy - M P Agarwal - S Chand and Co. Ltd.
 3. Solar energy - Suhas P Sukhative Tata McGraw - Hill Publishing Company Ltd
 4. Godfrey Boyle, "Renewable Energy. Power for a sustainable future", 2004.
 5. Oxford University Press, in association with The Open University.
 6. Dr. P Jayakumar, Solar Energy: Resource Assesment Handbook, 2009
 7. J.Balfour, M.Shaw and S. Jarosek, Photovoltaics, Lawrence J Goodrich (USA).
-

B.Sc. Semester III
Skill Enhancement Course (SEC)
(W.E.F the academic year 2016-2017) (CBCS)

WEATHER FORECASTING
(Credits: 02)
Theory: 30 Lectures

The aim of this course is not just to impart theoretical knowledge to the students but to enable them to develop an awareness and understanding regarding the causes and effects of different weather phenomenon and basic forecasting techniques

Introduction to atmosphere:

Elementary idea of atmosphere: physical structure and composition; compositional layering of the atmosphere; variation of pressure and temperature with height; air temperature: requirements to measure air temperature; temperature sensors: types; atmospheric pressure: its measurement; cyclones and anticyclones: its characteristics. (9 Periods)

Measuring the weather:

Wind; forces acting to produce wind; wind speed direction: units, its direction; measuring wind speed and direction; humidity, clouds and rainfall, radiation: absorption, emission and scattering in atmosphere; radiation laws. (4 Periods)

Weather systems: Global wind systems; air masses and fronts: classifications; jet streams; local thunderstorms; tropical cyclones: classification; tornadoes; hurricanes. (3 Periods)

Climate and Climate Change: Climate: its classification; causes of climate change; global warming and its outcomes; air pollution; aerosols, ozone depletion, acid rain, environmental issues related to climate. (6 Periods)

Basics of weather forecasting: Weather forecasting: analysis and its historical background; need of measuring weather; types of weather forecasting; weather forecasting methods; criteria of choosing weather station; basics of choosing site and exposure; satellites observations in weather forecasting; weather maps; uncertainty and predictability; probability forecasts. (8 Periods)

Demonstrations and Experiments:

1. Study of synoptic charts & weather reports, working principle of weather station.
2. Processing and analysis of weather data:
 - (a) To calculate the sunniest time of the year.
 - (b) To study the variation of rainfall amount and intensity by wind direction.
 - (c) To observe the sunniest/driest day of the week.
 - (d) To examine the maximum and minimum temperature throughout the year.
 - (e) To evaluate the relative humidity of the day.
 - (f) To examine the rainfall amount month wise.

3. Exercises in chart reading: Plotting of constant pressure charts, surfaces charts, upper wind charts and its analysis.
4. Formats and elements in different types of weather forecasts/ warning (both aviation and non aviation)

Reference books:

1. Aviation Meteorology, I.C. Joshi, 3rd edition 2014, Himalayan Books
 2. The weather Observers Hand book, Stephen Burt, 2012, Cambridge University Press.
 3. Meteorology, S.R. Ghadekar, 2001, Agromet Publishers, Nagpur.
 4. Text Book of Agrometeorology, S.R. Ghadekar, 2005, Agromet Publishers, Nagpur.
 5. Why the weather, Charls Franklin Brooks, 1924, Chpraman & Hall, London.
 6. Atmosphere and Ocean, John G. Harvey, 1995, The Artemis Press.
-

B.Sc. Physics and B.Sc. Electronics Syllabus
II YEAR , Semester - IV
Skill Enhancement Course :BASIC INSTRUMENTATION SKILLS

With effect from 2016-2017

Total number of hours : 30

Number of credits: 2

This course is to get exposure with various aspects of instruments and their usage through hands-on mode.

UNIT I

Basic of Measurement: Instruments accuracy, precision, sensitivity, resolution range etc. Errors in measurements and loading effects. **Multimeter:** Principles of measurement of dc voltage and dc current, ac voltage, ac current and resistance. Specifications of a multimeter and their significance. . (3 Lectures)

Electronic Voltmeter: Advantage over conventional multimeter for voltage measurement with respect to input impedance and sensitivity. Principles of voltage, measurement (block diagram only). Specifications of an electronic Voltmeter/ Multimeter and their significance. **AC millivoltmeter:** Type of AC millivoltmeters. Block diagram ac millivoltmeter, specifications and their significance. (4 Lectures)

Oscilloscope: Block diagram of basic CRO. CRT, electrostatic focusing and acceleration (Explanation only – no mathematical treatment), brief discussion on screen phosphor, visual persistence. Time base operation, synchronization. Front panel controls. Specifications of CRO and their significance. (5 Lectures)

Use of CRO for the measurement of voltage (dc and ac), frequency and time period. Special features of dual trace, introduction to digital oscilloscope, probes. Digital storage Oscilloscope: principle of working. (3 Lectures)

UNIT II

Signal and pulse Generators: Block diagram, explanation and specifications of low frequency signal generator and pulse generator. Brief idea for testing, specifications. Distortion factor meter, wave analysis. (4 Lectures)

Impedance Bridges: Block diagram of bridge. working principles of basic (balancing type) RLC bridge. Specifications of RLC bridge. Block diagram and working principles of a Q-Meter. Digital LCR bridges. (4 Lectures)

Digital Instruments: Comparison of analog & digital instruments. Characteristics of a digital meter. Working principles of digital voltmeter. (3 Lectures)

Digital Multimeter: Block diagram and working of a digital multimeter. Working principle of time interval, frequency and period measurement using universal counter/ frequency counter, time- base stability, accuracy and resolution. (4 Lectures)

The test of lab skills will be of the following test items:

1. Use of an oscilloscope.
2. Oscilloscope as a versatile measuring device.
3. Use of Digital multimeter/VTVM for measuring voltages
4. Winding a coil / transformer.
5. Trouble shooting a circuit
6. Balancing of bridges

Reference Books:

A text book in Electrical Technology - B L Theraja - S Chand and Co.
Performance and design of AC machines - M G Say ELBS Edn.
Digital Circuits and systems, Venugopal, 2011, Tata McGraw Hill.
Logic circuit design, Shimon P. Vingron, 2012, Springer.

Theory: 3 credits and Practicals: 1 credit
Theory: 3 hours /week and Practicals: 2 hours /week

Objective: Students will be made to understand some methods of numerical analysis.

Outcome: Students realize the importance of the subject in solving some problems of algebra and calculus.

Unit - I

Solutions of Equations in One Variable : The Bisection Method - Fixed-Point Iteration - Newton's Method and Its Extensions - Error Analysis for Iterative Methods - Accelerating Convergence - Zeros of Polynomials and Müller's Method - Survey of Methods and Software

Unit - II

Interpolation and Polynomial Approximation: Interpolation and the Lagrange Polynomial - Data Approximation and Neville's Method - Divided Differences - Hermite Interpolation - Cubic Spline Interpolation

Unit - III

Numerical Differentiation and Integration: Numerical Differentiation - Richardson's Extrapolation - Elements of Numerical Integration- Composite Numerical Integration - Romberg Integration - Adaptive Quadrature Methods - Gaussian Quadrature

Text : Richard L. Burden and J. Douglas Faires, *Numerical Analysis (9e)*

References: M K Jain, S R K Iyengar and R k Jain, *Numerical Methods for Scientific and Engineering computation*

B.Bradie, *A Friendly introduction to Numerical Analysis*

Numerical Analysis

Practicals Question Bank

UNIT-1

1 Use the Bisection method to find p_3 for $f(x) = \sqrt{x} - \cos x$ on $[0, 1]$.

2 Let $f(x) = 3(x+1)(x-\frac{1}{2})(x-1)$. Use the Bisection method on the following intervals to find p_3 .

- a. $[-2, 1.5]$ b. $[-1.25, 2.5]$

3 Use the Bisection method to find solutions accurate to within 10^{-5} for the following problems.

a. $x - 2^{-x} = 0$ for $0 \leq x \leq 1$

b. $e^x - x^2 + 3x - 2 = 0$ for $0 \leq x \leq 1$

c. $2x \cos(2x) - (x+1)^2 = 0$ for $-3 \leq x \leq -2$ and $-1 \leq x \leq 0$

4

1. Use algebraic manipulation to show that each of the following functions has a fixed point at p precisely when $f(p) = 0$, where $f(x) = x^4 + 2x^2 - x - 3$.

a. $g_1(x) = (3 + x - 2x^2)^{1/4}$

b. $g_2(x) = \left(\frac{x+3-x^4}{2}\right)^{1/2}$

5

Use a fixed-point iteration method to determine a solution accurate to within 10^{-2} for $x^4 - 3x^2 - 3 = 0$ on $[1, 2]$. Use $p_0 = 1$.

6

Use a fixed-point iteration method to determine a solution accurate to within 10^{-2} for $x^3 - x - 1 = 0$ on $[1, 2]$. Use $p_0 = 1$.

7

Use a fixed-point iteration method to find an approximation to $\sqrt{3}$ that is accurate to within 10^{-4} .

8

The equation $x^2 - 10 \cos x = 0$ has two solutions, ± 1.3793646 . Use Newton's method to approximate the solutions to within 10^{-5} with the following values of p_0 .

a. $p_0 = -100$

b. $p_0 = -50$

c. $p_0 = -25$

d. $p_0 = 25$

e. $p_0 = 50$

f. $p_0 = 100$

9

The equation $4x^2 - e^x - e^{-x} = 0$ has two positive solutions x_1 and x_2 . Use Newton's method to approximate the solution to within 10^{-5} with the following values of p_0 .

10

Use each of the following methods to find a solution in $[0, 1, 1]$ accurate to within 10^{-4} for

$$600x^4 - 550x^3 + 200x^2 - 20x - 1 = 0.$$

a. Bisection method

c. Secant method

e. Müller's method

b. Newton's method

d. method of False Position

UNIT-11

11

For the given functions $f(x)$, let $x_0 = 0$, $x_1 = 0.6$, and $x_2 = 0.9$. Construct interpolation polynomials of degree at most one and at most two to approximate $f(0.45)$, and find the absolute error.

a. $f(x) = \cos x$

c. $f(x) = \ln(x+1)$

12

For the given functions $f(x)$, let $x_0 = 1$, $x_1 = 1.25$, and $x_2 = 1.6$. Construct interpolation polynomials of degree at most one and at most two to approximate $f(1.4)$, and find the absolute error.

a. $f(x) = \sin \pi x$

c. $f(x) = \log_{10}(3x+1)$

13

Let $P_3(x)$ be the interpolating polynomial for the data $(0, 0)$, $(0.5, y)$, $(1, 3)$, and $(2, 2)$. The coefficient of x^3 in $P_3(x)$ is 6. Find y .

14

Neville's method is used to approximate $f(0.4)$, giving the following table.

$x_0 = 0$	$P_0 = 1$				
$x_1 = 0.25$	$P_1 = 2$	$P_{0,1} = 2.6$			
$x_2 = 0.5$	P_2	$P_{1,2}$	$P_{0,1,2}$		
$x_3 = 0.75$	$P_3 = 8$	$P_{2,3} = 2.4$	$P_{1,2,3} = 2.96$	$P_{0,1,2,3} = 3.016$	

Determine $P_2 = f(0.5)$.

15

Neville's method is used to approximate $f(0.5)$, giving the following table.

$x_0 = 0$	$P_0 = 0$			
$x_1 = 0.4$	$P_1 = 2.8$	$P_{0,1} = 3.5$		
$x_2 = 0.7$	P_2	$P_{1,2}$	$P_{0,1,2} = \frac{27}{7}$	

Determine $P_2 = f(0.7)$.

16

Neville's Algorithm is used to approximate $f(0)$ using $f(-2)$, $f(-1)$, $f(1)$, and $f(2)$. Suppose $f(-1)$ was overstated by 2 and $f(1)$ was understated by 3. Determine the error in the original calculation of the value of the interpolating polynomial to approximate $f(0)$.

17

Use the Newton forward-difference formula to construct interpolating polynomials of degree one, two, and three for the following data. Approximate the specified value using each of the polynomials.

a. $f(0.43)$ if $f(0) = 1$, $f(0.25) = 1.64872$, $f(0.5) = 2.71828$, $f(0.75) = 4.48169$

b. $f(0.18)$ if $f(0.1) = -0.29004986$, $f(0.2) = -0.56079734$, $f(0.3) = -0.81401972$, $f(0.4) = -1.0526302$

18

Use the Newton backward-difference formula to construct interpolating polynomials of degree one, two, and three for the following data. Approximate the specified value using each of the polynomials.

a. $f(0.43)$ if $f(0) = 1$, $f(0.25) = 1.64872$, $f(0.5) = 2.71828$, $f(0.75) = 4.48169$

b. $f(0.25)$ if $f(-1) = 0.86199480$, $f(-0.5) = 0.95802009$, $f(0) = 1.0986123$, $f(0.5) = 1.2943767$

19

Determine the natural cubic spline S that interpolates the data $f(0) = 0$, $f(1) = 1$, and $f(2) = 2$.

20

Determine the clamped cubic spline s that interpolates the data $f(0) = 0$, $f(1) = 1$, $f(2) = 2$ and satisfies $s'(0) = s'(2) = 1$.

UNIT-III

21

Use the forward-difference formulas and backward-difference formulas to determine each missing entry in the following tables.

a.

x	$f(x)$	$f'(x)$
0.5	0.4794	
0.6	0.5646	
0.7	0.6442	

b.

x	$f(x)$	$f'(x)$
0.0	0.00000	
0.2	0.74140	
0.4	1.3718	

22

Derive a method for approximating $f'''(x_0)$ whose error term is of order h^2 by expanding the function f in a fourth Taylor polynomial about x_0 and evaluating at $x_0 \pm h$ and $x_0 \pm 2h$.

23

The forward-difference formula can be expressed as

$$f'(x_0) = \frac{1}{h}[f(x_0 + h) - f(x_0)] - \frac{h}{2}f''(x_0) - \frac{h^2}{6}f'''(x_0) + O(h^3).$$

Use extrapolation to derive an $O(h^3)$ formula for $f'(x_0)$.

24

Show that

$$\lim_{h \rightarrow 0} \left(\frac{2+h}{2-h} \right)^{1/h} = e.$$

25

Approximate the following integrals using the Trapezoidal rule.

a. $\int_{0.5}^1 x^4 dx$

b. $\int_0^{0.5} \frac{2}{x-4} dx$

c. $\int_1^{1.5} x^2 \ln x dx$

d. $\int_0^1 x^2 e^{-x} dx$

26

The Trapezoidal rule applied to $\int_0^2 f(x) dx$ gives the value 5, and the Midpoint rule gives the value 4. What value does Simpson's rule give?

27

The quadrature formula $\int_0^2 f(x) dx = c_0 f(0) + c_1 f(1) + c_2 f(2)$ is exact for all polynomials of degree less than or equal to 2. Determine c_0 , c_1 , and c_2 .

28

Romberg integration is used to approximate

$$\int_2^3 f(x) dx.$$

If $f(2) = 0.51342$, $f(3) = 0.36788$, $R_{31} = 0.43687$, and $R_{33} = 0.43662$, find $f(2.5)$.

29

Use Romberg integration to compute $R_{3,3}$ for the following integrals.

a. $\int_1^{1.5} x^2 \ln x dx$

b. $\int_0^1 x^2 e^{-x} dx$

30

Use Romberg integration to compute $R_{3,3}$ for the following integrals.

a. $\int_{-1}^1 (\cos x)^2 dx$

b. $\int_{-0.75}^{0.75} x \ln(x+1) dx$

Theory: 3 credits and Practicals: 1 credit

Theory: 3 hours /week and Practicals: 2 hours /week

Objective: Concepts like gradient, divergence, curl and their physical relevance will be taught.

Outcome: Students realize the way vector calculus is used to addresses some of the problems of physics.

Unit I

Line Integrals: Introductory Example : Work done against a Force-Evaluation of Line Integrals-

Conservative Vector Fields-Surface Integrals: Introductory Example : Flow Through a Pipe-

Evaluation of Surface Integrals

Unit II

Volume Integrals: Evaluation of Volume integrals

Gradient, Divergence and Curl: Partial differentiation and Taylor series-Partial differentiation-Taylor series in more than one variable-Gradient of a scalar field-Gradients, conservative fields and potentials-Physical applications of the gradient

Unit III

Divergence of a vector field -Physical interpretation of divergence-Laplacian of a scalar field-Curl of a vector field-Physical interpretation of curl-Relation between curl and rotation-Curl and conservative vector fields.

Text: P.C. Matthews, *Vector Calculus*.

References: G.B. Thomas and R.L. Finney, *Calculus*
H. Anton, I. Bivens and S. Davis, *Calculus*

Vector Calculus

Practicals Question Bank

UNIT-I

1

Evaluate the line integral

$$\int_C \mathbf{F} \times d\mathbf{r},$$

where \mathbf{F} is the vector field $(y, x, 0)$ and C is the curve $y = \sin x, z = 0$, between $x = 0$ and $x = \pi$.

2

Evaluate the line integral

$$\int_C x + y^2 d\mathbf{r},$$

where C is the parabola $y = x^2$ in the plane $z = 0$ connecting the points $(0, 0, 0)$ and $(1, 1, 0)$.

3

Evaluate the line integral

$$\int_C \mathbf{F} \cdot d\mathbf{r} \quad \text{where} \quad \mathbf{F} = (5z^2, 2x, x + 2y)$$

and the curve C is given by $x = t, y = t^2, z = t^2, 0 \leq t \leq 1$.

4

Find the line integral of the vector field $\mathbf{u} = (y^2, x, z)$ along the curve given by $z = y = e^x$ from $x = 0$ to $x = 1$.

5

Evaluate the surface integral of $\mathbf{u} = (y, x^2, z^2)$, over the surface S , where S is the triangular surface on $x = 0$ with $y \geq 0, z \geq 0, y + z \leq 1$, with the normal \mathbf{n} directed in the positive x direction.

6

Find the surface integral of $\mathbf{u} = \mathbf{r}$ over the part of the paraboloid $z = 1 - x^2 - y^2$ with $z > 0$, with the normal pointing upwards.

7

If S is the entire x, y plane, evaluate the integral

$$I = \iint_S e^{-x^2 - y^2} dS,$$

by transforming the integral into polar coordinates.

8

Find the line integral $\oint_C \mathbf{r} \times d\mathbf{r}$ where the curve C is the ellipse $x^2/a^2 + y^2/b^2 = 1$ taken in an anticlockwise direction. What do you notice about the magnitude of the answer?

9

By considering the line integral of $\mathbf{F} = (y, x^2 - x, 0)$ around the square in the x, y plane connecting the four points $(0, 0), (1, 0), (1, 1)$ and $(0, 1)$, show that \mathbf{F} cannot be a conservative vector field.

10

Evaluate the line integral of the vector field $\mathbf{u} = (xy, z^2, x)$ along the curve given by $x = 1 + t, y = 0, z = t^2, 0 \leq t \leq 3$.

UNIT-II

11

A cube $0 \leq x, y, z, \leq 1$ has a variable density given by $\rho = 1 + x + y + z$. What is the total mass of the cube?

12

Find the volume of the tetrahedron with vertices at $(0,0,0)$, $(a,0,0)$, $(0,b,0)$ and $(0,0,c)$.

13

Evaluate the surface integral of $\mathbf{u} = (xy, x, x+y)$ over the surface S defined by $z = 0$ with $0 \leq x \leq 1$, $0 \leq y \leq 2$, with the normal \mathbf{n} directed in the positive z direction.

14

Find the surface integral of $\mathbf{u} = \mathbf{r}$ over the surface of the unit cube $0 \leq x, y, z \leq 1$, with \mathbf{n} pointing outward.

15

The surface S is defined to be that part of the plane $z = 0$ lying between the curves $y = x^2$ and $x = y^2$. Find the surface integral of $\mathbf{u} \cdot \mathbf{n}$ over S where $\mathbf{u} = (z, xy, x^2)$ and $\mathbf{n} = (0, 0, 1)$.

16

Find the surface integral of $\mathbf{u} \cdot \mathbf{n}$ over S where S is the part of the surface $z = x + y^2$ with $z < 0$ and $x > -1$, \mathbf{u} is the vector field $\mathbf{u} = (2y + x, -1, 0)$ and \mathbf{n} has a negative z component.

17

Find the volume integral of the scalar field $\phi = x^2 + y^2 + z^2$ over the region V specified by $0 \leq x \leq 1$, $1 \leq y \leq 2$, $0 \leq z \leq 3$.

18

Find the volume of the section of the cylinder $x^2 + y^2 = 1$ that lies between the planes $z = x + 1$ and $z = -x - 1$.

19

Find the unit normal \mathbf{n} to the surface $x^2 + y^2 - z = 0$ at the point $(1, 1, 2)$.

Find the gradient of the scalar field $f = xyz$, and evaluate it at the point $(1, 2, 3)$. Hence find the directional derivative of f at this point in the direction of the vector $(1, 1, 0)$.

20

UNIT-III

21

Find the divergence of the vector field $\mathbf{u} = \mathbf{r}$.

22

The vector field \mathbf{u} is defined by $\mathbf{u} = (xy, z + x, y)$. Calculate $\nabla \times \mathbf{u}$ and find the points where $\nabla \times \mathbf{u} = 0$.

23

Find the gradient $\nabla\phi$ and the Laplacian $\nabla^2\phi$ for the scalar field $\phi = x^2 + xy + yz^2$.

24

Find the gradient and Laplacian of

$$\phi = \sin(kx) \sin(ly) \exp(\sqrt{k^2 + l^2}z).$$

25

Find the unit normal to the surface $xy^2 + 2yz = 4$ at the point $(-2, 2, 3)$.

26

For $\phi(x, y, z) = x^2 + y^2 + z^2 + xy - 3x$, find $\nabla\phi$ and find the minimum value of ϕ .

27

Find the equation of the plane which is tangent to the surface $x^2 + y^2 - 2z^3 = 0$ at the point $(1, 1, 1)$.

28

Find both the divergence and the curl of the vector fields

(a) $\mathbf{u} = (y, z, x)$;

(b) $\mathbf{v} = (xyz, z^2, x - y)$.

29

For what values, if any, of the constants a and b is the vector field $\mathbf{u} = (y \cos x + axz, b \sin x + z, x^2 + y)$ irrotational?

30

(a) Show that $\mathbf{u} = (y^2z, -z^2 \sin y + 2xyz, 2z \cos y + y^2x)$ is irrotational.

(b) Find the corresponding potential function.

(c) Hence find the value of the line integral of \mathbf{u} along the curve $x = \sin \pi t/2$, $y = t^2 - t$, $z = t^4$, $0 \leq t \leq 1$.

Department of Physics

Satavahana University



Scheme of instruction and Syllabus

B.Sc. (Physics)
I and II semesters
Under CBCS Scheme

**(For the batch admitted from the
academic year 2019-2020 onwards)**

SCHEME OF INSTRUCTION :: B.Sc. PHYSICS SYLLABUS UNDER CBCS SCHEME
Revised and effective from academic year 2019-2020

Semester	Paper [Theory and Practical]	Instructions Hrs/week	Marks	Credits
I	Paper – I : Mechanics	4	100	4
	Practicals – I : Mechanics	3	50	1
II	Paper – II: Thermal Physics	4	100	4
	Practicals – II : Thermal Physics	3	50	1
III	Paper – III : Electromagnetic Theory	4	100	4
	Practicals – III : Electricity & Magnetism	3	50	1
IV	Paper – IV : Optics	4	100	4
	Practicals – IV : Optics	3	50	1
V	Paper –V : <i>Discipline Specific Elective - I</i> A. Modern Physics (OR) B. Computational Physics using MATLAB	4	100	4
	Practicals – V: <i>Discipline Specific Elective - I</i> A. Modern Physics (OR) B. Computational Physics using MATLAB	3	50	1
VI	Paper – VI : <i>Discipline Specific Elective - II</i> A. Electronics (OR) B. Applied Optics	4	100	4
	Practicals VI: <i>Discipline Specific Elective - II</i> A. Electronics (OR) B. Applied Optics	3	50	1

Total credits:

30

Skill enhancement courses (2 credits each):

Semester - III

1. Measurements and Errors
2. Electrical circuits and Networking

Semester - IV

3. Basic Instrumentation
4. Digital Electronics

Semester - V : Generic Elective (4 Credits) - Renewable Energy & Harvesting

Semester – VI: Project work /Optionals (Nano science) - 4 Credits



CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

**B.Sc. (Physics) Semester I-Theory Syllabus
Paper – I: Mechanics**

56 hrs

(w. e. from academic year 2019-20)
(CBCS)

Unit – I

1. Vector Analysis (14)

Scalar and vector fields, gradient of a scalar field and its physical significance. Divergence and curl of a vector field and related problems. Vector integration, line, surface and volume integrals. Stokes, Gauss and Greens theorems- simple applications.

Unit – II

2. Mechanics of Particles (07)

Laws of motion, motion of variable mass system, motion of a rocket, multi-stage rocket, conservation of energy and momentum. Collisions in two and three dimensions, concept of impact parameter, scattering cross-section.

3. Mechanics of rigid bodies (07)

Definition of Rigid body, rotational kinematic relations, equation of motion for a rotating body, angular momentum and inertial tensor. Euler's equation, precession of a top, Gyroscope.

Unit – III

4. Central forces (14)


Central forces – definition and examples, conservative nature of central forces, conservative force as a negative gradient of potential energy, equation of motion under a central force, gravitational potential and gravitational field, motion under inverse square law, derivation of Kepler's laws, Coriolis force and its expressions.

Unit – IV

5. Special theory of relativity (14)

Galilean relativity, absolute frames, Michelson-Morley experiment, Postulates of special theory of relativity. Lorentz transformation, time dilation, length contraction, addition of velocities, mass-energy relation. Concept of four vector formalism.

NOTE: Problems should be solved at the end of every chapter of all units.



CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

Textbooks

1. Berkeley Physics Course. Vol.1, **Mechanics** by C. Kittel, W. Knight, M.A. Ruderman - *Tata-McGraw hill Company Edition 2008.*
2. **Fundamentals of Physics.** Halliday/Resnick/Walker *Wiley India Edition 2007.*
3. **First Year Physics - Telugu Academy.**
4. **Introduction to Physics for Scientists and Engineers.** F.J. Ruche. *McGraw Hill.*
5. **Sears and Zemansky's University Physics** by Hugh D. Young, Roger A. Freedman *Pearson Education Eleventh Edition.*
6. **Theory of relativity - Resnick**

Reference Books

1. **Fundamentals of Physics** by Alan Giambattista et al *Tata-McGraw Hill Company Edition, 2008.*
2. **University Physics** by Young and Freeman, *Pearson Education, Edition 2005.*
3. **An introduction to Mechanics** by Daniel Kleppner & Robert Kolenkow. *The McGraw Hill Companies.*
4. **Mechanics.** Hans & Puri. *TMH Publications.*


CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

36 hrs
(3 hrs / week)

FIRST SEMISTER PRACTICALS


Practical Paper – I : Mechanics

1. Study of a compound pendulum determination of 'g' and 'k'.
2. Y' by uniform Bending
3. Y by Non-uniform Bending.
4. Moment of Inertia of a fly wheel.
5. Measurement of errors –simple Pendulum.
6. 'Rigidity moduli by torsion Pendulum.
7. Determine surface tension of a liquid through capillary rise method.
8. Determination of Surface Tension of a liquid by different methods.
9. Determine of Viscosity of a fluid.
10. Calculation of slope and intercept of a $Y = mX + C$ by theoretical method

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Text and reference books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (Pragati Prakashan, Meerut).
3. "Practical Physics" R.K Shukla, Anchal Srivastava
4. Practical Physics – Ramakrishna and Induprakash


CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

B.Sc. (Physics) Semester II-Theory Syllabus
Paper – II : Thermal Physics
(w.e.f the academic year 2019-2020)

56 hrs

Unit – I

1. Kinetic theory of gases: (6)

Introduction – Deduction of Maxwell's law of distribution of molecular speeds, Transport Phenomena – Viscosity of gases – thermal conductivity – diffusion of gases.

2. Thermodynamics: (8)

Basics of thermodynamics-Kelvin's and Clausius statements – Thermodynamic scale of temperature – Entropy, physical significance – Change in entropy in reversible and irreversible processes – Entropy and disorder – Entropy of universe – Temperature-Entropy (T-S) diagram – Change of entropy of a perfect gas-change of entropy when ice changes into steam.

Unit – II

3. Thermodynamic potentials and Maxwell's equations: (7)

Thermodynamic potentials – Derivation of Maxwell's thermodynamic relations – Clausius-Clayperon's equation – Derivation for ratio of specific heats – Derivation for difference of two specific heats for perfect gas. Joule Kelvin effect – expression for Joule Kelvin coefficient for perfect and Vanderwaal's gas.


4. Low temperature Physics: (7)

Joule Kelvin effect – liquefaction of gas using porous plug experiment. Joule expansion – Distinction between adiabatic and Joule Thomson expansion – Expression for Joule Thomson cooling – Liquefaction of helium, Kapitza's method – Adiabatic demagnetization – Production of low temperatures – Principle of refrigeration, vapour compression type.

Unit – III

5. Quantum theory of radiation: (14)

Black body-Ferry's black body – distribution of energy in the spectrum of Black body – Wein's displacement law, Wein's law, Rayleigh-Jean's law – Quantum theory of radiation - Planck's law – deduction of Wein's distribution law, Rayleigh-Jeans law, Stefan's law from Planck's law.


CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

Measurement of radiation using pyrometers – Disappearing filament optical pyrometer – experimental determination – Angstrom pyroheliometer - determination of solar constant, effective temperature of sun.

Unit – IV

6. Statistical Mechanics: (14)


Introduction, postulates of statistical mechanics. Phase space, concept of ensembles and some known ensembles, classical and quantum statistics and their differences, concept of probability, Maxwell-Boltzmann's distribution law -Molecular energies in an ideal gas- Maxwell-Boltzmann's velocity distribution law, Bose-Einstein Distribution law, Fermi-Dirac Distribution law, comparison of three distribution laws, Application of B-E distribution to Photons-planks radiation formula, Application of Fermi-Dirac statistics to white dwarfs and Neutron stars.

Textbooks

1. **Fundamentals of Physics.** Halliday/Resnick/Walker.C. *Wiley India Edition 2007.*
2. **Second Year Physics – Telugu Academy.**
3. **Modern Physics** by R. Murugesan and Kiruthiga Siva Prasath (for statistical Mechanics) S. Chand & Co.
4. **Heat and Thermodynamics** by Mark W.Zemansky 5th edition Mc Graw - Hill
5. **Heat and Thermodynamics** by D.S. Mathur.

Reference Books

1. **Modern Physics** by G. Aruldas and P. Rajagopal, *Eastern Economy Education.*
2. B.B. Laud "**Introduction to statistics Mechanics**"(Macmillan 1981)
3. F.Reif: "**Statistical Physics** "(Mcgraw-Hill,1998)
4. K.Haug: "**Statistical Physics** "(Wiley Eastern 1988)


CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

42 hrs
(3 hrs / week)

II SEMESTER PRACTICALS


Practical Paper – II : Thermal Physics

1. Co-efficient of thermal conductivity of a bad conductor by Lee's method.
2. Measurement of Stefan's constant.
3. Specific heat of a liquid by applying Newton's law of cooling correction.
4. Heating efficiency of electrical kettle with varying voltages.
5. Determination of Thermo emf
6. Cooling Curve of a metallic body (Null method)
7. Resistance thermometer. To Determine temp coeff resistance
8. Thermal expansion of solids
9. Study of conversion of mechanical energy into heat.
10. Determine the Specific of a solid (graphite rod)
11. Thermistor Characteristics. Calculation of A and B

Note: Minimum of eight experiments should be performed. Maximum of 15 students per batch and maximum of three students per experiment should be allotted in the regular practical class of three hours per week.

Text and reference books

1. D.P. Khandelwal, "A laboratory manual for undergraduate classes" (Vani Publishing House, New Delhi).
2. S.P. Singh, "Advanced Practical Physics" (PragatiPrakashan, Meerut).
3. Worsnop and Flint- Advanced Practical physics for students.
4. "Practical Physics" R.K Shukla, AnchalSrivastava


CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

Question paper pattern

FACULTY OF SCIENCE

SUBJECT : PHYSICS

TITLE OF THE PAPER : -----

PAPER: -----

Duration: 3Hrs]

[Max. Marks : 80

Section-A: Short Answer Questions

(8 x 4 = 32)


Answer any EIGHT questions

1. Unit – I
2. Unit – I
3. Unit – I (Problem)
4. Unit – II
5. Unit – II
6. Unit – II (Problem)
7. Unit – III
8. Unit – III
9. Unit – III (Problem)
10. Unit – IV
11. Unit – IV
12. Unit – IV (Problem)

Section B: Essay Answer Questions

(4 x 12 = 48)

- 13 (a) Unit – I
OR
(b) Unit – I
- 14 (a) Unit – II
OR
(b) Unit – II
- 15 (a) Unit – III
OR
(b) Unit – III
- 16 (a) Unit – IV
OR
(b) Unit – IV


CHAIRMAN
Board of Studies in Physics
SATAVAHANA UNIVERSITY
Karimnagar - 505 001

**GENERIC ELECTIVE II
(FOR ALL FACULTIES)**

BC 602: WATER RESOURCES MANAGEMENT

Paper: BC602

PPW: 2 Hrs

Max. Marks: 40+10

Exam Duration: 1½ hrs

UNIT-I

1. Importance of Natural Resources – Different Types and Resources
2. Significance of Water Resources and their uses
3. Conservation of water and recycling of the water – Global distribution of water
4. Water shed programmes and their management
5. Storing the rain water in tanks and recharging ground water

Unit-II

6. Rain water harvesting in rural areas (*chekdam, trenches* etc.,)
7. Overuse of surface and ground water and control measures.
8. Aims, objectives and implementation of *Mission Bhagiratha* (Telangana Government Drinking water programme)
9. Aims, objectives and implementation of *Mission Kakatiya* (Telangana Government minor irrigation programme)
10. Issues and challenges in Water Resources Management

SKILL ENHANCEMENT COURSE: IV
BCO601: REGULATIONS OF INSURANCE BUSINESS

Paper: BC601
PPW: 2 Hrs

Max. Marks: 40+10
Exam Duration: 1½ hrs

Objective: To equip the students with the knowledge regarding Insurance Business Regulations

UNIT I: INSURANCE LEGISLATION IN INDIA:

History of life and non-life insurance legislation—nationalization—insurance reforms—insurance business Act, 1972—IRDA and its functions including licensing functions—Web aggregators—regulation for intermediaries—CCS-SPV-PoS-insurance repositories-TPAs—Role and duties of surveyors—Origin and development of micro-insurance—regulation of ULIPs—pension schemes—money laundering—KYC—methods of receipt of premium—Exchange control regulations relating to General and Life Insurance—IRDA Health Insurance Regulations, 2016—Health plus life combi products.

UNIT II: POLICY HOLDERS RIGHTS OF ASSIGNMENT, NOMINATION AND TRANSFER:

Assignment and transfer of insurance policies—provisions related to nomination—repudiation—Fraud—protection of policyholder interest—stages in insurance policy-presale stage-post sale stage-free look period—grievance redressal—claim settlement—key feature document—dispute resolution mechanism—insurance ombudsman—solvency margin and investments—international trends in insurance regulation.

SUGGESTED READINGS :

1. Regulation of Insurance Business – Insurance Institute of India
2. Regulation of Insurance Business – D.S. Vittal, HPH
3. Regulation of Insurance Business: Dr. V. Padmavathi, PBP
4. Risk Management : A Publication of the Insurance Institute of India
5. Insurance Theory and Practice: Tripathi PHI
6. Life and Health Insurance: Black, JR KENNETH & Harold Skipper, Pearson
7. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt
8. South Western College Publishing Cincinnati, Ohio.
9. Insurance Management – S.C. Sahoo & S.C. Das-HPH.



BBA - III Year VI Semester

Syllabus 2018 – 2019

TOTAL QUALITY MANAGEMENT - 502

UNIT – I :INTRODUCTION :

The concept of Quality. Quality Dimensions. Evolution of Total Quality Management, Historical perspectives of TQM – Deming, Juran, Crosby and Taguchi's Contributions. Product and Service Quality, Inspection, Statistical Quality Control, Quality Assurance, Conventional Quality Management versus TQM - Customer and supplier focus in TQM. Benefits and Costs of TQM.

UNIT – II :TOOLS AND TECHNIQUES OF TQM :

Statistical Tools - Check Sheets, Histograms, Scatter Diagrams, Pareto's Chart, Regression Analysis & Control Charts. Cause and Effect Diagrams, The Five Why's, Five S's, Kaizen, JIT, Quality Circles, Gantt Chart and Balanced Score Card. Dimensions of Service Quality. An overview of TQM in Service Organisations.

SUGGESTED BOOKS :

1. Sunil Sharma, "Total Engineering Quality Management", 2003, Macmillan India Ltd.
2. Ron Basu, "Implementing Quality: A Practical Guide to Tools and Techniques", 2016, THOMPSON.
3. Kanishka Bedi, "Quality Management", Oxford University Press.
4. Mukherjee, PN, "Total Quality Management", 2007, PHI.
5. R. P. Mohanty & R. R. Lakhe, "TQM in the Service Sector", Jaico Books. 2016


CHAIRMAN, BOS
Faculty of Business Management
Satavahana University, Karimnagar-505 001 (MS)

15

SATAVAHANA UNIVERSITY
SKILL ENHANCEMENT COURSE IV
FOR ALL ARTS COURSES
SEMESTER VI (UNDER CBCS)
SOFT SKILLS

CREDITS:2

Unit I: Personality Development: Personality Development: Meaning- Characteristics – Determinants – Ingredients of pleasing personality. Learning: Meaning – Characteristics – Significance – Principles of learning. Self esteem: Meaning – Characteristics – Significance – Building self esteem.

Unit II: Self Management: Attitude Development: Meaning – Characteristics – Significance – Building Positive Attitude. Achievement Motivation: Meaning – Characteristics – Significance – Goal setting for achievement – Strategies of achievement motivation. Emotional Intelligence: Meaning – Characteristics – Significance – Strategies of developing emotional intelligence: Fear, Anger and Anxiety.

Suggested Readings:

1. Sarma V S Veluri & Muralidhar D., Personal Empowerment: LOTUS Series - Interactive Learning, CAMFL Limited, 2017.
2. Sarma V S Veluri and Others., Jeevan nipunyalu: LOTUS Series, (Telugu), CAMEL Limited, 2017.
3. K Alex, Soft Skills, S. Chand & Company, 2013
4. Narula, S S., Personality Development & Communication Skills, Taxman Publications Pvt. Ltd. New Delhi.
5. Arora, A., Communication Skills and Personality Development, Kalyani Publishers, Ludhiana, 2015.

SATAVHANA UNJIVERSITY
SEMESTER VI (UNDER CBCS)
SKILL ENHANCEMEMNT COURSE IV
(FOR FACULTY OF SCIENCES)
QUANTITATIVE APTITUDE TEST

Credits: 2

Theory: 2 hours/week Marks - 40

Unit – I ARITHMETICAL ABILITY

- 1.1 Arithmetical Ability: Ratio & Proportion
- 1.2 Arithmetical Ability: Time & Work, Time & Distance
- 1.3 Arithmetical Ability: Simple Interest, Compound Interest
- 1.4 Arithmetical Ability: Stocks & Shares

Unit – II DATA INTERPRETATION

- 2.1 Data Interpretation: Tabulation
- 2.2 Data Interpretation: Bar Graphs
- 2.3 Data Interpretation: Pie Charts
- 2.4 Data Interpretation: Line Graphs

Text Book: Quantitative Aptitude by Dr. R.S.Aggarwal



FACULTY OF COMMERCE, SATAVAHANA UNIVERSITY, KARIMNAGAR

DEPARTMENT OF COMMERCE
Course Structure for P.G. Programme in Commerce
SATAVAHANA UNIVERSITY – KARIMNAGAR
Under Choice Based Credit System
M.COM I & II SEMESTER

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
	CPT - I	5	-	20	80	100	5	3 Hrs
	CPT – II	5	-	20	80	100	5	3 Hrs
	CPT –III	5	-	20	80	100	5	3 Hrs
	CPT –IV	5	-	20	80	100	5	3 Hrs
	CPT -V	3	2*	20	60 20	100	5	3 Hrs
	FC*	2	-	10	40	50	2	2 Hrs
Total		27		110	440	550	27	

* Every Student must pass this paper since it is mandatory. However the credits will not be included in the calculation of SGPA and CGPA.

* Computer Lab PPW 1 = 2Lab hours

CPT – Core Paper Theory

CPP – Core Paper Practical

FC-Foundation Course*



FACULTY OF COMMERCE, SATAVAHANA UNIVERSITY, KARIMNAGAR

DEPARTMENT OF COMMERCE
Course Structure for P.G. Programme in Commerce
SATAVAHANA UNIVERSITY – KARIMNAGAR
Under Choice Based Credit System
M.COM III & IV SEMESTER

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
	CPT – I	5	-	20	80	100	5	3 Hrs
	CPT – II	5	-	20	80	100	5	3 Hrs
	CPT –III	5	-	20	80	100	5	3 Hrs
	CPT –IV	5	-	20	80	100	5	3 Hrs
	CPT –V	5	-	20	80	100	5	3 Hrs
	Project Work	5						
	Total	30	-	100	400	500	25	

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
	CPT – I	5	-	20	80	100	5	3 Hrs
	CPT – II	5	-	20	80	100	5	3 Hrs
	CPT –III	5	-	20	80	100	5	3 Hrs
	CPT –IV	5	-	20	80	100	5	3 Hrs
	CPT –V	5	-	20	80	100	5	3 Hrs
	Project Work	5	-	--	50VV+ 50D	100	5	
	Total	30	-	100	500	600	30	

CPT – Core Paper Theory

CPP – Core Paper Practical

VV=Viva-Voce

D=Dissertation



FACULTY OF COMMERCE, SATAVAHANA UNIVERSITY, KARIMNAGAR

DEPARTMENT OF COMMERCE
Course Structure for P.G. Programme in Commerce
SATAVAHANA UNIVERSITY – KARIMNAGAR
Under Choice Based Credit System
M.COM I & II SEMESTER

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
MCG101	Business Environment	5	-	20	80	100	5	3 Hrs
MCG 102	Managerial Economics	5	-	20	80	100	5	3 Hrs
MCG 103	Corporate Financial Accounting	5	-	20	80	100	5	3 Hrs
MCG 104	Financial Management	5	-	20	80	100	5	3 Hrs
MCG 105	Computer Applications in Business	3	2	20	60	100	5	3 Hrs
					20			
	Professional Communication*	2	-	10	40	50	2	2 Hrs
Total		27		110	440	550	27	

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
MCG 201	Organisation Theory and Behaviour	5	-	20	80	100	5	3 Hrs
MCG 202	Management Accounting	5	-	20	80	100	5	3 Hrs
MCG 203	Marketing Management	5	-	20	80	100	5	3 Hrs
MCG 204	Human Resource Management	5	-	20	80	100	5	3 Hrs
MCG 205	Computer Applications in Accounting	3	2	20	60	100	5	3 Hrs
					20			
	Fundamentals of Computers and Office Automation*	2	-	10	40	50	2	2 Hrs
Total		27		110	440	550	27	

* Every Student must pass this paper since it is mandatory. However the credits will not be included in the calculation of SGPA and CGPA.

* Computer Lab PPW 1 = 2Lab hours *MCG = Master of Commerce (General)



FACULTY OF COMMERCE, SATAVAHANA UNIVERSITY, KARIMNAGAR

DEPARTMENT OF COMMERCE
Course Structure for P.G. Programme in Commerce
SATAVAHANA UNIVERSITY – KARIMNAGAR
Under Choice Based Credit System
M.COM III & IV SEMESTER

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
MCG 301	Research Methodology and Statistical Analysis	5	-	20	80	100	5	3 Hrs
MCG 302	E- Business	5	-	20	80	100	5	3 Hrs
MCG 303	Specialization**	5	-	20	80	100	5	3 Hrs
MCG 304	Specialization**	5	-	20	80	100	5	3 Hrs
MCG 305	Specialization**	5	-	20	80	100	5	3 Hrs
	* Project Work	5						
Total		30		100	400	500	25	

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
MCG 401	Strategic Management	5	-	20	80	100	5	3 Hrs
MCG 402	International Business	5	-	20	80	100	5	3 Hrs
MCG 403	Specialization**	5	-	20	80	100	5	3 Hrs
MCG 404	Specialization**	5	-	20	80	100	5	3 Hrs
MCG 405	Specialization**	5	-	20	80	100	5	3 Hrs
	* Project Work	5	-	--	50VV+ 50D	100	5	
Total		30		100	500	600	30	

*MCG = Master of Commerce (General)

VV=Viva-Voce

D=Dissertation



**** AREA OF SPECIALIZATION**

(M.Com General)

MASTER OF COMMERCE UNDER CBCS- THIRD SEMESTER

A. SPECIALIZATION: ACCOUNTING AND FINANCE

- 311- FINANCIAL MARKETS AND INSTITUTIONS
- 312- SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
- 313- CORPORATE TAX MANAGEMENT

B. SPECIALIZATION: BANKING AND INSURANCE

- 321- BANK MANAGEMENT
- 322- BANK LENDING POLICY AND TECHNIQUES
- 323- PRINCIPLES OF LIFE INSURANCE

C. SPECIALIZATION: MARKETING

- 331- RURAL MARKETING
- 332- ADVERTISING AND SALES MANAGEMENT
- 333- CONSUMER BEHAVIOUR

D. SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

- 341- INDUSTRIAL RELATIONS
- 342 - PERFORMANCE MANAGEMENT
- 343- COMPENSATION MANAGEMENT

MASTER OF COMMERCE UNDER CBCS- FOURTH SEMESTER

A. SPECIALIZATION: ACCOUNTING AND FINANCE

- 411- FINANCIAL SERVICES MANAGEMENT
- 412- FINANCIAL DERIVATIVES
- 413 – STRATEGIC FINANCIAL MANAGEMENT

B. SPECIALIZATION: BANKING AND INSURANCE

- 421- FIRE AND MARINE INSURANCE
- 422- INSURANCE FINANCE AND ADMINISTRATION
- 423- BANKING OPERATIONS AND PROCEDURES

C. SPECIALIZATION: MARKETING

- 431- RETAIL MARKETING
- 432- GLOBAL MARKETING
- 433- SERVICES MARKETING

D. SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

- 441- HUMAN RESOURCE DEVELOPMENT
- 442 - LEADERSHIP AND CHANGE
- 443 - STRATEGIC HUMAN RESOURCE MANAGEMENT



PROJECT GUIDELINES:

The aim of the Project is to give an opportunity to students to learn independently and show that they can identify, define and analyze problems or issues and integrate knowledge in a business context. It reflects the ability of a student to understand and apply the theory, the concepts and the tools of analysis to a specific situation.

1. The project is a practical, in-depth study of a problem, issue, opportunity, technique or procedure or a combination of these aspects of business. The students are required to define an area of investigation, carve out research design, gather relevant data, analyze the data, draw conclusions and make recommendations. **The project must be an original piece of work that will be undertaken in post-graduate study, over a period of two semesters.**
2. The topic is to be selected carefully with the help of supervisor.
3. All the material that relates to your project, including completed questionnaires or tapes from interviews, should be shown to your supervisor and be kept until the examination board has confirmed your results. Do not throw this material away once your project is submitted, as you might be asked to present it as part of the Viva Voce Examination, before your project results are confirmed.
4. The supervisor's role is to appraise ideas and work of the student. Student must take overall responsibility for both the content of project and its management. This includes selection of an appropriate subject area (with the approval of the supervisor), setting up meetings with the supervisor, devising and keeping to a work schedule (to include contingency planning), and providing the supervisor with samples of your work.
5. There shall be Viva-voce at the end of IV semester with 50 marks for Viva-voice and 50 marks for dissertation. The Project report Viva- Voce Committee consists of 3 a member of which 1 member is external. Out of the remaining two one shall be the Head/Chairman, Board of Studies /Dean and a University teacher of the Department nominated by the Dean / BOS. The quorum will be two members of which at least one shall be External Member. Depending on the need, more than one Committee could be constituted.



FACULTY OF COMMERCE, SATAVAHANA UNIVERSITY, KARIMNAGAR

6. The External Examiners will examine the following in Project Report:
- a) Literature Survey on the Topic Chosen.
 - b) Method of Data Collection.
 - c) Presentation – Style, Comprehensiveness, Table presentation, Graphs, Charts.
 - d) Analysis and inference and implication of the study.
 - e) Overall linkage between objectives, methodology, findings and suggestions.
 - f) Bibliography and References.

<<>>



FACULTY OF COMMERCE, SATAVAHANA UNIVERSITY, KARIMNAGAR



**MASTER OF COMMERCE- FIRST SEMESTER
101 – BUSINESS ENVIRONMENT**

(Common to M.Com and M.Com-Financial Accounting- under CBCS)

Class Hours : 5 ppw

Credits: 5

-
- Unit-I:** Business Environment – significance – Types of Environment – Internal and External Environment – Micro and Macro Environment – Environmental Analysis Stages – Approaches – Techniques of Environmental Analysis – Steps – Types and Techniques of Environmental forecasting – Benefits and limitations.
- Unit-II:** Economic Environment – Economic System – Capitalism – Communism and Mixed Economy – Economic Reforms – Economic Policies – Industrial Policies – Trade policies – Fiscal and Monetary Policies – Economic Development and Role of Government – Technological Environment – features – Impact – Technology transfer.
- Unit-III:** Politico – Legal Environment – Political Institutions – Legislative – Executive and judiciary – Constitution of India – Fundamental rights – Directive Principles of State policy – Business Responsibilities to Government – Government responsibilities to business – Legal framework of Business- Regulatory Institutions- TRAI-SEBI-IRDA- Electricity Regulatory Agencies- Central Electricity Regulatory Commission-Telangana State Electricity Regulatory Commission (TSERC) .
- Unit-IV:** Socio-Cultural Environment – Business and Society – Objectives of Business – Social Responsibilities of Business – Business and culture – Cultural dimensions – Social audit – Nature – Evolution – benefits – Social Audit in India – Business Ethics – Nature Sources – Managing Ethics – Corporate Governance – Nature and Mechanism.
- Unit-V:** Global Environment – Globalisation – Meaning and Dimensions –Stages – Drivers and effects of Globalisation – Players in Global Business – Benefits and problems of MNCs – Challenges of global Business – WTO and India – Foreign Direct Investment – (FDI) Foreign Institutional Investors (FIIS).

Suggested Readings

1. Francis Cherunilam, **Business Environment Text and Cases**, Himalaya Publishing House, Text and Cases, Himalaya Publishing House, 2014.
2. Aswathappa K, **Essentials of Business Environment**, Himalaya Publishing House, 2014.

References

1. Faisal Ahmed and Absar Alam.M, **Business Environment: Indian and Global Perspective**, Prentice Hall of India, 2014.
2. Veena Keshav Pailwar, **Business Environment**, Prentice Hall of India Private Limited, 2014.
3. Justin Paul, **Business Environment: Text and Cases**, Tata McGraw-Hill Publishing Company Limited, 2008.
4. Sukumar Nandi, **International Business Environment**, McGraw-Hill Education Company Limited, 2010.
5. Fernando A.C, **Business Environment**, Dorling Kindersley India Pvt. Ltd, 2011.
6. Ian Worthington and Chris Britton, **The Business Environment**, Pearson Education Limited, 2014.



102 - MANAGERIAL ECONOMICS

(Common to M.Com and M.Com-Financial Accounting- under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** Introduction to Managerial Economics – Nature – Scope – Applications of Micro Economics and Macro Economics – Need and Significance – Theory of firm - Business objectives of Organization
- Unit-II:** Demand and Supply Analysis – Concepts – Determinants of Demand – Law of Demand- Elasticity of Demand – Price Elasticity of Demand- Income Elasticity of Demand-Cross Elasticity of Demand- Supply function – Law of Supply – Exceptions to the Law of Supply – Demand forecasting – Objectives and methods
- Unit-III:** Production and Cost functions – Cobb Douglas Production function – Isoquants – Isocosts – Production Equilibrium – Returns to Scale – Cost function – Behaviour of costs in Short run and Long run – Economies and Diseconomies of Scale
- Unit-IV:** Structure of Competition – Price and Output decisions in Perfect Competition – Monopoly – Monopolistic Competition – Oligopoly – Barriers to Entry – Pricing – Dual Pricing – Discriminatory Price – Pricing methods and Strategies.
- Unit-V:** Concept of Industry – Plant – Firm - Industry – Factors influencing size of firm – Optimum firm – Location and size decisions – Measurement of Efficiency – Productivity – Profit-Policy – Planning- Controlling and Forecasting

Suggested Readings

1. Mote V.L., Paul Samuel, Gupta G.S., **Managerial Economics – Concepts and Cases**, Tata McGraw Hill Publishing Company Limited, 2013.
2. Varshney R.L., Maheshwari K.L., **Managerial Economics**, Sultan Chand and Sons, 2014.

References

1. Mehta P.L., **Managerial Economics**, Sultan Chand & Sons (P) Limited, 2007.
2. Joel Dean, **Managerial Economics**, Prentice-Hall of India Pvt. Limited, 2010.
3. Mithani, D.M., **Managerial Economics**, Himalaya Publishing House Pvt. Limited, 2010.
4. Robinson E.A.G., **Structure of Competitive Industry**, NISBET & Co. Limited, 1958.
5. Justin Paul, Leena Kaushal and Sebastian VJ., **Managerial Economics**, Cengage Learning India, 2012.
6. Christopher R.Thomas and Charles Maurice.S., **Managerial Economics**, McGraw Hill Education (India) Private Limited, 2014.



103 – CORPORATE FINANCIAL ACCOUNTING
(Common to M.Com, M.Com - Financial Accounting - under CBCS)

Class Hours : 5 ppw

Credits: 5

-
- Unit-I:** Company Accounts – Legal provisions relating to Company Accounts – Profit and Loss Account – Balance Sheet – Valuation of Shares and Goodwill – Methods(simple problems)
- Unit-II:** Accounting for Mergers and Amalgamations –Types of Restructuring –Nature of Merger and Amalgamation- Purchase Consideration –Exchange Ratio- Minimum and Maximum Exchange Ratio-Intrinsic Value of Share-Accounting Entries in the Books of Transferring Company- Accounting in the Books of Transferee Company- Pooling of Interest method – The Purchasing Method (simple problems)
- Unit-III:** Inflation Accounting – Meaning – Need – Scope – Approaches –Current Cost Accounting – Current Purchasing Power (simple problems)
- Unit-IV:** Investment Accounting – Meaning – Need – Investment Transactions – Ex-dividend – Cum – Dividend – Treatment of Interest and Dividend – Lease Accounting-Disclosure- Journal Entries- Schedule of Payment – Sale and Lease back Transactions (Simple problems)
- Unit-V:** Accounting of Public utilities – Nature – Significance – Public utility Accounts — Fund Accounting- Double Accounting – Accounting of Electricity Undertakings including Distribution of Surplus (Simple Problems) –Human Resource Accounting – Approaches.

Suggested Readings

1. Gupta R.L. and Radhaswamy M., **Advanced Accountancy**, Sultan Chand and Sons, 2014.
2. Jain SP. And Narang KL, **Advanced Accountancy**, Kalyani Publishers, 2013.

References

1. John Gabriel S., and Marcus A., **Financial Accounting**, Tata McGraw Hill Education Private Limited, 2010.
2. Bhattacharyya S.K., and John Dearden, **Accounting For Management: Text and Cases**, Vikas Publishing House Private Limited, 2009.
3. Shukla M.C., Grewal T.S., and Gupta S.C., **Advanced Accounts**, Sultan Chand Limited, 2006.
4. Narayana Swamy R., **Financial Accounting – A Managerial perspective**, PHI Learning Private Limited, 2014.
5. Mukherjee A., and Hanif M., **Corporate Accounting**, Tata McGraw-Hill Publishing Company Limited, 2006.
6. Rajasekaran V. and Lalitha R., **Financial Accounting**, Pearson Education, 2011.
7. Mukherjee A and Hanif M., **Financial Accounting**, Mc Graw Hill Pvt Ltd 2012



104 – FINANCIAL MANAGEMENT

(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Class Hours : 5ppw

Credits: 5

-
- UNIT-I: INTRODUCTION:** Finance Function – Concept, Classification, Scope, Goals and Functions of Finance, Risk-Return – Trade-off; **Forms of Business Organization** –Tax Environment, Financial Environment and Financial Regulation; **Time Value of Money** – Concept, Time Preference for Money, Present Values, Future Values and their Computation.
- UNIT-II: FINANCING DECISION: Capital Structure** – Concept, Source of Long Term Capital and their relative merits and demerits, Optimum Capital Structure, and Determinants of Capital Structure; **Cost of Capital** – Definition, Concepts of Cost, and Measurement of Specific Costs of Capital and Firm’s Weighted Average Cost of Capital; **Capital Structure and Firm’s Value** – Net Income Approach, Net Operating Income Approach, Traditional Position, Modigliani and Miller Position, and Taxation and Capital Structure; **Capital Structure Decision** - Leverage Analysis: Concepts of Operating and Financial Leverage and EBIT – EPS Analysis (Simple Problems).
- UNIT-III: INVESTMENT DECISION: Capital Budgeting Decision** – Meaning, Characteristics, Process and Significance; **Estimation of Cash Flows** – Elements of Cash Flow Stream and Basic Principles of their Estimation **Methods of Evaluating Alternative Investment Projects** – Payback Period, Adjusted Payback Period, Accounting Rate of Return, Net Present Value, Internal Rate of Return and Modified Internal Rate of Return, and Benefit-Cost Ratio(Simple Problems), Capital Rationing and Capital Budgeting; Inflation and Capital Budgeting.
- UNIT-IV: DIVIDEND DECISION: Dividend Policy and Firm’s Value** – Models in which Investment and Dividend Decisions are related- Walter and Gordon’s Models, Traditional Position, Miller and Modigliani Model(Simple Problems) - Financial Signaling; **Dividend Decision** – Types of Dividend, Stock Dividend, Stock-Splits, Bonus Shares, Share Repurchase and Managerial Considerations in Dividend Policy Formulation.
- UNIT-V: WORKING CAPITAL MANAGEMENT: Working Capital Decision** – Concept, Characteristics, Components, Operating Cycle, Cash Cycle, Determinants of Working Capital, and Estimation of Working Capital (Simple Problems); **Cash and Liquidity Management** – Objectives, Cash Budgeting – Cash Collection and Disbursement – Optimum Cash Balance, and Investment of Surplus Funds; **Credit Management** – Credit terms – **Credit** Policy Variables, Credit Evaluation and Granting Decision, and Control of Receivables; **Inventory Management** - Need, Objectives, Order Quantity, Monitoring and Control of Inventories; **Working Capital Financing** – Sources and Financing Strategies.

Suggested Readings:

1. Prasanna Chandra., **Financial Management- Theory and Practice**, Tata Mc Graw Hill Education (India) Private Limited, Eighth Edition, 2008.
2. Van Horne, James C., and Wachowicz John M. Jr., **Financial Management and Policy**, Pearson Education Inc., 2012.

References:

1. Brigham., and Ehrhardt, **Financial Management: Theory & Practice**, Cengage Learning, 2014.
 2. Shashi K.Gupta, **Financial Management: Theory and Practice**, Kalyani Publishers, 1996.
 3. Srivastava R.M., **Financial Management: Management and Policy**, Himalaya Publishing House, 2003.
 4. Khan M.Y., and Jain P.K., **Financial Management**, Tata McGraw-Hill Education, 2007.
 5. Pandey I.M., **Essentials of Financial Management**, Vikas Publishing House, 2014.
 6. Hampton, John J., **Financial Decision making: Concepts, Problems and Cases**, Prentice Hall of India Learning, 2012
-



105 – COMPUTER APPLICATION IN BUSINESS

(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Theory – 3 PPW

Lab: 2 PPW

One Period Lab means 2 hours of Lab Session

Credits= 5

UNIT – I Computer Hardware, Software and Systems: Computer System: Characteristics of computers CPU – Input-Output Devices – Memory: Types – Storage: Files – Access Modes – Data Processing and Retrieval Systems. Software: Types – Computer languages – Salient features – Assemblers – Compilers – Translators. Applications of Computers in Business.

UNIT – II Data Communication and Networking: Data Communication: Concepts – Systems – Procedures – Methods – Media & Channels – Tools – Telecommunication. Networks: Components – Topologies – Communication with Networks – Network Operating Systems – EDI – Email – Internet – intranet – Web Technologies – TCP/IP, FTP, SMTP – Multimedia – CD Technologies.

UNIT – III Operating System: Operating Systems: Functions – Types – OS Programs – WINDOWS – Logging – Taskbar - Document: Opening – Finding – Folders – Working with Documents – Saving – Print Functions – Connecting to Internet.

UNIT – IV Word & SpreadSheet: MS-WORD: Text creation – Opening – Editing – Saving – Preview – Printing – Closing – Letters – Find and Replace – Copy – Dictionary – Spread sheet: MS EXCEL: Work book – Data entry – Move – Edit – Range – Labels – Save – Copy – Change – Arithmetic, Statistical and Financial functions – Formulas – Spread Sheet Charts.

UNIT – V Information Systems: Management Information System: Concept – Need – Structure: TPS, DSS, EIS, OAS, ES – Manufacturing Information System – Production, Planning and Control - Purchasing – Warehousing – Materials – Marketing Information System – Finance and Accounting Information System – Debtors and Creditors Information – HRIS. (Strategic, Practical and Transaction Processing)

Suggested Reading

1. Curtin P Dennis and others – Information Technology: The Breaking wave, Tata Mc.Graw Hill, New Delhi, 1999.
2. Mayer Marilyn and others, Computers in your Future (3rd Ed), Prentice Hall of India Pvt. Ltd, New Delhi, 1999.
3. Basandra K Suresh, Computers Today, Galgotia Publications, New Delhi, 2000.
4. Post V Gerald, Anderson L David Management Information Systems: Solving Business Problems with Information Technology. Tata McGraw Hill Ltd., New Delhi, 1999.
5. Windows Work books

References:

1. Information Technolgy : Dennis P. Curtin, McGraw Hill International
2. Fundamentals of Computers : P.Mohan, Himalaya Publishing House
3. Fundamentals of Computers : V. Srinivas, Kalyani Publications
5. MS Office : Sanjay Saxsena
7. E commerce : CSV Murthy, Himayalaya Publishing House
8. Raymond Green Law :Fundamentals of the Internet,Tata Mc Graw Hill



LAB: COMPUTER APPLICATIONS IN BUSINESS
(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Lab: 2 PPW

One Period Lab means 2 hours of Lab Session

Lab – Students are required to undergo Lab Sessions with MS-Dos, Windows OS, MS-office and Internet concepts.

*A viva-voce and Practical exam for 20 marks will be conducted for above subject.

Practical Record: 5, Practical's: 10, Viva – Voce: 5 Total: 30

Final Practical Examination duration shall be taken as 2 Hours

DESCRIPTION OF PRACTICALS

1. Practical I – Introduction to Computer – BIOS (Basic Input and Output devices)
2. Practical 2 – DOS (Disk Operating System) (Internal Commands – Time, Date, Dir, Ver, Vol.etc.
3. Practical 3 – DOS (Disk Operating System) – Internal Commands–Prompt,MD
4. Practical 4 – External Commands – Tree, More, Format, Mode, External Commands – Scandisk, Xcopy, Diskcomp, Diskcopy etc.

WINDOWS OS

- 5 Practical 5 – Windows Overview GUI Operating Systems, Features, Desktop Icons, Accessories, Start Menu, Explorer

MS WORD

6. Practical 6 – Create a File and save the file with the name letter.doc make the page setup properties.
7. Practical 7 – Execute Find, Replace & Goto option
8. Practical 8 – Create Header & Footer for the document letter doc.
9. Practical 9 – Create an Index for the document word.doc.
10. Practical 10 – Apply bullets & Numbering option for the full document.
11. Practical 11 - Creates Labels & Envelops.
12. Practical 12 – Create a File with the name Bio-Date.doc and prepare a Bio-data in it.
13. Practical 13 – Inserting of pictures & objects.
14. Practical 14 – Creating a mail merge
15. Practical 15 – Make a hyper link to a Work Document.

MS-EXCEL

16. Practical 16 – Execute the option Validation (Data Menus)
17. Practical 17 – Apply Filter Option on a particular column
18. Practical 18 – Split the sheet in to two parts.
19. Practical 19 – Formatting worksheet data & Cell References.
20. Practical 20 – Macros – Creation, Editing and deletion of Macros
21. Practical 21 – MS-ACCESS: MS-Access Window-Tables-Forms, Queries and Reports
22. Practical 22 – POWER-POINT: Creating Presentation through Auto Content Wizard
23. Practical 23 – Slides Show– Saving, Opening and Closing Presentation
24. Practical 24 – INTER NET: Internet, Browsing and E-Mail.

* * *



**MASTER OF COMMERCE- SECOND SEMESTER
201- ORGANISATION THEORY AND BEHAVIOUR**

(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Class Hours : 5 ppw

Credits: 5

-
- Unit I: Introduction to Organisation and Behaviour:** Organisation – Definitions and Characteristics – Principles of Organisation. Organisational Behaviour: Meaning – Definition - Factors influencing organisational behaviour - Significance - Emergence of Organisational Behaviour - Contributing Disciplines - Emerging challenges to organisational behaviour -Understanding Human Behaviour: Similarities and dissimilarities.
- Unit-II: Individual Behaviour in Organisations:** Personality – Definitions – Characteristics – Determinants - Personality Traits Influencing Organisational Behaviour - Models of Human Personality: Rational Economic, Administrative, Social, Organisational, Self-Actualising - Perception: Definitions, Process, Factors influencing Perception, Distortions in Perception - Attitudes: Definitions and Formation of Attitudes - Learning: Definitions, Learning Process, Classical Conditioning, Operant Conditioning, Social Learning Theories.
- Unit III: Group Behaviour in Organisations:** Groups Meaning – Formation - Group Development -Types of Groups - Group Dynamics: Definitions Group Behaviour: Group Cohesiveness, Norming, Thinking, Risk Shift, Social Loafing - Team Development: Meaning, Definitions, Groups vs. Teams, Team Development, Using Teams for Organisational Building - Conflicts: Definitions, Process, Drives for Conflicts, Types, Outcomes, Conflict Resolution Techniques.
- Unit IV: Behavioural Basis of Organisation Theory:** Organisation Process - Elements of Organisation Structure: Types of Organisational Designs – Behaviour implications of Organisational Design – Authority and Power – Delegation and Decentralisation - Span of Management – Line and Staff. Organisational Change: Meaning – Need - Types – Resistance to Change and Overcoming Resistance.
- Unit V: Organisational Communication and Leadership** –Communication- Meaning - Process – Barriers – Overcoming Barriers. Leadership: Meaning – Styles – Managerial Grid – Traits Vs. Situational – Transformational Leadership – Leadership for Millennium Organisations. Motivation: Meaning – Motivators – Maslow and Herzberg Theories of Motivation – Approaches to Motivating Employees. Stress: Meaning –Individual - Organisational dimensions of Stress- Stress Management Techniques: Individual and Organisational.

Suggested Readings

1. Greenberg Jerald and Baron A Robert, **Behaviour in Organisations**, Prentice Hall of India Learning Private Limited, 2009.
2. Sarma V S Veluri, **Organisational Behaviour - An Interactive Learning Approach -Text and Cases**, Jaico Publishing House, 2009.

References

1. Robbins P Stephen, Judge A Timothy and Sanghi Seema, **Organizational Behavior**, Pearson Education, 2009.
2. McShane L Steven and Mary Von Glinow., **Organizational Behavior**, McGraw Hill Education India, 2010.
3. Rae Andre., **Organizational Behavior – An Introduction to Your Life in Organizations**, Pearson Education, 2009.
4. Slocum W John and Hellriegel Don, **Fundamentals of Organizational Behaviour**, Cengage Learning India Private Limited, 2007.
5. Newstrom W John, **Organizational Behavior – Human Behavior at Work**, Tata McGraw Hill Publishing Company Limited, 2008.
6. Suja R Nair, **Organisational Behaviour – Text & Cases**, Himalaya Publishing House, 2010.



202 - MANAGEMENT ACCOUNTING

(for M.Com - under CBCS)

Class Hours : 5ppw

Credits: 5

UNIT - I: INTRODUCTION: Management Accounting - Meaning, Definitions, Nature and Scope, Objectives, Functions, Process, Relationship with Financial Accounting and Cost Accounting, Role of Management Accountant, and Organization of Management Accounting System; **Cost Behavior and Decision-Making** -Elements of Costs, Classification of Costs, Fixed and Variable Costs, Relevant Costs and Opportunity Costs.

UNIT - II: COST ANALYSIS FOR DECISION MAKING: Cost-Volume-Profit Analysis - Meaning of Marginal Cost and Marginal Costing, Basic Characteristics and Assumptions of Marginal Costing, Marginal Costing, Differential Costing and CVP Analysis, Meaning, Objectives, and limitations of CVP Analysis - Concept of Break-Even Point, Profit-Volume Graph and Profit Planning, and Managerial Applications in Decision Making (Decisions on Product-Mix, Make or Buy, Add or Drop, Shut Down or Continue, Capacity Utilization, Equipment Replacement, Exports, Alternative Methods of Production, and Key Factor Analysis) (Problems).

UNIT - III: MANAGEMENT ACCOUNTING FOR PLANNING AND CONTROL: Budgetary Control - Meaning and Significance, Types of Budgets, Preparation of Fixed and Flexible Budgets (Problems); **Performance Budgeting and Zero-based Budgeting** - Concept, Importance, and Relevance; **Standard Costing** - Meaning, Need, Types of Standards, Advantages of Standards, Standards Setting, Variance Analysis, and Controllability of Variances, Material, Labour, Overhead and Sales Variances (Problems)

UNIT - IV: MANAGEMENT CONTROL SYSTEMS & RESPONSIBILITY ACCOUNTING: Responsibility Accounting - Meaning, Definition, and Essential Features of Responsibility Accounting, Steps Involved in Responsibility Accounting; **Responsibility Centers** - Concept and Types of Responsibility Centers; **Transfer Pricing** - Transfer Prices, Methods/Types of Transfer Prices (Problems), Selection of Transfer Pricing Method, Performance Reports, Segmented Performance Evaluation, Advantages of Transfer Pricing and Responsibility Accounting.

UNIT - V: ACTIVITY BASED COSTING: ACTIVITY BASED COSTING SYSTEM: Concept, Traditional Manufacturing Costing System, Activity Based Costing/Management (ABC) System, ABC System Vs. Traditional Costing System, Tracing costs from Activities, Activity Cost Drivers (Problems), ABC for Marketing, Selling and Distribution Expenses, ABC for Service Companies, and Pros and Cons of ABC.

Suggested Readings:

1. Hongren, Sundem Stratton, Burgstahler and Schatzberg., **Introduction to Management Accounting** Pearson Education, 2009.
2. Shashi K. Gupta and Sharma R.K., **Management Accounting - Principles and Practice**, Kalyani Publishers, 2014.

References:

1. Khan M Y., and Jain P.K., **Management Accounting: Text, Problems and Cases**, Mc Graw Hill Education India Private Limited, 2013.
2. Madegowda.J., **Advanced Management Accounting**, Himalaya Publishing House, 2012.
3. Colin Drury, **Management & Cost Accounting**, Cengage Learning India Private Limited, 2014.
4. Maheswari S.N., **Principles of Management Accounting**, Sultan Chand & Sons, 2011.
5. Jain S.P., and Narang K.L., **Cost Accounting- Principles and Practice**, Kalyani Publishers, 2012.
6. Balakrishnan R., Sivaramakrishnan K., Sprinkle G., **Managerial Accounting**, Wiley, 2012.



203 – MARKETING MANAGEMENT

(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Class Hours: 5ppw

Credits: 5

-
- UNIT-I: INTRODUCTION:**– Marketing Management – Definition – Core concepts – Nature, scope and importance of marketing – Evolution of marketing concepts – Role of marketing in economic development – Functions and tasks of marketing management – Marketing mix – Recent trends in marketing.
- UNIT-II: MARKET ANALYSIS** - Marketing environment – Macro and Micro components and their impact on marketing decisions- Competitive Marketing Strategies- Market Leader, Challenger, Follower and Nicher – STP marketing – Market segmentation – Concept – Bases and process – Target market selection – Positioning – Concept , bases and process - Consumer behavior- Concept - Factors influencing consumer behavior – Consumer buying decision process – Marketing research - Steps and process.
- UNIT-III: PRODUCT AND PRICING DECISIONS** – Concept of product – Classification – Levels –Product line decisions - New product development – Product life cycle and its implications – Branding and packaging decisions. Price – Concept –Objectives - Factors influencing pricing decisions – Methods of Pricing- Cost based, demand based and competition based pricing strategies – Initiating and responding to price changes.
- UNIT-IV: PLACE DECISIONS** – Channels of distribution – Concept – Levels – Functions and types of distribution channels – Channel management decisions – Channel conflict – Channel cooperation – Retailing and wholesaling. Physical distribution decisions - Concept - Importance – Components of physical distribution (market logistics) – Market logistics decisions – Direct marketing – Major channels of direct marketing.
- UNIT-V: PROMOTION DECISIONS** – Promotion mix – Integrated marketing communication – Concept , process – Nature and importance of advertising – Advertising copy – Media selection – Advertising budget – Measurement of advertisement effectiveness - Personal selling – Nature and importance – Process – Sales force management – Recruitment ,selection ,training ,compensation and control of sales force – Sales promotion – Objectives – Techniques.

Suggested Readings

1. Kotler.P, Keller K.L., Koshy.A., and Jha.M, **Marketing Management : A South Asian Perspective**, Pearson Education Limited, 2014.
2. Stanton W.J., Michael J.Etzel and Bruce J.Walker, **Fundamentals of marketing**, McGraw-Hill publications, 1997.

References

1. Ramaswamy V.S., and Namakumari S., **Marketing Management: Planning, Implementation and Control**, Macmillan India publishers, 1991.
2. Rajan Saxena, **Marketing Management**, Tata McGraw Hill Education Private Limited, 2009.
3. Gandhi, J.C., **Marketing: A Managerial Introduction**, Tata McGraw-Hill Publishing Company Limited, 1985.
4. Kazmi S.H.H., **Marketing Management : Text and Cases**, Excel Books, 2007.
5. Michael R.Czinkota and Masaaki Kotabe, **International Marketing**, Cengage Learning, 2013.
6. Arun Kumari and Meenakshi N, **Marketing Management**, Vikas Publishing House, 2010.



204– HUMAN RESOURCE MANAGEMENT
(for M.Com - under CBCS)

Class Hours : 5ppw
Credits: 5

-
- Unit I:** **Human Resource Management:** Nature – Scope – Functions - Roles of HR Manager, HRM and PM Distinctions – Models of HRM: Fombrun, Harvard, Warwick Models – **HRM in Changing Environment** - Impact of Technology on HRM – Workforce Diversity – **Contemporary issues in HRM** - Employee Engagement – Talent Management – Competency Management – Internationalization of HRM.
- Unit II:** **Human Resource Planning:** Forecasting Human Resource Requirements – **Job Analysis** – Reasons for conducting Job Analysis:– Job Analysis Methods: Questionnaire, Observation and Interviews – Job Description – Job Specification - Job Design Concepts – Job Enrichment – Job Enlargement – Reengineering – **Recruitment** – Recruitment Process – Recruitment Methods: Online Recruitment Methods
- Unit III:** **Selection** – Significance of Employee Selection – Factors affecting the Selection – Selection Process: Preliminary Interview, View of Resumes – Selection Tests – Characteristics of properly designed Selection Tests - Types of Employment Tests: Cognitive Aptitude Tests, Job Knowledge Tests and Personality Tests – Online Testing – **Employment Interview**- General Types of Interviews – Methods of Interview: One-to-One Interview, Group Interview, Panel Interview and Stress Interview – Interviewing Problems.
- Unit IV:** **Training and Development** – Socialization – Assumptions – Socialization Process – Employee Orientation – Employee Training - Factors influencing Training and Development – Training and Development Process – Training and Development Methods: On-the -Job Training Methods, Off-the-Job Training Methods – **Employee Development** – Employee Development Methods – Evaluating Training and Development Effectiveness.
- Unit V:** **Performance Management** – Purposes – Performance Appraisal Process – Appraisal Methods – Critical Incident Appraisal, Checklist appraisal, Graphic Rating Appraisal, Forced Choice Appraisal and Behaviourally Anchored Rating Scales- **Career Planning and Development** – Career Planning – Career Paths: Traditional Career Path, Lateral Skill Path, Dual Career Path and Demotion – Career Development Methods –Workshops – Personal Development Plans.

Suggested Readings

1. Wayne Mondy. R, **Human Resource Management**, Pearson Education, 2010.
2. David A.Decenzo, Stephen P.Robbins and Susan L.Verhulst, **Human Resource Management**, Wiley India Private Limited, 2013.

References

1. Sharon Pande and Swapnalekha Basak, **Human Resource Management**, Pearson Education, 2014.
2. Aswathappa K, **Human Resource Management: Text and Cases**, McGraw Hill Education India Private Limited, 2013.
3. Subba Rao .P, **Human Resource Management**, Himalaya Publishing House, 2010.
4. Gupta S.K., Joshi.R, **Human Resource Management with Case Study**, Kalyani Publishers, 2014.
5. Gary Dessler, **Human Resource Management**, Pearson Education, 2009.
6. Pattanayak Biswajeet, **Human Resource Management**, Prentice Hall of India Private Limited, 2014.



205- COMPUTER APPLICATIONS IN ACCOUNTING
(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Theory – 3 PPW

Lab: 2 PPW

One Period Lab means 2 hours of Lab Session

Credits= 5

Unit-I: **Computerized Accounting** – Need, Features and merits – Distinction between Manual Accounting and Computerized Accounting – Limitations of Computerized Accounting – Accounting Packages – Tally, Wings and Ex- integration of Accounting Packages with ERP – Features of Tally – Gateway of Tally –Shortcut keys.

Unit-II: **Creation of Account groups** – Creation Ledgers – With inventory and without inventory – Voucher Types – Payment voucher – Receipt Voucher – Contra Voucher – Sales Voucher – Purchase Voucher – VAT voucher – Credit Note Voucher – Debit Note Voucher – Other types of Voucher – Reversing Journal Voucher. **Inventory Management in Tally** – Stock groups, Categories, items – Inventory Masters – Stock Ledgers – Invoicing – Inventory Vouchers _ Inventory Journals – Purchase and Sales Order Processing – Delivery Notes – Treatment and posting of Sales, Tax, VAT, and other related Taxes.

Unit- III: **Payroll in Tally** - Exploring Payroll in Tally.ERP9 – Working with Payroll vouchers – Defining Payroll Reports – Working with Statement of Payroll Report – Describing Salary Disbursement – Create a Tax Ledger – TDS Vouchers – Printing a TDS Challan – Tax Collected at Source in Tally.ERP9 – TCS Reports in Tally.ERP9.

Unit-IV: **Financial Reporting** - Day Book – Cash/Bank Book – Bank Reconciliation Statement – Cash Flow and Fund Flow – Sales Book _ Purchase Book – Statement of Accounts – Trial Balance – Treatment and Accounting for Depreciation – Profit and Loss Accounts – Balance Sheet – Generation of Financial Reports other than Financial Statements – Treatment of Income Tax and TDS.

Unit-V: **Special Features in Tally** - Tally Vault – Import and Export of Data – ODBC Connectivity – Web enabled Financial Reporting – Split Financial year, Income and Expenses Statement – Tax Ledgers – Financial Audit – Security in Accounting Packages – Data integrity and Security – Virus Problems – Overcoming Security issues – Security Protocols for Accounting Packages – Backup and Restore.

Suggested Readings

1. Namrata Agarwal, **Financial Accounting on Computers using Tally**, Dreamtech Press, 2000.
2. Ashok K Nadhani., **Tally.ERP 9 Made Simple Basic Financial Accounting**, BPB Publications, 2012.

References:

1. Kongent Learning Solutions Inc., **Tally.ERP 9 in Simple Steps**, Dreamtech Press, 2002.
2. Nadhani. A.K., and Nadhani .K.K. , **Implementing Tally 9**, BPB Publications, 2007.
3. Shraddha Singh and Navneet Mehra., **Tally ERP 9**, V&S Publishers, 2005.
4. Tally Work Book.



LAB: COMPUTER APPLICATIONS IN ACCOUNTING
(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Lab: 2 PPW

One Period Lab means 2 hours of Lab Session

Lab – Students are required to undergo Lab Sessions with Tally Software.

1. Gateway of Tally and Shortcut Keys
2. Creation of Company, Account Groups, Ledgers, with Inventory and without Inventory
3. Creation of different types of Vouchers, Reversing Journal Voucher
4. Creation of Stock Groups, Categories, Items – Inventory Master
5. Inventory Vouchers, Receipt Note, Return Out, Return In, Inventory Journals
6. Purchase and Sales Order Processing, Treatment of Sales Tax, VAT and other related taxes Entries into Day Book, Cash/Bank Book, Bank Reconciliation Statement, Cash Flow and Fund Flow Statements
7. Sales Book, Purchase Book
8. Statement of Accounts, Trial Balance, Treatment of Depreciation
9. Profit and Loss Account and Balance Sheet
10. Generation of Financial Reports other than Financial Statements
11. Payroll Vouchers, Statement of Payroll
12. Creation of Tax Ledger, TDS Vouchers, Printing TDS Challan
13. TCS Reports



MASTER OF COMMERCE UNDER CBCS- THIRD SEMESTER
(M.Com General)

COMMON FOR ALL

- 301 - RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS
- 302 – E- BUSINESS

A. SPECIALIZATION: ACCOUNTING AND FINANCE

- 311- FINANCIAL MARKETS AND INSTITUTIONS
- 312– SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
- 313- CORPORATE TAX MANAGEMENT

B. SPECIALIZATION: BANKING AND INSURANCE

- 321- BANK MANAGEMENT
- 322- BANK LENDING POLICY AND TECHNIQUES
- 323- PRINCIPLES OF LIFE INSURANCE

C. SPECIALIZATION: MARKETING

- 331- RURAL MARKETING
- 332- ADVERTISING AND SALES MANAGEMENT
- 333- CONSUMER BEHAVIOUR

D. SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

- 341- INDUSTRIAL RELATIONS
- 342 - PERFORMANCE MANAGEMENT
- 343- COMPENSATION MANAGEMENT



MASTER OF COMMERCE- THIRD SEMESTER
301 -RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS
(Common to M.Com and M.Com- Financial Accounting - under CBCS)

Class Hours: 5 ppw

Credits: 5

- Unit-I:** **INTRODUCTION:** Quantitative Techniques: Meaning, Need and Importance - Classification: Statistical Techniques - Operations Research techniques - Role of Quantitative Techniques in Business and Industry - Quantitative Techniques in Decision making - Limitations.
Research: Meaning, Purpose, Characteristics and Types - Process of Research: Formulation of objectives - Formulation of Hypotheses: Types of Hypotheses - Methods of testing Hypotheses - Research plan and its components - Methods of Research: Survey, Observation, Case study, experimental, historical and comparative methods - Difficulties in Business research.
- UNIT-II:** **COLLECTION, PRESENTATION & ANALYSIS OF DATA:** Sources of Data: Primary and Secondary Sources - Methods of collecting Primary Data - Designing Questionnaires/Schedules in functional areas like Marketing, Finance, Industrial Economics, Organizational Behavioral and Entrepreneurship (Practically students should be able to design questionnaires for given problem/cases in these areas). Census vs. Sampling - Methods of Sampling Random and Non-Random Sampling methods - Measurement and scaling techniques.
Processing and Presentation of Data: Editing, coding, classification, and tabulation - Graphic and diagrammatic presentation (Theory only). Statistical analysis of Data: Types of analysis (Descriptive analysis and inferential analysis) – Tools: Measures of Central Tendency, Measures of Variation, Skewness, Time series, Index numbers, Correlation and Regression (theory only).
- UNIT-III:** **INTERPRETATION AND REPORT WRITING:** Interpretation: Introduction - Essentials for Interpretation, Precautions in interpretation - Conclusions and generalization - Methods of generalization. Statistical fallacies: bias, inconsistency in definitions, inappropriate comparisons, faulty generalizations, drawing wrong inferences, misuse of statistical tools, failure to comprehend the data. (including small cases).
Report Writing: Meaning and types of reports - Stages in preparation of Report - Characteristics of a good report - Structure of the report'-Documentation: Footnotes and Bibliography - Checklist for the report.
- UNIT-IV:** **PROBABILITY AND PROBABILITY DISTRIBUTIONS:** Probability: Meaning - Fundamental Concepts - Approaches to measurement of Probability -Classical, Relative frequency, subjective and axiomatic approaches - Addition theorem - Multiplication theorems- Bayesian theorem and its simple applications - Mathematical expectation (including problems).
Probability Distributions: Meaning and importance of theoretical frequency distributions Binomial, Poisson and Normal distributions - Properties and uses - fitting Binomial, Poisson and Normal, Distributions (areas method only) (including problems).
- UNIT-V:** **ASSOCIATION OF ATTRIBUTES & CHI SQUARE TEST:** Association of Attributes: Meaning - Distinction between correlation and association Methods of studying Association - interpretation of results.
Chi Square Test: Definition - Conditions for applying Chi square test, Yates's correction - Uses and limitations of Chi square test - Chi square test for testing the independence of Attributes - Chi square test for goodness of fit (including problems).

SUGGESTED READINGS:

1. Krishna Swamy:Methodology of Research in Social Sciences
2. Kothari:Research Methodology
3. Zikmund:Business Research Methods
4. SC.Gupta:Fundamentals of Statistics
5. SP.Gupta:Statistical Methods
7. Sanchetty & Kapoor: Business Statistics



MASTER OF COMMERCE- THIRD SEMESTER

302 – E- BUSINESS

(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Introduction to E-Business:** E-Business: Meaning, significance – Opportunities and Risks – E-Business Models: B2B: Meaning and implementation, B2C: Meaning and implementation, B2G: Meaning and implementation, C2G: Meaning and implementation and C2B: Meaning and implementation – Advantages and Limitations – Mobile Commerce: Meaning, Framework and Models – E- Business Trade: Bookshops, grocery, software, newspaper, banking auction, share dealing.
- Unit-II: E-Business Infrastructure:** Internet: Meaning, Issues, Problems and Prospects, ISP – Intranets: Trends, Growth and Applications – Extranet: Applications, VPN – EDI: Definitions and Benefits – Technology and Implementation - Portals.
- Unit-III: E-Business Applications:** E-Business Strategy: Definition, Objectives, Analysis and Implementation - E-Marketing: Meaning, Areas, Planning, Strategy and implementation – Internet Advertising - E-CRM: Meaning, Technology for CRM and application - E-Procurement: Meaning, Drivers, Risks and implementation – E-SCM: Meaning, Focus and implementation – E-Payment Systems: Meaning, Pre and Post paid payments systems – E-Cash.
- Unit-IV: E-Security -** Security Meaning, Attacking methods, SET and SSL, Hacking Security Tools: Cryptology and Encryption – Password – Authentication: Keys and Kerberos – Digital Signatures – Security Protocols – Firewall Security – E- Commerce Law: Information Technology Act, 2000 – Government Policy and Recommendations.
- Unit-V: E-Business Web Technologies:** Web site meaning – Types – Planning and Organizing – Web page Designing, Essentials in designing good web site – Web page development tools – Testing and evaluating web site – Creating Web site using MS Front Page: Using Wizard – Viewing and closing web sites – HTML: Basics, Syntax, HTML Editors – Multimedia: Graphics, web image formats, VRML.

Suggested Readings

1. Albert Napier H, Rivers N Ollie, Wagner W Stuart and Napier JB, **E-Business – Creating a Winning**, 2nd Edition, Cengage learning India Private Limited, New Delhi, 2008.
2. Murthy C S V, **E-Commerce – Concepts, Models, Strategies**, Himalaya Publishing House, Mumbai, 2009.

References

1. Gary P Schneider, **E-Commerce**, Cengage Learning, New Delhi, 2011.
2. David Whiteley, **E-Commerce Strategy, Technologies and Applications**, Tat McGraw Hill Publishing Company Limited, New Delhi, 2009
3. Ravi Kalakoda, **Frontiers of Electronic Commerce**, Pearson Education, New Delhi, 2010.



MASTER OF COMMERCE- THIRD SEMESTER
SPECIALIZATION: ACCOUNTING AND FINANCE
311- FINANCIAL MARKETS AND INSTITUTIONS
(for M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Financial System:** Meaning and Objectives of Financial System; Structure of Financial System -Components: Financial Markets – Financial Institutions – Financial Instruments – Financial Services; Functions of Financial System; Role of Financial System in Economic Development.
- Unit-II:** **Money Market:** Concept, Features, Functions and Significance of Money Market; Money Market Instruments; Segments of Money Market – Call / Notice Money Market - Commercial Bills Market - Treasury Bills Market – Discount and Acceptance Markets - Commercial Papers – Certificates of Deposit –Repo Instruments; Role and Challenges of Money Market in India.
- Unit- III:** **Primary Market:** Concept, Features, Functions and Significance of Capital Market; Structure and Recent Developments of Capital Market in India; Primary Market / New Issues Market: Initial Public Offer (IPO) – Follow on Public Offer (FPO) – Rights Issue – Private Placements – Preferential Issues – Bonus Issues - Book-Building – American Depository Receipts (ADRs) – Global Depository Receipts (GDRs) – Foreign Currency Convertible Bonds (FCCBs); Players in New Issue Market; Role and Importance of Primary Market in Economic Development.
- Unit-IV:** **Secondary Market:** Stock Exchanges – Organisation – Functions - Players - Management and Membership; Listing of Securities; Trading and Settlement Systems; Stock Market Indices; Bond Market: Significance – Functions – Participants; Depositories and Custodians – National Securities Depository Limited (NSDL) – Central Depository Services Limited (CDSL) – The Stock Holding Corporation of India Limited (SHCIL) - Recent Developments in Stock Market.
- Unit-V:** **Institutional Regulatory Framework:** Introduction, Importance, and Functions of RBI – RBI and Monetary Policy - Promotional Role of RBI; SEBI: Organization Structure - Objectives – Powers and Functions – SEBI Regulations relating to Capital Markets – Investors Education and Protection.

Suggested Readings

1. Bhole L.M. and Mahakud J, **Financial Institutions and Markets**, Tata McGraw Hill Education Private Limited, New Delhi, 2004.
2. Jeff Madhura, **Financial Institutions and Markets**, Cengage Learning India Private Limited, New Delhi, 2012

References:

1. Preeti Singh, **Dynamics of India Financial System – Markets, Institutions & Services**, Ane Books Private Limited, New Delhi, 2009.
2. Ajay Shah, Susan Thomas and Michael Gorham, **Indian Financial Markets: An Inside Guide to How the Markets Work**, Elsevier Publications, Oxford, UK, 2008.
3. R M Srivastava and Divya Nigam, **Dynamics of Financial Markets and Institutions in India**, Excel Books, New Delhi, 2010.



MASTER OF COMMERCE-THIRD SEMESTER
312– SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
(for M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Introduction to Investments:** Concept- Nature- Scope- Types- Process-Alternatives - Environment - Investment, Speculation and Gambling - Indian Stock market – Primary and Secondary markets – Derivatives market – Stock exchanges – BSE-NSE- OTCEI- Organization and Regulation.(Theory only)
- Unit –II: Security Analysis:** Objectives of security investment – Fundamental Analysis: economy industry – Industry analysis - company analysis – Technical analysis – Efficient market hypothesis – Types of Risks. (Theory only)
- Unit – III: Valuation of Securities:** Valuation of Equity Shares: Dividend discount model – Constant growth model Two stage and three phase models – Valuation through P/E Ratio - Preference Shares – Valuation of Debt securities: Bond Pricing Theorems- Convexity – Duration - Bond immunization - Active and passive bond management (Problems)
- Unit – IV: Portfolio Theory:** Risk and Return Analysis - Approaches in Portfolio construction – Traditional and Modern – Portfolio selection: Markowitz’s Portfolio Optimization - Sharpe’s Portfolio Optimization- CAPM – APT Models. (Problems)
- Unit – V: Portfolio performance Evaluation:** Concept – Objectives - Portfolio performance measures: Sharpe’s - Trenor’s - Jensen’s measures – Portfolio Revision. (Problems)

Suggested Readings

1. Donald E Fischer and Ronald J Jordan, **Security Analysis and Portfolio Management**, Pearson Prentice Hall of India, New Delhi, 2008.
2. Bhalla V.K., **Investment Management**, Sultan Chand & Sons, New Delhi, 2008.

References

1. S Kevin, **Security Analysis and Portfolio Management**, Prentice Hall of India, New Delhi, 2015.
2. Punithavathy Pandian, **Security Analysis and Portfolio Management**, Vikas Publishing House Pvt. Ltd., New Delhi, 2014.
3. Preeti Singh, **Investment Management**, Himalaya Publishing House, Mumbai, 2015.



MASTER OF COMMERCE-THIRD SEMESTER
313- CORPORATE TAX MANAGEMENT
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- Unit-I: Introduction:** Significance of Corporate Taxation – Concepts and definitions of Corporate Income Tax – Assessee- Assessee in default-Previous Year-Assessment Year – Residential Status of Company-Incidence of Tax – Types of Companies for tax purpose – Incomes forming part of total income of a company — Exempted Incomes and Tax free incomes with special reference to corporate assessee. (Theory only)
- Unit-II: Corporate Taxation:** Computation of Income from House Property-Business-Capital Gains-Other Sources – Set-Off and Carry-Forward of losses – Deductions out of G.T.I. u/s. 80 applicable to companies – Computation of Total Income and tax liability of Company – Minimum Alternative Tax – Dividend Tax. (Problems with special focus on computation of total income and tax liability)
- Unit- III: Tax Planning – Financial Management Decisions:** Concept of tax planning; Tax avoidance and Tax evasion – Tax Management: Meaning and Scope of Tax Management – Implications of tax planning – Requisites of a successful tax planning – Methods of Tax Planning. (Theory only)
- Capital Structure Decisions: Meaning of capital structure-Tax considerations in deciding capital structure-Choice of Capital Structure (Problems) – Dividend Policy: Meaning-Factors affecting dividend policy – Dividend Policy and Tax Considerations: Meaning of dividend under IT Act; Tax implications for company distributing dividend; Tax implications for Shareholders – Inter Corporate Dividend – Tax Planning in respect of Bonus Shares. (Problems on Tax Planning with reference to Choice of Capital Structure)
- Unit-IV: Tax Planning - Business Restructuring and Managerial Decisions:** Tax issues relating to Amalgamation of Companies: Meaning of Amalgamation under IT Act; Tax Concessions to Amalgamating Company; Tax Concessions to Amalgamated Company; Tax Concessions to the Shareholders of Amalgamating Company – Tax Issues relating to Demerger: Meaning of Demerger; Parties to Demerger; Tax Incentives in case of Demerger: Tax Incentives to Demerged Company-Tax Incentives to Shareholders-Tax Incentives to Resulting Company. (Theory only)
- Tax considerations with reference to specific managerial decisions: Own or Lease-Tax considerations in Buy or Lease – Sale of Assets of Scientific Research – Make or Buy – Repair, Replace, Renewal or Renovation – Shut Down or Continue (Problems on tax planning with special focus on Buying Asset with Borrowing or Taking on Lease)
- Unit-V: Special Tax Provisions for Certain Undertakings:** Special provisions in respect of Newly established units in Special Economic Zones – Special Provisions in respect of Newly established 100% Export-oriented Undertakings – Undertakings engaged in Infrastructure, Telecommunication, Power Sector and Industrial Parks – Undertakings engaged in Development of SEZ – Undertakings located in backward Areas and Other Notified Areas – Tax Planning in respect of Export Promotion – Tax Planning provisions with reference to reinvestment of Capital Gains. (Theory and Problems on Capital Gains investment)

Suggested Readings:

1. Rajeev Puri and Puja Gaur, **Corporate Tax Planning & Management**, Kalyani Publishers, 2015.
2. Vinod K Singhania, **Direct Taxes, Planning and Management**, Taxmann's Publications Private Limited, New Delhi, 2015.

References:

1. Gaur VP, Narang DB, Puja Gaur and Rajeev Puri, **Income Tax Law & Practice**, Kalyani Publishers, New Delhi, 2009.
2. Girish Ahuja and Ravi Gupta, **Professional Approach to Direct Taxes Law & Practice**, Bharat Law House Private Limited, 2015.



MASTER OF COMMERCE- THIRD SEMESTER
SPECIALIZATION: BANKING AND INSURANCE
321- BANK MANAGEMENT
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit I:** **An overview of banking** : Nature of banking Business; Banking and other financial institutions in India; Official regulations and controls over banks and other financial institutions; social obligations of banks in India; Banking Sector Reforms in India.
- Unit II:** **Organizing and Managing banks:** Organizational structure of banks, Forms of Banking – Unit Banking – Branch Banking – Group Banking – Chain Banking, satellite and affiliate banking and correspondent banking; Organisational Structure of Banks in India.
- Unit III:** **Financial Management in Commercial Banks:** Management of Liabilities; Management of Assets; Expenditure control and Profitability
- Unit IV:** **Process of Bank Management:** Planning – Organizing – Co-ordination – Motivation and Control.
- Unit V:** **Manpower Planning:** Employee Selection – Appraisal and Promotion – Recent Developments and Current Issues; Problems in Bank Management in India.

Suggested readings:

1. Desai, vasanth, Bank Management, Himalaya Publishing House, Delhi.
2. Reed, E.W: Commercial Banks Management, Harper and Row Publishers, New York.
3. Ghotgalker, R,K.; Service Conditions of Bank Employees, Himalaya Publishing House, New Delhi
4. Ghotgalker, R,K.; Disciplinary Action of Banks Himalaya Publishing House, New Delhi
5. Subba Rao, P. Principles and Practice of Bank Management, Himalaya Publishing House, New Delhi
6. Srivastava, R.M,: Management of Indian Financial Institutions, Himalaya Publishing House, New Delhi
7. Sundharam, K.P.M.; Banking Theory – Law and Practice, Sultan Chand, New Delhi.
8. Macmillan, Principles and practices of Banking, Macmillan Publishers India Limited, Chennai.
9. K Sasidharan, Alex K Mathews, Financial Services and System, Tata McGraw- Hill Publishing Limited, New Delhi.



MASTER OF COMMERCE- THIRD SEMESTER
SPECIALIZATION: BANKING AND INSURANCE
322- BANK LENDING POLICY AND TECHNIQUES
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit I:** Bank advances- Types and forms –Bank lending Principles under Changing Socio – Economic and Legal Environment.
- Unit II:** Assessment of Credit Needs for Term Assets- Assessment of Credit Needs for working Capital – Financial Analysis Techniques for Bank Lending.
- Unit III:** Credit Disbursement: Terms and Conditions; Documentation, Disbursement, Scheduling
- Unit IV:** Monitoring of advances- Renewal and Recovery of Advances – Nursing of Problem Accounts including Non – Performing Assets.
- Unit V:** Present Credit Policy and Various Schemes of Bank Lending to Industry, Commerce and Trade – Agriculture in India – Refinance and Credit Guarantee Facilities for Banks in India – Current Issues and Problems of Bank Lending in India.

Suggested readings:

1. Jha, S.M. Bank Marketing, Himalaya Publishing House, New Delhi.
2. Mithaini and Gordon: Banking Theory and Practice, Himalaya Publishing House, New Delhi.
3. Suneja, S.R. Management of Bank Credit, Himalaya Publishing House, New Delhi.
4. Varshney P.N. Banking Law and Practice, Sultan Chand & Sons, New Delhi
5. Parameswaran, R and Natrajan. S: Indian Banking , Sultan Chand & Sons, New Delhi
6. Seth; Marketing of Banking Services, Macmillian India Ltd., New Delhi
7. Nanda, K.C Credit and Banking , Response Book (A Division of Sage Publications, New Delhi)



MASTER OF COMMERCE- THIRD SEMESTER
SPECIALIZATION: BANKING AND INSURANCE
323- PRINCIPLES OF LIFE INSURANCE
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- Unit I:** Introduction: Need for security against economic difficulties Risk and Uncertainty; individual life insurance –nature and uses of life insurance. Life insurance as a collateral as a measure of financing business continuation as protection of property and as a measure of investment.
- Unit II:** Life insurance contract: Distinguishing characteristics Utmost good faith ; insurable interest Caveat emptor ; Unilateral and allegory nature of contract ;proposal and application form; warranties ; medical examination ; policy construction and delivery; policy provision; lapse; revival; surrender value; paid up policies; maturity nomination and assignment suicide and payment of insured amount; loan to policy holders.
- Unit III:** Life Insurance Risk: Factors governing sum assured; Methods of calculating economic risk in life insurance proposals; Measurement of risk and Mortality tables. Calculation of Premium; Treatment of Sub- Standard Risks; Life Insurance Fund; Valuation and Investment of Surplus; Payment of Bonus.
- Unit IV:** Life Insurance Policies: Applications in different situations; Important life insurance policies: Life insurance annuities; Important legal provisions and judicial pronouncements in India.e
- Unit V:** Life Insurance Salesmanship: Rules of Agency; Essential qualities of an ideal insurance salesman; Rules to canvas business from prospective customers; After – sale service to policy holder.

Suggested readings:

1. Mishra M.N.: Insurance – Principles and Practices, Sultan Chand & Co. Ltd. New Delhi
2. Life Insurance Corporation Act, 1956, G.O.I
3. Gupta, O.S.: Life Insurance, Frank Brothers, New Delhi.
4. Balachandran,S.: Customer – Driven Services Management, Response Books (A Division of Sage Publications), New Delhi.
5. Vinuyakam, N.M. Radhasamy and S.V. Vasudevan: Insurance – Principles and Practice, Sultan Chand & Co. Ltd. New Delhi



MASTER OF COMMERCE- THIRD SEMESTER
SPECIALIZATION: MARKETING
331- RURAL MARKETING
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Rural Marketing:** Concepts and Components – Nature and Characteristics of Rural Markets – Differentiating Urban and Rural Markets - Population- Infrastructure – Demand-Consumption Pattern – Incomes–Rural Marketing Mix - Changing Scenario of Rural Marketing in India - Rural Marketing Problems & Challenges - Opportunities in Rural Markets.
- Unit-II: Agricultural Marketing in India:** Characteristics of Agricultural Products –Types , Characteristics and importance of Agricultural Markets- - Defects in Agricultural Marketing System – Challenges in Marketing of Agriculture Produce - Measures to improve Agricultural system in India.
- Unit-III: Rural Periodic Markets in India: Location -** Nature of Merchandise - Management of Periodic Markets - Regulated Markets - Origin and Growth – Structure - Objectives – Functions – Management - Problems - Progress.
- Unit-IV: Rural Retail Trade:** Structure of Retail Outlets- Problems - Public Distribution System in Rural Areas-Managerial Aspects –Organized and Unorganized Retail – Types – Features-Problems of PDS - Rural Marketing strategies: Segmentation of Rural Market- Competitive Strategy - Product Strategy – Pricing Strategy – Communication Strategy – Distribution Strategy – Hiring Strategy – Social Strategy –Region Specific Strategies.
- Unit-V: Rural Consumer Behaviour:** Rural Consumers - Types – Characteristics - Shopping habits of Rural Consumers - Factors affecting Rural Consumer Behaviour - Opinion Leaders - An Overview of Marketing of Rural Industrial Products – Corporate Strategies.

Suggested Readings

1. Balram Dogra and Karminder Ghuman, **Rural marketing- Concepts & Practices**, Tata McGraw-Hill Company Limited, New Delhi, 2008.
2. Krishnamacharyulu CNG and Lalitha Kumari, **Rural Marketing, Text & Cases**, Pearson Edition, New Delhi, 2002.

References

1. R.V. Badi & N.V. Badi: **Rural Marketing**, Himalaya Publishing House, New Delhi, 2008.
2. Goplala Swamy: **Rural Marketing-Environment, Problems and Strategies**, A.H. Wheeler & Co. 1997.
3. Rajagopal: **Rural Marketing-Development Policy, Planning and Practice**, Rawat Publications, Jaipur, 1998.



MASTER OF COMMERCE- THIRD SEMESTER
332- ADVERTISING AND SALES MANAGEMENT
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Advertising:** Concept of Advertising - Features Importance – Objectives - Types of Advertisements - Functions of advertising. Department and Advertising Manager-Social, Cultural and Ethical dimensions of advertising - Recent developments in advertising sector.
- Unit-II:** **Advertisement Copy:** Meaning – Components – Types — Essentials of good advertising copy. Advertisement copy for Print and Electronic Media - Radio, Television and Outdoor Media - Advertising Agencies – Functions - Advertising Agencies in India – An overview.
- Unit-III:** **Media Decisions:** Types of Media – Merits and demerits of Print and Electronic Media - Media Selection - Media Scheduling and Media Mix - Overview of media scenario in India. Advertising Budget – Methods of determining size of advertising budget- Measuring effectiveness of advertising.
- Unit-IV:** **Salesforce Management:** Salesmanship – Recruitment – Selection – Training and Development – Compensation – Motivation - Personal Selling: Objectives – Type of Selling - Process of Personal Selling - Evaluation of Sales Personnel.
- Unit-V:** **Sales Organization& Sales Promotion:** Organisation Structure – Types – Functions - Sales Quota - Sales Budget – Sales Territories – Controlling Sales Force – Sales Promotion - Planning Sales Promotion – Techniques of Sales Promotion at Consumer level, Trade Level and Sales Force level -- Essentials of good Sales Promotion.

Suggested Readings

1. Chunawalla, S.A, Advertising, **Sales and Promotion Management**, Himalaya Publishing House, 2007.
2. Krishna K. Havaldar & Others: **Sales & Distribution Management**, Tata McGraw Hill Company Limited, New Delhi, 2008.

References

1. David, A. Aaker & John .G Myer, **Advertising Management**, Prentice Hall of India, New Delhi, 2005.
2. Manendra Mohan, **Advertising Management - Concepts and Cases**, Tata McGraw Hill Company Limited, New Delhi, 2006.
3. Charles, M. and Futrell, **Sales Management**, Thomson Publications, 6th Edition, 2005.



MASTER OF COMMERCE- THIRD SEMESTER

333- CONSUMER BEHAVIOUR

(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Consumer Behaviour:** Concept and need for studying Consumer Behaviour - Types of Consumers - Application of Consumer Behaviour in designing marketing strategies- Problems in studying consumer behaviour - Characteristics of Indian Consumers- Organizational Buying Behaviour-Features-Process.
- Unit-II:** **Socio-Cultural Influences on Consumer Behaviour:** Family Influences- Family Life cycle - Reference groups – Types- Benefits - Opinion leadership- Social Class –Features – Factors responsible for social stratification - Cultural and Sub -Cultural Influences.
- Unit-III:** **Psychological Foundations of Consumer Behaviour:** Motivation – Concept – Theories of Needs - Learning: Meaning –Components – Theories of Learning Process – Perceptions - Attitude and Behaviour: Factors Involved in Attitude Formation –Personality: Characteristics of Personality – Theories of Personality - Trait Theory –Psychoanalytic Theory - Stages in the development of Personality - Lifestyle.
- Unit-IV:** **Consumer Decision Making:** Meaning of Decision Making – Buying Motives- Buying Roles - Types of Decision Making - Steps involved in consumer decision making process - Diffusion of Innovations-Consumer Decision Making Models: Howard Sheth Model - Nicosia Model. Models of Organizational Buying Behaviour - Sheth Model of Industrial Buying behaviour.
- Unit-V:** **Marketing Research:** Concept – Need and Importance – Areas of Marketing Research – Process of Marketing Research – Research Objectives – Hypothesis – Research Problem - Research Design – Data Collection Techniques – Sample Design - Statistical tools – Report Writing.

Suggested Readings

1. Schiffman, Leon, G. Kanuk, Lazar, **Consumer Behaviour**, Prentice Hall of India.
2. Suja R, Nair, **Consumer Behaviour and Marketing Research**, Himalaya Publishing House, New Delhi, 2006.

References

1. Doyer, Macinnis, **Consumer Behaviour**, All India Publishers & Distributors, Chennai, 2000.
2. Chunawala, S.A, **Commentary on Consumer Behaviour**, Himalaya Publishing House, Mumbai, 2005.



MASTER OF COMMERCE- THIRD SEMESTER
SPECIALIZATION: HUMAN RESOURCE MANAGEMENT
341- INDUSTRIAL RELATIONS
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Introduction-** Labour force in India: Structure, Composition and Trends- Key Issues and Critical Challenges-**Industrial Relations**-Meaning and Scope of Industrial relations- Approaches to Industrial relations: The Systems Framework, Theoretical Perspectives- Rule Making and Industrial Relations- Basic Concepts and Values- Industrialization Strategy and Industrial relations- Globalization and Industrial Relations
- Unit-II:** **Grievances Handling**-Introduction-Managing Employee Grievance-Nature and Causes of Employee Grievance-Grievance Procedure -Management of Discipline-**Dispute Resolution**-Introduction- Industrial Conflicts- Causes and Consequences of Industrial Conflicts- Legal Framework- The Industrial Dispute Act of 1947- Reference of Disputes to Boards, Courts and Tribunals- Voluntary Reference of Disputers to Arbitration – Unfair Labour Practices-
- Unit-III:** **Trade Unions**-Introduction -Trade Unions in India-Legal Framework-Trade Union Recognition-Trade Union Structures-Trade Union Structures at National Level-Managerial Trade Unions- Women in Trade Unions-Multiple Unionism-Trade Union Unity and Trade Union Mergers- **Management of Trade Unions in India**- Trade Union Constitution- Trade Union Functions- Internal Challenges-External Challenges-Leadership and Organizational Issues-Internal Democracy- Strategies for Strengthening Unions and Unionism
- Unit-IV:** **Collective Bargaining**- Nature -Legal Framework of Collective Bargaining-Levels of Bargaining: National Level, Industry Level- Collective Bargaining and Stake Holders: Government, Employers, Trade Unions, Consumers and Community-Negotiating Techniques and Skills- Stages of Negotiation-: Preparation and Bargaining- Factors Contributing to the Success of Collective Bargaining-Drafting an Agreement-Terms of Employment
- Unit-V:** **Tripartism**- Introduction-Types and Levels of Tripartite Agreements- ILO and Tripartism-Tripartism at National Level- Tripartism at State Level- **Role of Government in Industrial Relations**- Introduction- Divergent Perspectives-Types of Government Interventions-Means of State Intervention- Role of State in Industrial relations at the State Level-Pluralism and Diversity-Changes in Labour Laws/Policy -Recognition of Bargaining Agent-Problems concerning the Role of Government in Industrial Relations.

Suggested Readings

1. Venkata Ratnam C S, **Industrial Relations**, Oxford University Press, New Delhi
2. Arun Monappa, Ranjeet Nambudiri and Patturaja Selvaraj, **Industrial Relations and Labour Laws**, Tata McGraw Hill Education Private Limited, New Delhi, 2012.

References

1. Suresh C Srivastava, **Industrial Relations and Labour Laws**, Vikas Publishing House, New Delhi, 2009.
2. BD Singh, **Industrial Relations & Labor Laws**, Excel books, New Delhi, 2008.
3. PRN Sinha, Indu Bala Sinha and Seema Priyadarshini Shekhar, **Industrial Relations, Trade Unions and Labour Legislation**, Pearson Education, New Delhi, 2009.



MASTER OF COMMERCE- THIRD SEMESTER
342 - PERFORMANCE MANAGEMENT
(for M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- Unit-I: Performance Management System** – Functions – Characteristics - Performance Management Process –Performance Planning –Objectives Methodologies-Principles of Performance Counseling- Performance Counseling Skills-Developing Performance Management System -Implementation of Performance Management System- Bottlenecks.
- Unit-II: Performance Appraisal** –Importance –Process –Elements-Methods –Performance Standards-determining Who will conduct Performance appraisal-Supervisor –Team – Subordinate- Customer-Self-Graphic Rating Scales-Critical Incidents Method- Check List-BARS- 360 Degrees Appraisal- Factors Influencing the choice of Performance appraisal Method.
- Unit- III: Training in Organizations**- Opportunities and Challenges – Needs Assessment -Training and Education –Training and learning-Approaches to Learning-Developing Effective Human Resources-Human Resource Portfolio-Benchmarking –Strategies for effective Business Outsourcing-Careers and Career Management.
- Unit-IV: Training Design** – Training Methods-On the Job Methods. Job Instruction Technique JIT -Apprenticeship Training –Team Training ; Of the Job Training Methods -Lecture Method – Demonstration – Games –Simulation-Role playing-Evaluation of Training.
- Unit-V: Performance Management:** Strategies for Performance Management – Competency Based –team Based – Culture Based-Leadership Based – HR Professionals and Performance Management – Strategic Role of HR Professional.

Suggested Readings

1. AS Kohli and Deb, **Performance Management**, Oxford University Press, 2012.
2. Soumendran Narian Bagehi, **Performance Management**, Cengage Learning, India, 2012.

References:

1. Srinivas R Kandula, **Performance Management**, Prentice Hall of India, New Delhi, 2006.
2. Tapomoy Deb, **Performance Appraisal and Management**, Excel Books, New Delhi, 2008.
3. Dinesh K Srivastava, **Strategies for Performance Management**, Excel Books, New Delhi, 2005.



MASTER OF COMMERCE-THIRD SEMESTER
343- COMPENSATION MANAGEMENT
(for M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Introduction-** Concept of Compensation-Definition –Forms of Pay - Pay model – Strategy– Strategic Choices – Developing a Total Compensation Strategy – Sources of Competitive Advantage – Defining Internal Alignment-Factors influencing Internal Alignment – Designing Internal structures – External Competitiveness – Factors influencing External Competitiveness – Labour Market Factors, Organizational Factors.
- Unit-II:** **Evaluating Work** – Job Analysis – Structure based on Jobs – Job Analysis Procedure – Information Collection – Conventional Methods and Quantitative Methods – Judging Job Analysis – Reliability, Validity and Acceptability - Person based Structures – Skill Analysis – Types of Skills – Purposes of Skills - Competencies – Competency Analysis.
- Unit- III:** **Pay for Performance:** Linking Organization Strategy to Compensation and Performance – Total Reward System – Compensation and Motivation – Designing Pay-For-Performance Plan - Efficiency, Equity and Complaints – Specific Pay Performance Plans – Merit Pay, Lump sum Bonuses, Individual Incentive Plans – Team Incentive Plans – Team Compensation, Gain-Sharing Plans, Earnings –at-risk Plans – Advantages and disadvantages of Team Incentive Plans – Long Term Incentive Plans – Employee Stock Ownership Plans – Performance Plans – Broad-Based Option Plans.
- Unit-IV:** **Benefits Determination:** Employee benefits – Reasons for Growth in Employment, Employee Benefits – Key considerations in Benefit Determination – Benefit Planning, Design and Administration – Components of Wage and Benefit Structure – Basic Wage, Dearness Allowance and Allowances – Components of Benefit Plan – Employer Preferences and Employee Preferences – Statutory Benefits: Social Security Benefits – Accident Insurance Scheme, Sick Leave, House Building Allowance and Educational Allowances.
- Unit-V:** **Government and legal issues in Compensation:** Wage system in India – Macro Economic Considerations and Public Policy – Regulation of Wages - Regulation of Managerial Remuneration – Institutional Framework – Unilateral, Bipartite and Third Party Wage Fixations - National Wage Policy – Pay Structure – Pay Components- Methods of Payments – Wage Incentive Schemes – Individual and Group Payment by -Result Schemes, Time Rate Schemes - Contemporary issues in Wage System.

Suggested Readings

1. George T Milkovich, Jerry M Newman and CS Venkata Ratnam, **Compensation**, McGraw Hill Education, New Delhi, 2013.
2. Richard L Henderson, **Compensation Management in a Knowledge – Based World**, Tenth Edition, Pearson Prentice Hall, New Delhi, 2007.

References:

1. B D Singh, **Compensation and Reward Management**, Excel Books, New Delhi, 2007.
2. Martocchio and Joseph J, **Strategic Compensation**, Prentice Hall Incorporation, New Delhi, 1998.
3. Mousumi S Bhattacharya and Niranjana Sen Gupta, **Compensation Management**, Excel Books, New Delhi, 2009.



MASTER OF COMMERCE UNDER CBCS- FOURTH SEMESTER
(M.COM General – CBCS)

COMMON FOR ALL

- 401 - STRATEGIC MANAGEMENT
- 402 – INTERNATIONAL BUSINESS

A. SPECIALIZATION: ACCOUNTING AND FINANCE

- 411- FINANCIAL SERVICES MANAGEMENT
- 412- FINANCIAL DERIVATIVES
- 413 – STRATEGIC FINANCIAL MANAGEMENT

B. SPECIALIZATION: BANKING AND INSURANCE

- 421- FIRE AND MARINE INSURANCE
- 422- INSURANCE FINANCE AND ADMINISTRATION
- 423- BANKING OPERATIONS AND PROCEDURES

C. SPECIALIZATION: MARKETING

- 431- RETAIL MARKETING
- 432- GLOBAL MARKETING
- 433- SERVICES MARKETING

D. SPECIALIZATION: HUMAN RESOURCE MANAGEMENT

- 441- HUMAN RESOURCE DEVELOPMENT
- 442 - LEADERSHIP AND CHANGE
- 443 - STRATEGIC HUMAN RESOURCE MANAGEMENT



MASTER OF COMMERCE- FOURTH SEMESTER

401 – STRATEGIC MANAGEMENT

(Common for M.Com and M.Com Financial Accounting - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Introduction** – Concept of Strategic management – Characteristics of Strategic management – Significance of Strategic Management – Dimensions of Strategic management – Tasks of Strategic Management – Developing – Vision – Mission – Objectives – Goals – Elements in Strategic Management Process – Benefits of Strategic Management.
- Unit-II: Environmental and Organizational Appraisal.** : Concept and Characteristics of Environment – External and Internal Environment – Environmental Scanning – Factors Effecting Environmental Scanning – Organizational Capability – Factors Effecting Organizational Appraisal – Methods and Techniques used for Organizational Appraisal.
- Unit-III: Strategy Formulation:** Corporate Level: Grand strategies – Stability Strategy – Expansion Strategy – Retrenchment Strategy – Turnaround strategy – Combination Strategy – Business Level: Cost Leadership Strategy – Differentiation Strategy – Focus Strategy.
- Unit-IV: Strategy Implementation:** Project Implementation – Resource Allocation – Approaches of Resource Allocation – Structural Implementation – Types of Structures – Strategy and structure – Leadership implementation – Role of Leader – New paradigms of Leadership.
- Unit-V: Strategy Evaluation and Control:** Nature and Importance of Strategic evaluation – Participants of strategic evaluation and barriers in strategic evaluation – Evaluation Techniques for strategic control – Evaluation Techniques for Operational Control – Role of Organizational System in Evaluation.

Suggested Readings

1. Azhar Kazmi, **Strategic Management and Business Policy**, Tata McGraw Hill Company Limited, New Delhi, 2008.
2. Thomas L., Wheelen, J.David Hunger & Krish Rangarajan, **Concepts in Strategic Management and Business Policy**, Pearson Education, 2011.

References

1. Subba Rao, P, Business Policy and strategic Management, Himalaya Publishing House, Mumbai, 2003.
2. Vipin Gupta, Kamala and Srivasam R, **Business Policy and strategic Management**, Prentice Hall of India Private Limited, New Delhi, 2006.
3. Barney & Hesterly, **Strategic Management and Competitive Advantage Concepts**, Prentice Hall of India Private Limited, New Delhi, 2009.



MASTER OF COMMERCE- FOURTH SEMESTER
402 – INTERNATIONAL BUSINESS
(for M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Introduction:** International Business – Meaning – Different stages in International Business – Drivers for growth of International Business – Barriers and Problems – Theories of International Business – Modes of entry into International Business.
- Unit-II: International Business Environment:** Economic Environment – International Economic Reforms – Technological Environment – Socio-Cultural Environment – Political – Legal Environment – Recent Trends in International Business – Liberalization, Privatization, Marketization and Globalization.
- Unit-III: International Agencies, Agreements and Institutions:** Trade Blocks – GATT – GATS – WTO – Objectives, Functions and Organisation Structure – Objectives, Functions and Organizational Structure of IMF and World Bank – Impact of IMF and World Bank in Developing Countries.
- Unit-IV: Multi National Corporations (MNCs):** Definition and Concepts – Growth of MNCs – Advantages and Disadvantages to Home Countries and Host Countries – Organisation Structure of MNCs – Indian MNCs – Foreign Direct Investment – Recent Trends in FDI – FDI in India.
- Unit-V: International Business Management Operations:** International HR Strategies – Global Selection Process – Expatriates – training and Development – Compensation and Benefits – International Financial Management Strategies – Global Capital Structure – Foreign Exchange Markets – Convertibility – International risk Management – International Marketing Strategies – Globalization Markets and Demands, Pricing, Distribution and Promotion.

Suggested Readings

1. K Ashwathappa, **International Business**, Tata McGraw Hill Company Limited, New Delhi, 2006.
2. P Subba Rao, **International Business – Text & Cases**, Himalaya Publishing House, New Delhi, 2009.

References

1. Justin Paul, **International Business**, Prentice Hall of India Private Limited, New Delhi, 2008.
2. Manab Adhikary, **Global Business Management**, South -Western Cengage Learning, New Delhi, 2008.
3. Michael R Czinkota, Iikka A Ronakainen and Michael H Moffett, **International Business**, Cengage Learning, New Delhi, 2011.



MASTER OF COMMERCE- FOURTH SEMESTER
411- FINANCIAL SERVICES MANAGEMENT
(M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Financial Services:** Meaning, Features, and Scope of Financial Services; Classification of Financial Services - Traditional vs. Modern Activities - Fund-based vs. Fee-Based Financial Services; Role, Importance, and Growth of Financial Services; Problems and Prospects of Financial Services Sector in India.
- Unit-II:** **Merchant Banking:** Meaning, Origin and Growth, and Functions of Merchant Banking; Qualities and Services of Merchant Bankers; Code of Conduct of Merchant Bankers; SEBI Regulations of Merchant Banking; Problems and Prospects of Merchant Banking in India. **Credit Rating:** Definition and Meaning, Objectives and Methodology of Credit Rating; Benefits and Limitations of Credit Rating; Origin and Growth of Credit Rating in India; Credit Rating Agencies in India; SEBI Guidelines on Credit Rating.
- Unit- III:** **Mutual Funds:** Meaning, Origin and Growth, Organization and Types of Mutual Funds; Merits and Problems of Mutual Funds; Performance Evaluation of Mutual Funds and Concept of Net Asset Value; SEBI Guidelines on Mutual Funds; Problems and Prospects of Mutual Funds in India.
- Unit-IV:** **Venture Capital:** Concept, meaning, Features and Scope of Venture Capital Financing; Origin, Growth and Importance of Venture Capital Financing; SEBI Guidelines on Venture Capital; Venture Capital Financing in India. **Lease Financing:** Meaning, Features, and Types of Lease Financing; Merits and Demerits of Lease Financing; Lease vs. Buy and Lease vs. Hire-Purchase Decisions.
- Unit-V:** **Factoring:** Meaning, Modus Operandi, Functions, and Types of Factoring Services; Benefits and Costs of Factoring; Factoring Services in India. **Forfeiting:** Meaning and Importance of Forfeiting; Benefits and Costs of Forfeiting; Factoring Vs. Forfeiting; Forfeiting in India.

Suggested Readings

1. Khan M.Y., **Financial Services**, Tata McGraw Hill Education Private Limited, New Delhi, 2013.
2. Gordon and Natarajan, **Financial Markets and Services**, Himalaya Publishing House, Mumbai, 1996.

References:

1. Tripaty Nalini Prava, **Financial Services**, Prentice Hall of India, New Delhi, 2007.
2. Sashidharan K., & Alex K. Mathews, **Financial Services and System**, Tata McGraw Hill Education Private Limited, New Delhi, 2009.
3. Guruswamy S, **Financial Services**, Tata McGraw-Hill Education Private Limited, New Delhi.



MASTER OF COMMERCE- FOURTH SEMESTER
412- FINANCIAL DERIVATIVES
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **INTRODUCTION:** Concept of Risk – Risk Management System – Derivatives Evolution – Significance – Types of Derivatives – Financial and commodity Derivatives – Derivatives Markets – Players in Derivative Markets – Trading and settlement mechanism – Types of orders – Clearing House – Margins (Theory).
- Unit-II:** **FORWARD AND FUTURES CONTRACTS:** Features of Forward And Futures – Forward prices – Forward Rate Agreements – differences between Forward and Future contracts – Valuation of Forward & Futures contract – Cost of Carry Model – Stock Index Futures – Interest Rate Futures – Hedging – Reasons – Hedge Ratio – Trading Strategies – Conditions for Hedging application (Theory & Problems).
- Unit- III:** **OPTIONS CONTRACTS:** Features of Options – differences between Options and Futures – types of Options - Call and put Options – options trading – options pricing models – Binomial Model - Black - Scholes Model – Pay-offs from Options – In-the money – At-the money – Out of the money – Time Value and Intrinsic Value – (Theory & Problems).
- Unit-IV:** **FINANCIAL SWAPS:** Features of Swap contracts – Types of Financial Swaps – Structure and Trading Mechanism of Currency Swaps – Valuation and Pricing Methods – Risks relating to Swap Trading – Advantages and Disadvantages Swap Contracts (Theory only).
- Unit-V:** **REGULATORY FRAMEWORK:** Regulation to Risk Management Practices – Regulations for Clearing and settlements – Securities contracts (Regulation) Act. 1956 – SEBI Act. 1992 – Recommendations of L.C. Gupta committee – J.R. Varma Committee Report (Theory).

Suggested Readings

1. Vohra N.D., **Futures and Options**, Tata McGraw Hill Publishing Company Limited, New Delhi, 2010.
2. Jayant Rama Varma, **Derivatives and Risk Management**, Tata McGraw Hill Publishing Company Limited, New Delhi, 2009.

References:

1. Bishnupriya Mishra and Sathya Swaroop Debasish, **Financial Derivatives**, Excel Books, New Delhi, 2010.
2. Amuthan, **Financial Derivatives**, Himalaya Publishing House, New Delhi, 2010.
3. John C Hul, **Options, Futures and other Derivatives**, Pearson Education, New Delhi, 2009.
4. Read Head, **Futures and Options**, Prentice Hall of India, New Delhi, 2005.



MASTER OF COMMERCE- FOURTH SEMESTER
413 – STRATEGIC FINANCIAL MANAGEMENT
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

UNIT - I : Introduction

Introduction Strategic Financial Planning - Corporate Strategy for Growth - Regulatory Framework - Rights Issue - Value of Right - Initial Public Offer - Private Placement - Venture Capital.

UNIT - II : Capital Structure Planning

Estimating Financial Requirements - Understanding Debt – Debt Securitization - Syndicatisation - Debt Policy - Pecking Theory Hypothesis -EBIT-EPS Analysis Indifference Point – Levered Beta - Un-levered Beta (Simple Problems).

UNIT - III : Corporate Acquisitions

Types of Acquisitions - Mergers - Reasons - Merits and Demerits - Exchange Ratio - Dilution and Accretion of Earnings - Evaluation of Mergers and Takeovers - Consolidated Balance Sheet (Simple Problems).

UNIT - IV : Corporate Valuation

Approaches - Estimating Equity Free Cash Flows - Valuation based on EFCF - DCF - (Simple Problems) Value Based management - Economic Value Added Approach.

UNIT - V : Corporate Restructuring

Corporate Restructuring and Reengineering Changing Ownership - Spin-off - Split-off - Leveraged Buyout - Financial Restructuring - Buy Back of Shares - Problems in Implementing Corporate Restructuring Policies - (Theory only).

Suggested readings :

1. Prasanna Chandra - Financial Management, Tata McGrawhill Book Co. Ltd. 4th Edn.
2. Aswath Damodaran - Corporate Finance Wiley India 2nd Edn.
3. Shridan Titman, John DMartin, V. Ravi Anushuman - Valuation Analyzing Global Opportunities, Pearson Education 1st Edn.
4. Fred Weston, Kwang SC Hung, Susan E. Hoag Mergers - Restructuring and Corporate Control, Prentice Hall, India, 2007.

References

1. Sudhindra Bhat, **Financial Management**, 2nd Edition, Excel Books, 2008.
2. ASwath Damodaran, **Corporate Finance**, Wiley India, 2nd Edition, New Delhi, 2016.
3. J Fred Weston, Kevang SC hung and Susan E Moad Mergers, **Restructuring and Corporate Control**, Prentice Hall India, 2007.
4. R Srivastava, **Financial Management and Policy**, Himalaya Publishing House, 4th edition, 2009.



**MASTER OF COMMERCE- FOURTH SEMESTER
421- FIRE AND MARINE INSURANCE**

(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- UNIT – I:** Fire Insurance Contract: Origin of Fire Insurance; Its Nature, Risks, Hazards and Indemnity; Legal Basis, Stipulation and Conditions; Contracts; Full Disclosure of Material Facts; Inspection and Termination of Coverage.
- UNIT – II:** Fire Insurance Policies; Issue and Renewal Policies; Different kinds; Risks Covered; Recovery of claims; Insurer's option; - lix-gratia payment and subrogation; Policy conditions; Hazards not covered; contribution and average; Re-Insurance, double insurance and excess insurance. Types of fire protection policies.
- UNIT – III:** Marine Insurance Contract; origin and growth; History of Lloyds; Evaluation of marine insurance business in India; Basic Elements – insurable interest utmost good faith, implied warranties; Policy document; types of Marine Insurance Contract – freight, cargo and vessel; procedure for obtaining marine protection policy; Marine policies and conditions; Nature of Coastal Marine.
- UNIT – IV:** Marine Losses; Total loss, partial loss, particular average loss and general average loss, preparation of loss statement, payment of marine losses – requirement of insured, documents needed, procedure for presentation of claim; valuation of loss salvage; limits of liability; attachment and termination of risk.
- UNIT- V:** General Insurance Corporation and Other Insurance Institutions: working of GIC in India, types of risks assumed and specific policies issued by ECGC and private sector insurers.

Suggested Readings:

1. Mishra, M.N: Insurance – Principles & Practice, S. Chand & Co. Ltd., New Delhi
2. The Marine Insurance Act, 1963. Government of India
3. Vinayakam, N.M. Radhasamy and S.V. Vasudevan; Insurance – Principles and Practice, S.Chand & Co. Ltd. New Delhi.



**MASTER OF COMMERCE- FOURTH SEMESTER
422- INSURANCE FINANCE AND ADMINISTRATION**

(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- UNIT – I:** Introduction: Law of Probability; Forecast of future events; construction of morality tables; Morality tables for annuities.
- UNIT – II:** Premium Determination; Basic factors; Use of Morality tables in premium determination interest, compound interest functions; Net and Gross Premium; Mode of periodical premium payment; model of claim payment; benefit to be provided; mode of loading for expenses; gross premium- general considerations, insurers expenses; margin adjusting; premium for term insurance; temporary insurance; endowment insurance; level and natural premium plan; premium calculation for annuities, Life and other policies; elementary study of actuarial valuation.
- UNIT – III:** Reserves and Surplus; Nature, Origin and importance of reserves and funds in Life and Property insurance; retrospective and prospective reserve computation; statutory regulations of reserves; nature of surrender value, concept and calculation of surrender value; standard non forfeiture value; reduced paid up values; settlement options; automatic premium loan; Nature and source of insurance surplus; special form of surplus; distribution of surplus-extra dividend, residuary dividend; investment of surplus and reserves – basic principles. Investment policy of LIC and GIC in India as specific cases.
- UNIT – IV:** Administration; Present Administrative setup of GIC and LIC. Provident fund societies and other organisations doing insurance business; establishment and control of branches; machinery of decision making used by insurance organisations; statutory administrative provisions.
- UNIT- V:** Legislations; Detailed study of LIC of India Act, 1956. GIC of India Act 1976, Export Credit and Guarantee Corporation Act with particular reference to life fund, other insurance funds, annual and periodical valuation of surplus, bonus to anticipating policies; investment regulations; Agency rules; performance evaluation; a brief study of Indian insurance Act 1938; Role of IRDA of India.

Suggested Readings:

1. Mishra, M.N: Insurance – Principles & Practice, S. Chand & Co. Ltd., New Delhi
2. Study of LIC Act and Other relevant Acts and IRDA
3. Vinayakam, N.M. Radhasamy and S.V. Vasudevan; Insurance – Principles and Practice, S.Chand & Co. Ltd. New Delhi.
4. Sing S.P. Investment Pattern of LIC of India, Sahitya Bavan Agra.



**MASTER OF COMMERCE- FOURTH SEMESTER
423- BANKING OPERATIONS AND PROCEDURES**

(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- UNIT – I:** Commercial Banks in India – Leasing, Insurance, Brokering, Merchant Banking and Mutual Funds.
- UNIT – II:** Relationship between Banker and Customer; Definition of a customer; Relationship as a debtor and creditor; Banker as a trustee; obligation of banker – obligation to honour cheque; Garnishee order; attachment order issued by income-tax authorities; liabilities of banker in case of wrongful dishonour of cheque; obligation to maintain secrecy of accounts; bankers right of general lien, right of set- off, right of appropriation, right to charge interest, incidental charges, etc.
- UNIT – III:** Customers Account with a Bank; fixed deposit accounts, saving accounts, recurring deposit accounts and current accounts. Opening of current and saving accounts; operating the bank accounts; legal aspects; deposit scheme for Indians abroad; non- resident accounts scheme; foreign currency accounts scheme.
- UNIT – IV:** Special Types of Bank Customers; Minor – Legal Provisions regarding guardianship of a Minor; Married Women; Illiterate Person; Lunatic; Trustee; Executor; Administrator; Customers Attorney; Joint Accounts of Joint Hindu Family, Partnership, Joint Stock Companies, Club, Societies and Charitable institutes
- UNIT- V:** Law relating to Negotiable instruments.

Suggested Readings:

1. Gordon and Natrajan, Banking Theory Law and Practice, Himalaya Publishing House, Delhi.
2. Varshney, P.N. Banking Law and Practice, S.Chand & Co. Ltd. New Delhi
3. Tanna, M.L. Banking Law and Practice in India, Vol. I & II, India Law House, New Delhi.
4. Bare Acts regarding Negotiable instruments, Banking regulations, RBI, Banking Companies etc.



MASTER OF COMMERCE- FOURTH SEMESTER
431- RETAIL MARKETING
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Introduction:** Retailing - Importance of Retailing - Functions of Retailers - Classification of Retailers- Different Formats of Retailing - Organized and Unorganized Retailing–Retail Theories: Theory of Natural Section – Theory of Wheel – Accordion Theory – Retail Life Cycle theory - Growth Drivers of Retailing in India - Service Retailing- Recent trends in Retailing - Problems and Challenges of Retailing - E-Tailing.
- Unit-II: Retail Store Selection, Store Layout and Design:** Types of Store Locations -- Steps involved in Store Location- - Store Layout – Importance of Store Layout - Store Layout Key Considerations – Principles and Elements of Store Design - Important considerations in Store Selection and Design.
- Unit-III: Retail Merchandise Management:** Types of Merchandise - Product Range – Merchandise Procurement - Merchandise Assortment Plan- Category management- Retail Pricing - Factors effecting retail pricing - Different methods of retail pricing: Cost-Oriented – Demand – Oriented- Pricing Lining - Price Adjustments – Pricing Tactics - Margins.
- Unit-IV: Retail Human Resources & Promotion:** Concept of Human Resources Management in Retailing – Functions of Human Resources in Retail- Need - Importance – Steps in Human Resource Planning - Promotion Mix in Retailing - Need and Importance - Retail Promotion Mix Strategies.
- Unit-V: Retail Customer Behaviour and CRM:** Factors Influencing Buying Behaviour – Roles in Buying Decisions- Customers Buying Behaviour: Complex - Dissonance Reducing – Habitual - Variety Seeking. Buying Decision Process: Problem Recognition – Information Search- Evaluation - Buying Decision - Post Purchase Behaviour. Customer Retention - Customer Relationship Management in Retailing- Concept- Components - Importance- Process – Non-Store Retailing – Types-New Trends in IT Applications in Retailing.

Suggested Readings

1. Swapana Pradhan, **Retailing Management**, Tata McGraw Hill, New Delhi, 2009.
2. Suja Nair, **Retail Management**, Himalaya Publishing House, New Delhi, 2011.

References

1. Levy, Weitz and Pandit, **Retailing Management**, Tata McGraw Hill, New Delhi, 2010.
2. KVS Madan, **Fundamentals of Retailing**, Tata McGraw Hill Publishers, New Delhi, 2006.
3. G.Vedamani, **Retail Management**, Jaico Publishing House, New Delhi, 2004.



MASTER OF COMMERCE- FOURTH SEMESTER
432- GLOBAL MARKETING
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- Unit-I: Global Marketing:** Concepts - Key Concepts - Evolution of Global Marketing –Drivers of Globalization - Global Marketing Objectives - Theoretical Foundations - Country specific advantages - Firm Specific advantages - Rivalry between Global Competitors.
- Unit-II: Global Marketing Environment:** Meaning- Significance - Economic Environment - Political and Legal Environment - Cultural Environment- Analyzing Global Marketing Environment.
- Unit-III: Global Market Selection and Entry Strategies:** Assessing Global Market Opportunities - Country Attractiveness - Understanding Local Customers - Multinational Market Regions – Modes of Entry - Global Segmentation and Positioning - Global Mature Markets - Growth Markets - Emerging Markets.
- Unit-IV: Global Marketing Strategies:** Global Products and Services - Standardization Vs Localization - Global Product lines - Global brand Management – Global Pricing - Financial Issues - Transfer pricing - Counter Trade - Global Pricing Policies.
- Unit-V: Global Distribution & Promotion Strategies:** Promotion as Competitive advantage - Pros and Cons of Global Advertising - Global Advertisement Decisions - Global Sales Promotion - Direct Marketing - Global Personal Selling - Global distribution- Rationalization of Local Channels - Global logistics - Global Channel Design.

Readings

1. Jean Pierre Jeannette, H. David Hennessey: **Global Marketing Strategies**, Jaico Publishers, New Delhi, 2008.
2. Kotabe, Peloso, Gregory: **International Marketing - An Asia Pacific Focus**, Wiley Student Edition, 2009.

References

1. Johnny K. Johansson: **Global Marketing- Foreign Entry, Local Marketing and Global Management**, Tata McGraw Hill Pvt. Ltd, New Delhi, 2008.
2. Francis Cherunilam: **International Marketing**, Himalaya Publishing House, New Delhi, 2005.
3. P. K. Vasudeva: **International Marketing**, Excel Books, New Delhi, 2006.



MASTER OF COMMERCE- FOURTH SEMESTER
433- SERVICES MARKETING
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

- Unit-I: Conceptual Framework of Services:** Meaning - Nature and Scope – Components of Services – Classification-Characteristics of Services – Differences between Services and Goods - Need for emergence of Service Marketing - Problems and Opportunities of Service Marketing - Recent trends in Service Marketing.
- Unit-II: Services Marketing Mix:** Elements - Product: Concept and Levels – Product Decisions in Service Marketing - Pricing: Pricing Techniques – Service Promotion: Service Advertisement –Tools used in Service Promotion - Personal Selling- Publicity - Sales Promotion – Distribution – People-Physical Evidence – Process - Branding of Services.
- Unit-III: Marketing Strategies for Service Firms:** Managing differentiation - Service Quality - Components of Service Quality – Service Quality Gap – Measurement – Methods of Enhancing Service Quality – Bench Marking – Internal Performance Analysis – Specialist Market Research - Productivity, Support Services and Post Sales Services.
- Unit-IV: Marketing of Financial Services:** Financial Products - Characteristics – Typical Financial Products - Banking and Financial Institutions- Managing Customer Satisfaction – Marketing Strategies of Banking and Insurance Services.
- Unit-V: Marketing of Healthcare, Education and Tourism Services:** Need - Issues involved in marketing of Healthcare Services: Health Care Products – Characteristics – Categories of Services – Marketing Strategies - Education Services: Basis of Classification of Education Services - Marketing of Tourism Services – Tourism Products - Tourist Segments and their Characteristics - Tourism potential in India - Marketing Strategies for promoting tourism in India.

Suggested Readings

1. S. Shajahan, **Services Marketing- Concepts & Practices**, Himalaya Publishing House, New Delhi, 2009.
2. Govind Apte, **Service Marketing**, Oxford Publications, New Delhi, 2004.

References

1. Love Lock, Christopher, H, **Services Marketing**, Prentice Hall, Englewood Cliffs, N.J.1991.
2. Ravi Shankar, **Service Marketing**, Excel Books, New Delhi, 2008.
3. Venugopal, **Service Marketing**, Himalaya Publishing House, New Delhi, 2003.



MASTER OF COMMERCE- SECOND SEMESTER
441- HUMAN RESOURCE DEVELOPMENT
(For M Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I:** **Introduction** to Human Resource Development-Evolution of HRD-HRD Functions- Competencies of HR Professional- HRD Process: Need Assessment, Design, Implementation and Evaluation-Model of Employee Behavior- Internal and External influences on Employee Behavior -Learning and HRD- Learning and Instruction- Individual differences in the Learning Process- Learning Strategies and Styles
- Unit-II:** **Assessing HRD Needs**-Introduction-Strategic/Organizational Analysis- Task Analysis-Person Analysis – Prioritizing HRD Needs- **Designing HRD Programs**-Introduction- Definition of HRD Objectives- Selection of Trainer- Preparation of lesson Plan- Selecting Training Methods- Preparation of Training Material- Scheduling an HRD Program
- Unit- III:** **Implementing HRD Programs**- Introduction- Training Delivery Methods-On the Job Training Methods- Class Room Training Approaches- Discussion Method- Audiovisual Media- Experiential Methods- Computer Based Training – Arranging Physical Environment- **Evaluating HRD Programs**- Introduction-Purpose of Evaluation-Models and Framework of Evaluation- Kirkpatrick’s Evaluation Framework- Assessing impact of Technology on HRD Evaluation.
- Unit-IV:** **Employee Socialization**-Introduction-Fundamental concepts of Socialization- Perspectives on Socialization Process: Stage Model of Socialization, People Processing Tactics and Strategies-Realistic Job Preview- **Employee Orientation Programs** –Assessment and Determination of Content Orientation- Orientation Roles- Problems of Orientation Programs- Designing and implementing Orientation Programs- Evaluation of Orientation Programs
- Unit-V:** **Employee Counseling**-Introduction-Link between Counseling and Coaching- Employee Counseling Programs-Employee Assistance Programs- Stress Management Interventions **Career Management and Development**-Introduction - Stages of Life and Career Development – Models of Career Development –Process of Career Management – Roles in Career Management – Career Development Practices and Activities – Issues in Career Development.

Suggested Readings

1. Werner J M and Randy L De Simone, **Human Resource Development**, Cengage Learning, New Delhi, 2009.
2. T V Rao, **Human Resources Development – Experiences – Interventions Strategies**, Sage Publications, New Delhi, 2006.

References:

1. Topomay Deh, **Human Resource Management Theory & Practice**, Ane Books, New Delhi, 2009.
2. R Krishnaveni, **Human Resource Development a Researcher’s Perspective**, Excel Books, 2009.
3. Monica Belcourt and Kenneth J McBey, **Strategic Human Resource Planning**, Cengage Learning, UK, 2008.



MASTER OF COMMERCE- FOURTH SEMESTER
442 - LEADERSHIP AND CHANGE
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit I: Leadership Behaviour:** Leadership as a change agency: Situational Leadership Behaviour: Meaning, Fiedler Contingency Model, Path Goal and Normative Models - Emerging Leadership Behaviour: Transformational, Transactional and Visionary Leadership - Leadership for the new Millennium Organisations - Leadership in Indian Organisations. Leadership Effectiveness: Meaning, Reddins' 3-D Model, Hersey and Blanchard Situational Model, Driving Leadership Effectiveness, Leadership for Organisational Building.
- Unit II: Intra and Inter personal Leadership:** Intra-personal Leadership: Developing Self esteem within Leader – Believing followers – Strategies. Leaders Attitude: Meaning – Significance – Strategies for developing Attitude within Leaders. Leadership through Emotional Intelligence: Meaning – Significance – Approaches – Developing emotional intelligence for changing organization. Inter-personal Skills for Leadership: Understanding Human nature – Conversations – Appreciating - Accepting and criticizing.
- Unit III: Organisational Change:** Organisational Change: Meaning, Drivers, Types, Theories of Change: Life Cycle, Theological and Evolution theories - Diagnosing and Behavioural Management of Change: Resistance, Managing Resistance - Models of Change: Force-Field Analysis, Systems and the Continuous Change Process Model – Ethical Issues in Change.
- Unit IV: Change across Organisations:** Change in Work Process: JIT, Kaizen, BPR, KPO – HR Change: Issues and Challenges - Changes and HR initiatives in Global and Indian Context. Change through CRM: Strategies – Knowledge Management and Learning Organisations: Meaning, Objectives, Drivers and Process of KM, Elements, Process and Mechanism of Organisational Learning.
- Unit V: Leadership for Change:** Leadership in building Organisational Culture: Meaning – Dimensions - Managing and changing Organisational Culture. Leadership for Organisational Building: Approaches - Quality of Work Life - Cross Cultural Values - Developing Value Orientation in Behaviour for change. Changing through creativity - Leaders' Skills of Creativity – Creative process and Leadership – Promoting Creativity in Organizations.

Suggested Readings

1. Sengupta N, Bhattacharya S Mousumi and Sengupta R N, **Managing Change in Organizations**, New Delhi, Prentice Hall of India Learning Private Limited, 2006.
2. Sarma V S Veluri, **Organisational Behaviour - An Interactive Learning Approach (Text and Cases)**, Mumbai, Jaico Publishing House, New Delhi, 2009.

References:

1. Jerald Greenberg and Robert A Baron, **Behaviour in Organizations**, 9th Edition, PHI Learning Private Limited, New Delhi, 2015.
2. Radha R Sharma (2008), **Change Management – Concepts and Applications**, Tata McGraw Hill Publishing Company Limited, New Delhi, 2015.
3. Ian Palmer, Richard Dunford and Gib Akin, **Managing Organizational Change: A Multiple Perspectives Approach**, McGraw-Hill Higher Education, 2009, New York, 2009.



MASTER OF COMMERCE- FOURTH SEMESTER
443 - STRATEGIC HUMAN RESOURCE MANAGEMENT
(For M.Com - under CBCS)

Class Hours: 5 ppw

Credits: 5

-
- Unit-I: Strategic Human Resource Management:** Introduction – Strategic Human Resource – Change management and Strategic Human Resource Management - Challenges in Strategic Human Resource Management – impact of Technology – Human Resource issues and Challenges related to Technology – Work Force demographic Changes and Diversity - Models of Strategy – HR Practices corresponding to the Stages of Organizations life Cycle– Business Strategies and HR Competencies
- Unit-II: The Human Resource Environment:** Technology and Organisation Structure – Management trends – Demographic Trends – Work Force Diversity-Challenges and Changes in HRM - Changing Role of HR Manager - The Strategic role of HRP – Internal V/S External Deployment or Out Sourcing – Managerial Issues in Human Resource Planning
- Unit- III: Strategy Formulation and Implementation:** Importance of Human Resource to Strategy – Human Resource contributions to strategy – Strategy-driven role behaviors and practices – Efficient utilization of Human Resources – Dealing with employee shortages – Selection of employees – Dealing with employee surplus – Special implementation challenges.
- Unit-IV: Strategy Implementation – Career and Competency:** Career Planning Process – Designing effective Career Effective Systems – Strategic Knowledge Management Systems – The Human Resource Dimensions to Knowledge Management – Competency Mapping – Equity and Competency based Compensation
- Unit-V: Human Resource Evaluation:** Overview of Evaluation – Approaches to Evaluation - Prevalence of Evaluation – Evaluating Strategic Contributions of Traditional Areas – Evaluating Strategic Contributions in Emerging Areas – Macro level Evaluation of Human Resource Effectiveness

Suggested Readings

1. Tanuja Agarwal, **Strategic Human Resource Management**, Oxford Higher Education, New Delhi.
2. Charles R. Greer, **Strategic Human Resource Management – A General Managerial Approach**, Second Edition, Pearson Education, New Delhi, 2012.

References:

1. Jeffrey A. Mello, **Strategic Human Resource Management**, Second Edition, Thomson South-Western, New Delhi, 2014.
2. Gangaram Singh, R. Nandagopal and R.G. Priyadarshini, **Strategic Human Resource Management in a Global Economy**, Excel Books, 2007.
3. Dreher Dougherty, **Human Resource Strategy – A Behavioural perspective for the General Manager**, Tata McGraw Hill, 2007

DEPARTMENT OF ENGLISH
SATAVAHANA UNIVERSITY
Textbook – English for Communication – 2
[Published by Cambridge University Press India Pvt. Ltd]
Author: Prof G. Damodar

Second Year; from 2021-22 onwards
Semester III (for 4 Credits)
Semester IV (for 4 Credits)

Unit 7 (SHORT FICTION)	TEXT	'My Financial Career' by Stephen Leacock
	Reading comprehension	Bathukamma (for literal with five forms of questions)
	Vocabulary	Synonyms, Suffixes
	Communication skills	Listening, Barriers to listening
	Writing skills	Note-taking and Note-making
	Soft skills	Multitasking
Content Developer	S. Rajesh Kumar	SRRGASC, Karimnagar
Unit 8 (PROSE)	TEXT	'Student Mobs' by J. B. Priestly
	Reading comprehension	Dr Dasarathi (for re-organization with five forms of questions)
	Vocabulary	Short forms (Contractions)
	Communication skills	Speaking
	Writing skills	Summarizing, Précis writing
	Soft skills	Critical thinking skills
Content Developer	G. Ramakrishna	SRRGASC, Karimnagar
Unit 9 (POETRY)	TEXT	'Where the mind is Without Fear' by Rabindranath Tagore
	Reading comprehension	Dr N. Bhaskar (for inference with five forms of questions)
	Vocabulary	Words for diary writing
	Communication skills	Oral presentation
	Writing skills	Diarywriting, Notice writing
	Soft skills	Stress management
Content Developer	J. Uma Maheshwari	SRRGASC, Karimnagar

Unit 10 (SHORT FICTION)	TEXT	How I Taught My Grandmother to Read' by Sudha Narayana Murty
	Reading comprehension	The Godavari River (for prediction with five forms of questions)
	Vocabulary	Antonyms, Prefixes
	Communication skills	Describing places: Dulikatta Stupa / Kondagattu/ Nagunur fort and temples
	Writing skills	Composition: Lower Manair Dam, NTPC
	Soft skills	Interpersonal skills
Content Developer	G. Harikrishna	Dept of English, Satavahana University

Unit 11 (PROSE)	TEXT	'Indian Identity Is Forged in Diversity...' by Shashi Tharoor
	Reading comprehension	The Singareni Collieries (for personal response with five forms of questions)
	Vocabulary	One-word substitutes, Foreign words and phrases
	Communication skills	JAM (Just A Minute)
	Writing skills	Paragraph Writing – Writing lead lines for an event
	Soft skills	Motivational skills
Content Developer	Dr V. Pradeep Raj	Dept of English, Satavahana University
Unit 12 (POETRY)	TEXT	'The Lotus' by Toru Dutt
	Reading comprehension	The Nagoba Jatara (for evaluation with five forms of questions)
	Vocabulary	Minimal pairs
	Communication skills	Describing feelings
	Writing skills	Travelogue: Sivvaram Crocodile Sanctuary; Visit to Dr Jayashankar's village and Balasamudrum Park
	Soft skills	Time management
Content Developer	D. Vijay Prakash	Dept of English, Satavahana University

Semester Three (Second Year) Objective: to promote students' study skills

7. Note-taking and making, Cloze passages with the suggested words / Passages for Six Types of Comprehension with Five Forms of Questions (**for internal assessment**)
8. Precis-writing (a passage of 600 words to be written in columns by students)
9. Diary-writing (of daily / weekly / yearly activities, classes attended, things learnt, people met and lessons learnt from them, current views and opinions, thought for the day, importance of the day, etc), Notice-writing

Semester Four (Second Year) Objective: to enhance students' vocabulary

10. Antonyms and Synonyms (prefixes, suffixes, foreign words and phrases)
11. One-word substitutes / Idioms JAM Speeches (**for internal assessment**)
12. Minimal pairs (words often confused, misused, homophones, homographs, homonyms, etc)

Approved Syllabus
for
B.Sc. Computer Science



**Satavahana University,
Karimnagar**

Under Choice Based Credit System
2016

With Effect from the Academic Year 2016-2017

Syllabus for Computer Science

Proposed scheme for B.Sc. Programme under Choice Based Credit System

SYLLABUS for B.Sc Computer Science 2016-17

Programming in C (SEMESTER - I)

4 Hrs /week

Total Classes: 60

Unit-1:

Fundamentals of Computers: Computer Definition, Types of Computers, Block diagram of Computer (Memory, Input & Output Devices). Operating System: Definition, Types and Functions of Operating System. Introduction to DOS: Dos Internal and External Commands. Introduction to Windows: Desktop, File, Folder, My Computer, My Documents, Recycle bin, Internet Explorer and Windows Explorer. Programming Concepts: Algorithm and its characteristics, pseudo code / flow charts, program, compilers and interpreters.

Unit-2:

Introduction to C: Concept of Structured Programming, Implementation of Structured Programming, Introduction to the C Language – Background, C Programs, Identifiers, Types, Variables, Constants, Input / Output statements, Operators(Arithmetic, relational, logical, bitwise etc.), Expressions, Precedence and Associativity, Expression Evaluation, Type conversions, Statements - Selection Statements(making decisions) – if and switch statements, Repetition statements (loops)-while, for, do-while statements, Loop examples, other statements related to looping – break, continue, goto, Simple C Program examples. One-dimensional Arrays, Character arrays, Functions from ctype.h, string.h, Multidimensional Arrays.

Unit-3:

Functions-Designing Functions, user defined functions, inter function communication, Standard functions, Scope, Storage classes-auto, register, static, extern, scope rules, type qualifiers, recursion-recursive functions, Limitations of recursion, example C programs, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions. Pointers in C: Introduction, Address of Operator (&), Arrays and Pointers, Pointers and Strings, Pointer to Pointers, Array of Pointers, Pointer to Array, Dynamic Memory Allocation.

Unit-4:

User-defined Data Types(Structures & Union): Declaration, Initialization, Accessing members, Array of Structures , Structures Vs Unions, Enumeration Types. Files in C: Introduction, Using Files in C, Working with Text Files, Working with Binary Files, Random Access Files, Other File Management Functions. Command line arguments, Preprocessor commands.

Books Recommended

1. Computer Science: A Structured Programming Approach Using C, B.A.Forouzan and R.F. Gilberg, Third Edition, Cengage Learning.
2. Programming in C. P. Dey and M Ghosh , Oxford University Press.
3. Fundamentals of Computers - Reema Thareja , Oxford University Press.(UNIT-I)
4. Introduction to Computers - Peter Norton , Tata Mcgraw hill.(UNIT-I)

References

1. Programming in Ansi C by Bala guruswamy 7th edition Tata Mcgraw hill

2. Byron S. Gottfried, Theory and Problems of Programming with C Tata Mcgrawhill Publishing
3. Paul Deitel, Harvey Deitel, C How To Program
4. Herbert Schildt, The Complete Reference C
5. Brian W. Kernighan Dennis M. Ritchie, The C Programming Language

C - LAB

1. Write a program to find the largest two (three) numbers using if and conditional operator.
2. Write a program to print the reverse of a given number.
3. Write a program to print the prime number from 2 to n where n is given by user.
4. Write a program to find the roots of a quadratic equation using switch statement.
5. Write a C program to generate all the prime numbers between 1 and n, where n is a value supplied by the user.
6. WAP to print a triangle of stars as follows (take number of lines from user):

```

*
***
*****
*****
*****

```

7. Write a program to find largest and smallest elements in a given list of numbers.
8. Write a program to find the product of two matrices..
9. Write a program to find the GCD of two numbers using iteration and recursion.
10. Write a program to illustrate use of storage classes.
11. Write a program to demonstrate the call by value and the call by reference concepts.
12. Write a program that prints a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.
13. Write a program to illustrate use of data type enum.
14. Write a program to demonstrate use of string functions string.h header file.
15. Write a program that opens a file and counts the number of characters in a file.
16. Write a program to create a structure Student containing fields for Roll No., Name, Class, year and Total Marks. Create 10 students and store them in a file.
17. Write a program that opens an existing text file and copies it to a new text file with lowercase letters changed to capital letters and all other characters unchanged.
18. Write a C program to display the contents of a file.
19. Write a C program to merge two files into a third file (i.e., the contents of the first file followed by those of the second are put in the third file).
20. write a C Program to Store Information(name, roll and marks) of a Student Using Structure

Note: Write the Pseudo code and draw Flow Chart for the above Programs.

Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks for Windows 10.

Text Book

1. Programming in Ansi C by Bala guruswamy 7th edition Tata Mcgraw hill
2. Computer Science: A Structured Programming Approach Using C, B.A. Forouzan and R.F. Gilberg, Third Edition, Cengage Learning.

Object Oriented Programming in C++ (SEMETER - II)

4 Hrs /week

Total Classes: 60

Unit-1:

Introduction to OOP: Identifiers, variables, constants, data types- simple data types, floating data types, character data types, string data types, enumeration type, variables and constant declarations. Input and Output statements. Basic concepts of OOP, Benefits and applications of OOP, Objects and classes- instance variables, methods, inline functions, message passing, polymorphism, static and dynamic binding, inheritance, Function overloading, operator overloading.

Unit-2:

Classes: Introduction, Defining an Instance of a Class, Constructors, Passing Arguments to Constructors, Destructors, Overloading Constructors, Private Member Functions, Arrays of Objects, Abstract Array Data Types, Instance and Static Members, Friends of Classes, Member wise Assignment, Copy Constructors, Operator Overloading, Object Conversion, Aggregation Operators: types of operators, operator precedence, expressions, input using the extraction operator (>>) and cin, output using the insertion operator(<<) and cout, preprocessor directives, creating a C++ program. Branching statements (if and if ... else statement, switch, nested if, conditional operator, goto statement), looping statements (for, while and do-while), break and continue statement.

Unit-3:

Categories of functions (value returning functions, void functions, value versus reference parameters), recursion, local and global variables, static and automatic variables, one dimensional array, two dimensional array, character array, pointer data and pointer variables. Inheritance: Introduction, Protected Members and Class Access, Base Class Access Specification, Constructors and Destructors in Base and Derived Classes, Redefining Base Class Functions, Class Hierarchies, Polymorphism and Virtual Member Functions, Abstract Base Classes and Pure Virtual Functions, Multiple Inheritance. C++ Streams: Stream Classes, Unformatted I/O Operations, Formatted I/O Operations.

Unit-4:

Exceptions: Introduction, Throwing an Exception, Handling an Exception, Object-Oriented Exception Handling with Classes, Multiple Exceptions, Extracting Data from the Exception Class, Rethrowing an Exception, Handling the bad_alloc Exception. Templates: Function Templates-Introduction, Function Templates with Multiple Type, Overloading with Function Templates, Class Templates - Introduction, Defining Objects of the Class Template, Class Templates and Inheritance, Introduction to the STL.

Books Recommended

1. Object Oriented Programming With C++ 4th Edition By E balaguruswamy , Publisher, Tata McGraw-Hill Education 2008
2. Richard Johnson, An Introduction to Object-Oriented Application Development, Thomson Learning, 2006
3. B. Stroustrup, The C++ Programming Language, Addison Wesley, 2004.
4. Programming in c++ D.Ravichandran McGraw-Hill
5. Programming with ANSI C ++ by Bhushan Trivedi
6. Object Oriented Programming with c++ by Reema Thareja OXFORD

Reference books:

1. Introduction to Programming through c++ by Abhiram .G.Ranade.
2. Mastering C++.BY . K. R. Venugopal. Tata McGraw-Hill Publishing Company, 1997 - C++
3. Mastering c++ by Ravichandran

Object Oriented Programming in C++ Practical

2 Hrs/week

Total Practical: 29

Note: Out of the following experiments the student has to execute atleast 20 lab programs in the semester

1. WAP to print the sum and product of digits of an integer.
2. WAP to reverse a number.
3. WAP to compute the sum of the first n terms of the following series $S=1+1/2+1/3+1/4+.....$
4. WAP to compute the sum of the first n terms of the following series $S=1-2+3-4+5.....$
5. Write a function that checks whether a given string is palindrome or not. Use this function to find whether the string entered by user is palindrome or not.
6. Write a function to find whether a given no. is prime or not. Use the same to generate the prime numbers less than 100.
7. WAP to compute the factors of a given number.
8. Write a macro that swaps two numbers. WAP to use it.
9. WAP to print a triangle of stars as follows (take number of lines from user)

```
*
***
*****
*****
*****
```

10. WAP to perform following actions on an array entered by the user
 - i) Print the even-valued elements
 - ii) Print the odd-valued elements
 - iii) Calculate and print the sum and average of the elements of array
 - iv) Print the maximum and minimum element of array
 - v) Remove the duplicates from the array
 - vi) Print the array in reverse orderThe program should present a menu to the user and ask for one of the options. The menu should also include options to re-enter array and to quit the program.
11. WAP that prints a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.
12. Write a program that swaps two numbers using pointers.
13. Write a program in which a function is passed address of two variables and then alter its contents.
14. WAP which takes the radius of a circle as input from the user, passes it to another function that computes the area
15. WAP to find sum of n elements entered by the user. To write this program, allocate memory dynamically using malloc() / calloc() functions or new operator
16. Write a menu driven program to perform following operations on strings
 - a) Show address of each character in string
 - b) Concatenate two strings without using strcat function
 - c) Concatenate two strings using strcat function

- d) Compare two strings
 - e) Calculate length of the string (use pointers)
 - f) Convert all lowercase characters to uppercase
 - g) Convert all uppercase characters to lowercase
 - h) Calculate number of vowels
 - i) Reverse the string
17. Given two ordered arrays of integers, write a program to merge the two-arrays to get an ordered array.
 18. WAP to display Fibonacci series (i) using recursion (ii) using iteration
 19. WAP to calculate Factorial of a number (i) using recursion (ii) using iteration
 20. WAP to calculate GCD of two numbers (i) with recursion (ii) without recursion
 21. Create Matrix class using templates. Write a menu-driven program to perform following Matrix operations (2-D array implementation)
 - a) Sum
 - b) Difference
 - c) Product
 - d) Transpose
 22. Create a Person Class. Create some objects of this class (by taking information from the user). Inherit the class Person to create two classes Teacher and Student class. Maintain the respective information in the classes and create, display and delete objects of these two classes (Use Runtime Polymorphism)
 23. Create a class Triangle. Include overload functions for calculating area. Overload assignment operator and equality operator.
 24. Create a class Box containing length, breath and height. Include following methods in it.
 - a) Calculate surface area
 - b) Calculate Volume
 - c) Increment, Overload ++ operator (both prefix & postfix)
 - d) Decrement, Overload -- operator (both prefix & postfix)
 - e) Overload operator == (to check equality of two boxes), as a friend function
 - f) Overload Assignment operator
 - g) Check if it is a Cube or cuboid

Write a program which takes input from user for length, breath and height to test the above class.
 25. Create a structure Student containing fields for Roll No., Name, Class, Year and Total /marks. Create 10 students and store them in a file.
 26. WAP to retrieve the student information from file created in previous question and print it in following format: Roll No. Name /marks
 27. Copy the contents of one text file to another file, after removing all whitespaces.
 28. Write a function that reverses the elements of an array in place. The function must accept only one pointer value and return void.
 29. WAP that will read 10 integers from user and store them in an array. Implement array using pointers. The program will print the array elements in ascending and descending order.

References:

1. Object- Oriented Programming with ANSI & Turbo C++ - Ashok N. Kamthane Pearson Edition
2. Practical World of C++ - Sumitha Arora - Dhanpat Rai & Co
3. Object- Oriented Programming Using C++ - G.K. & G.S Baluja- Dhanpat Rai & Co
4. Mastering C++ - K.R. Venugopal
5. The C++ Programming Language - Bjarne Stroustrup

Syllabus for Computer Science

for B.Sc. Programme under Choice Based Credit System

B.Sc (Computer Science) – II year (III SEMESTER)

DSC-3C - Data Structures using JAVA

Theory: 4 credits (4 Hours/Week)

Practical: 1 credit (2 Hours/Week)

UNIT - I

Overview of Java, Java (JRE and JDK), Installation of java, Byte Code, Data Types & Variables, control statements, Operators, Classes and objects, Declaring classes, Class members, Interface and Enums. Object orientation, Encapsulation, Inheritance, Polymorphism, Strings, StringBuffer, . Exceptions, Exception Handling, Deadlock.

UNIT - II

Fundamental Concepts: Introduction to Data Structures, Types of Data Structures, Introduction to Algorithm, Pseudo code, Flow Chart, Analysis of Algorithms. Linear Data Structure Using Arrays: 1-D Arrays, 2-D Arrays, N-D Arrays, Memory representation and Address Calculation of 1-D, 2-D, N-D Arrays, Concept of ordered List, Pros and Cons of Arrays. Stacks: Concept, Primitive Operations, Abstract Data Type, Representation Stacks Using Arrays, Prefix, Infix, Postfix Notations for Arithmetic Expression, Applications of Stacks – Converting Infix Expression to Postfix Expression, Evaluating the Postfix Expression.

UNIT - III

Recursion: Introduction, Use of Stack in Recursion, Variants of Recursion, Execution of Recursive Calls, Recursive Functions, Iteration versus Recursion. Queues: Concept, Primitive Operations, Abstract Data Type, Representation Queues Using Arrays, Circular Queue Double Ended Queue, Applications of Queues. Linked Lists: Introduction, Concept, Terminology, Primitive Operations - creating, inserting, deleting, traversing, Representation of Linked Lists, Linked List Abstract Data Type, Linked List Variants Singly Linked List, Doubly linked List, Linear and Circular Linked List, Representation Stacks and Queues Using Linked Singly Lists, Application of Linked List.

UNIT - IV

Trees: Introduction, Representation of a General Tree, Binary Tree Introduction , Binary Tree Abstract Data Type, Implementation of Binary Trees, Binary Tree Traversals – preorder, inorder, postorder Traversals, Applications of Binary Trees Briefly. Graphs: Introduction, Graph Abstract Data Type, Representation of Graphs, Graph Traversal – Depth-First Search, Breadth-First Search, Spanning Tree –Prim's Algorithm, Kruskal's Algorithm. Searching and Sorting: Sequential (Linear) Search, Binary Search, Bubble Sort, Insertion Sort, Selection Sort, Quick Sort, Merge Sort,

and Comparison of Sorting Techniques. Heaps: Concept, Implementation, Heap Sort

Reference Books :

- E.Balaguruswamy, Programming with Java, A primer, 3e, TATA McGraw-Hill Company (2008).
- Robert Lafore, Data Structures & Algorithms in Java, Second Edition, Pearson Education(2008)
- John R. Hubbard, Programming with Java, Second Edition, Schaum"s outline Series, Tata McGrawhill (2007).
- Timothy Budd, Understanding Object Oriented Programming with Java, Pearson Education (2007).
- Adam Drozdek, Data Structures and Algorithms in Java, Second Edition, Cengage Learning(2008).
- John R. Hubbard, Anita Hurry, Data Structures with Java, Pearson Education (2008).
- Jana, Java and Object Oriented Programming Paradigm, PHI (2007).
- Deitel & Deitel. Java TM: How to Program, 7th Edition, PHI (2008).
- Samatha, Classic Data Structures, PHI (2005).

Data Structures using JAVA
(Programs for Practical Exam)

1. A program to demonstrate visibility control in Java
2. A program to demonstrate polymorphism in Java.
3. A Program to demonstrate Multilevel Inheritance
4. A program to demonstrate String and StringBuffer classes
5. A Program to demonstrate Exception Handling
6. A program to perform matrix multiplication
7. A program to implement stack ADT using array.
8. A program to convert infix expression to postfix expression
9. A program to evaluate postfix expression
10. A program to implement towers of Hanoi problem
11. A program to implement Queue ADT using Array
12. A program to create single linked list and perform insert, delete operations
13. A program to create double linked list and perform insert, delete operations
14. A program to implement circular queue using array method
15. A program to implement circular queue using linked list
16. A program to implement binary tree and its traversals
17. A program to implement merge sort
18. A program to implement quick sort
19. A program to implement Heap sort
20. A program to implement linear and binary search on strings

B.Sc(Computer Science) – II year(IV SEMESTER)

DSC-3D - Database Management System

Theory: 4 credits (4 Hours/Week)

Practical: 1 credit (2 Hours/Week)

Unit – I

Introduction to Databases: Introduction, Traditional File - Based Systems, Database Approach, Roles in the Database Environment, Advantages and Disadvantages of DBMSs, The Three - Level ANSI - SPARC Architecture, Database Languages, Data Models, Functions of a DBMS , Components of a DBMS Relational Model: Introduction, Terminology, Integrity Constraints, Views. The Relational Algebra : Unary Operations, Set Operations, Join Operations, Division Operation, Aggregation and Grouping Operations

Unit – II

Entity – Relationship Modeling : Entity Types , Relationship Types , Attributes , Keys , Strong and Weak Entity Types , Attributes on Relationships , Structural Constraints , Problems with ER Models – Fan Traps , Chasm Traps . Enhanced Entity – Relationship

Modeling : Specialization/Generalization , Aggregation , Composition . Functional – Dependencies: Anomalies, Partial Functional Dependency, Transitive Functional Dependency, Multi Value d Dependency, Join Dependency. Normalization: The Purpose of Normalization , How Normalization Supports Database Design , Data Redundancy and Update Anomalies , Functional Dependencies in brief, The Process of Normalization , 1NF , 2NF , 3NF , BCNF. The Database Design Methodology for Relational Databases (Appendix – D) .

Unit – III

SQL: Introduction, Data Manipulation–Simple Queries, Sorting Results, Using the SQL Aggregate Functions, Grouping Results, Sub - queries, ANY and ALL, Multi - table Queries, EXISTS and NOT EXIST, Combining Result Tables, Database Updates SQL: The ISO SQL Data Types, Integrity Enhancement Feature – Domain Constraints, Entity Integrity, Referential Integrity, General Constraints, Data definition – Creating a Database, Creating a Table, Changing a Table Definition, Removing a Table, Creating an Index, Removing an Index, Views – Creating a View , Removing a View, View Resolution, Restrictions on Views, View Updatability, WITH CHECK OPTION, Advantages and Disadvantages of Views, View Materialization, Transactions, Discretionary Access Control – Granting Privileges to Other Users , Revoking Privileges from Users Advanced SQL: The SQL Programming Language – Declarations, Assignments, Control Statements, Exceptions, Cursors, Subprograms, Stored Procedures, Functions, and Packages, Triggers, Recursion .

Unit - IV

Transaction Management : Transaction Support – Properties of Transactions , Database Architecture , Concurrency Control – The Need for Concurrency Control, Serializability and Recoverability , Locking Methods , Deadlock , Time Stamping Methods , Multi - version Timestamp Ordering , Optimistic Techniques , Granularity of Data Items , Database Recovery – The Need for Recovery , Transactions and Recovery , Recovery Facilities , Recovery Techniques , Nested Transaction Model . Security : Database Security – Threats , Computer - Based Controls – Authorization , Access Controls , Views , Backup and Recovery , Integrity , Encryption , RAID .

Text Book:

1. Thomas M. Connolly , Carolyn E. Begg , Database Systems – A Practical Approach to Design, Implementation, and Management (6e)

References

1. Sharon Allen, Evan Terry, Beginning Relational Data Modeling
2. Jeffrey A. Hoffer, V. Ramesh, Heikki Topi, Modern Database Management
3. Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems
4. Ramez Elmasri, Shamkant B. Navathe, Fundamentals of Database Systems
5. Abraham Silberschatz, Henry F. Korth, S. Sudarshan, Database System
6. Concepts C Coronel, S Morris, Peter Rob, Database Systems: Design, Implementation, and Management

Database Management Systems Lab

Consider the relational schema for part of the DreamHome case study is:

Branch (branchNo , street, city, postcode)

Staff (staffNo , fName, IName , position, sex, DOB, salary, branchNo)

PropertyForRent (propertyNo , street, city, postcode, type, rooms, rent, ownerNo, staffNo, branchNo)

Client (clientNo , fName, IName, telNo, prefType, maxRent, eMail)

PrivateOwner (ownerNo , fName, IName, address, telNo , eMail, password)

Viewing (clientNo , propertyNo , viewDate, comment)

Registration (clientNo , branchNo , staffNo, dateJoined)

NOTE : PKs and FKs underlined with continuous & dotted lines

1. Create a database with name "DreamHome" and now create all the tables listed above with constraints.
2. Insert a new row into the table supplying data for all columns.
3. Modify data in the database using UPDATE
4. Delete data from the database using DELETE
5. Changing a table definition using ALTER
6. Removing a table using DROP
7. Removing rows in table using TRUNCATE
8. Create an index and removing an index
9. Practice other standard SQL commands for creating, modifying, displaying data of tables.
10. List full details of all staff.
11. List all staff with a salary greater than £10000.
12. List the property numbers of all properties that have been viewed.
13. Produce a list of salaries for all staff, showing only the staffNo, fName, IName, and salary details.
14. List all cities where there is either a branch office or a property for rent.
15. List all cities where there is a branch office but no properties for rent.
16. List all cities where there is both a branch office and at least one property for rent.
17. List the names and comments of all clients who have viewed a property for rent.
18. Produce a status report on property viewings.
19. List complete details of all staff who work at the branch in Glasgow.
20. List the addresses of all branch offices in London or Glasgow
21. List all staff with a salary between £20,000 and £30,000.
22. Identify all clients who have viewed all properties with three rooms.
23. How many properties cost more than £350 per month to rent?

24. How many different properties were viewed in May 2013?
25. Find the total number of Managers and the sum of their salaries.
26. Find the minimum, maximum, and average staff salary.
27. Find the number of staff working in each branch and the sum of their salaries.
28. List all managers and supervisors.
29. Find all owners with the string 'Glasgow' in their address.
30. List the details of all viewings on property PG4 where a comment has not been supplied.
31. Produce a list of salaries for all staff, arranged in descending order of salary.
32. Produce an abbreviated list of properties arranged in order of property type.
33. Find the number of staff working in each branch and the sum of their salaries.
34. For each branch office with more than one member of staff, find the number of staff working in each branch and the sum of their salaries.
35. List the staff who work in the branch at '163 Main St'.
36. List all staff whose salary is greater than the average salary, and show by how much their salary is greater than the average.
37. List the properties that are handled by staff who work in the branch at '163 Main St'.
38. Find all staff whose salary is larger than the salary of at least one member of staff at branch B003.
39. Find all staff whose salary is larger than the salary of every member of staff at branch B003
40. List the names of all clients who have viewed a property, along with any comments supplied.
41. For each branch office, list the staff numbers and names of staff who manage properties and the properties that they manage.
42. For each branch, list the staff numbers and names of staff who manage properties, including the city in which the branch is located and the properties that the staff manage.
43. Find the number of properties handled by each staff member, along with the branch number of the member of staff.
44. List all branch offices and any properties that are in the same city.
45. List all properties and any branch offices that are in the same city.
46. List the branch offices and properties that are in the same city along with any unmatched branches or properties.
47. Find all staff who work in a London branch office.
48. Construct a list of all cities where there is either a branch office or a property.
49. Construct a list of all cities where there is both a branch office and a property.
50. Create a view so that the manager at branch B003 can see the details only for staff who work in his or her branch office.

51. Create a view of the staff details at branch B003 that excludes salary information, so that only managers can access the salary details for staff who work at their branch.
52. Create a view of staff who manage properties for rent, which includes the branch number they work at, their staff number, and the number of properties they manage.
53. Removing a view using DROP VIEW
54. Give the user with authorization identifier Manager all privileges on the Staff table.
55. Give users Personnel and Director the privileges SELECT and UPDATE on column salary of the Staff table.
56. Revoke the privilege SELECT on the Branch table from all users.
57. Revoke all privileges you have given to Director on the Staff table.
58. Demonstrate exceptions in PL/SQL
59. Demonstrate cursors in PL/SQL
60. Write PL/SQL queries to create procedures.
61. Write PL/SQL queries to create functions.
62. Write PL/SQL queries to create package.
63. Write PL/SQL queries to create triggers.
64. Write PL/SQL queries using recursion

Consider the relational schema for part of the Hotel case study is:

Hotel (hotelNo, hotelName, city)

Room(roomNo, hotelNo, type, price)

Booking(hotelNo, guestNo, dateFrom, dateTo, roomNo)

Guest(guestNo, guestName, guestAddress)

NOTE : PKs and FKs underlined with continuous & dotted lines

1. Create a database with name "Hotel" and now create all the tables listed above with constraints.
2. Insert a new row into the table supplying data for all columns.
3. Modify data in the database using UPDATE
4. Delete data from the database using DELETE
5. Changing a table definition using ALTER
6. Removing a table using DROP
7. Removing rows in table using TRUNCATE
8. Practice other standard SQL commands for creating, modifying, displaying data of tables.
9. List full details of all hotels.

10. List full details of all hotels in London.
11. List the names and addresses of all guests living in London, alphabetically ordered by name.
12. List all double or family rooms with a price below £40.00 per night, in ascending order of price.
13. List the bookings for which no dateTo –
14. has been specified.
15. How many hotels are there?
16. What is the average price of a room?
17. What is the total revenue per night from all double rooms?
18. How many different guests have made bookings for August?
19. List the price and type of all rooms at the Grosvenor Hotel.
20. List all guests currently staying at the Grosvenor Hotel.
21. List the details of all rooms at the Grosvenor Hotel, including the name of the guest staying in the room
22. What is the total income from bookings for the Grosvenor Hotel today?
23. List the rooms that are currently unoccupied at the Grosvenor Hotel.
24. What is the lost income from unoccupied rooms at the Grosvenor Hotel?
25. List the number of rooms in each hotel.
26. List the number of rooms in each hotel in London.
27. What is the average number of bookings for –
28. each hotel in August?
29. What is the most commonly booked room type for each hotel in London?
30. What is the lost income from unoccupied rooms at each hotel today?
31. Insert rows into each of these tables.
32. Update the price of all rooms by 5%.
33. Demonstrate that queries written using the UNION operator and same can be rewritten using the OR .
34. Apply the syntax for inserting data into a table.
35. Create a view containing the cheapest hotels in the world.
36. Create the Hotel table using the integrity enhancement features of SQL.

37. Create a database trigger for the following situations:
- (a) The price of all double rooms must be greater than £100.
 - (b) The price of double rooms must be greater than the price of the highest single room.
 - (c) A booking cannot be for a hotel room that is already booked for any of the specified dates.
 - (d) A guest cannot make two bookings with overlapping dates.
 - (e) Maintain an audit table with the names and addresses of all guests who make bookings for hotels in London (do not store duplicate guest details).

Given relation schemas are

Sailors (sid : integer , sname : string, rating : integer, age : real)

Boats (bid : integer , bname : string, color : string)

Reserves (sid : integer , bid : integer, day : date)

NOTE : PKs and FKs underlined with continuous & dotted lines

1. Find the names and ages of all sailors.
2. Find all sailors with a rating above 7.
3. Find the names of sailors who have reserved boat 103.
4. Find the sids of sailors who have reserved a red boat.
5. Find the names of sailors who have reserved a red boat.
6. Find the colors of boats reserved by Lubber.
7. Find the names of sailors who have reserved at least one boat.
8. Find the names of sailors who have reserved at least two boats.
9. Compute increments for the ratings of persons who have sailed two different boats on the same day.
10. Find the ages of sailors whose name begins and ends with B and has at least three characters.
11. Find the names of sailors who have reserved a red or a green boat.
12. Find the names of sailors who have reserved a red and a green boat.
13. Find the sids of all sailors who have reserved red boats but not green boats.
14. Find all sids of sailors who have a rating of 10 or have reserved boat 104.
15. Find the names of sailors who have not reserved a red boat.
16. Find sailors whose rating is better than some sailor called Horatio.
17. Find sailors whose rating is better than every sailor called Horatio.
18. Find the names of sailors who have reserved all boats.
19. Find the names of sailors who have reserved at least two boats.
20. Find the names of sailors who have reserved all boats called Interlake.

21. Find sailors who have reserved all red boats.
22. Find the sailor name, boat id, and reservation date for each reservation.
23. Find the sids of sailors with age over 20 who have not reserved a red boat.
24. Find the average age of all sailors.
25. Find the average age of sailors with a rating of 10.
26. Find the name and age of the oldest sailor.
27. Count the number of different sailor names.
28. Find the names of sailors who are older than the oldest sailor with a rating of 10.
29. Find the sailors with the highest rating.
30. Find the age of the youngest sailor for each rating level.
31. Find age of the youngest sailor who is eligible to vote for each rating level with at least 2 such sailors.
32. Find the average age of sailors for each rating level that has at least two sailors.
33. For each red boat, find the number of reservations for this boat.
34. Find the average age of sailors who are of voting age (i.e., at least 18 years old) for each rating level that has at least two sailors.
35. Delete the records of sailors who have rating 8 (deleting some rows in a table).
36. Loading data which is present in the text into the table.

Note : Recommended to use open source database software like MySQL, MongoDB, PostgreSQL , etc...

In practical examination, students have to

- Create database
- Create tables with their integrity constraints.
- Insert the data into tables and then execute the queries
- Answer any six queries from ten queries given by the examiner

Konay

Syllabus for Computer Science
For B.Sc Programme under Choice Based Credit System
B.Sc (Computer Science) – III year (V SEMESTER)

OPERATING SYSTEM (Core Subject)

Theory: 4 credits (4 Hours/Week)

Practical: 1 credit (2 Hours/week)

Unit I:

Introduction: Evolution of OS, Types of OS, Basic h/w support necessary for modern operating systems, services provided by OS, system programs and system calls.

Unit II:

Scheduling: Process concept, Process control block, Types of scheduler, Context switch, Multithreading model, Goals of scheduling and different scheduling algorithms, Examples of WINDOWS Server & LINUX.

Unit III:

Memory management: Contiguous allocation, Relocation, Paging, Segmentation, Demand paging, Page faults, Page replacement algorithms, working sets, Locality, Thrashing.

Unit IV:

Process cooperation and synchronization: Concurrency conditions, Critical section problem, software and hardware solution, Semaphores, conditional critical regions and monitors, Classical Inter process Communication Problems.

Deadlocks & Protection: Deadlock definition, Prevention, Avoidance, Detection and recovery.

Text Books:

1. Silberchatz and Galvin, Operating System concepts; 6th Edition; John Wiley and Sons, 2001.
2. Tanenbaum; Modern Operating Systems; 2nd Edition; PHI, 2001.

Reference Books:

1. Milan Milenkovic; Operating System; 2nd Edition; Tata McGraw Hill 1997.

LAB PRGORAMS

Note : The following programs can be implemented in C/C++.

1. A program to simulate the FCFS CPU scheduling algorithm
2. A program to simulate the SJF CPU scheduling algorithm
3. A program to simulate the priority CPU scheduling algorithm
4. A program to simulate the Round Robin CPU scheduling algorithm
5. A program to simulate the MVT.
6. A Program to simulate the MFT
7. A program to simulate the Bankers Algorithm for Deadlock Avoidance.
8. A program to simulate Bankers Algorithm for Deadlock Prevention.
9. A program to simulate FIFO Page Replacement Algorithm
10. A program to simulate LRU Page Replacement Algorithm

ELECTIVE – A - PROGRAMMING WITH PYTHON

Theory: 4 credits (4 Hours/Week)

Practical: 1 credit (2 Hours/week)

UNIT-I

INTRODUCTION TO PYTHON PROGRAMMING: How a Program Works, Using Python, Program Development Cycle, Input, Processing, and Output, Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations (Operators. Type conversions, Expressions), More about Data Output.

DECISION STRUCTURES AND BOOLEAN LOGIC: if, if-else, if-elif-else Statements, Nested Decision Structures, Comparing Strings, Logical Operators, Boolean Variables.

REPETITION STRUCTURES: Introduction, while loop, for loop, Calculating a Running Total, Input Validation Loops, Nested Loops.

UNIT – II

Functions: Introduction, Defining and Calling a Void Function, Designing a Program to Use Functions, Local Variables, Passing Arguments to Functions, Global Variables and Global Constants, Value-Returning Functions- Generating Random Numbers, Writing Our Own Value-Returning Functions, The math Module, Storing Functions in Modules.

FILE AND EXCEPTIONS: Introduction to File Input and Output, Using Loops to Process Files, Processing Records, Exceptions.

UNIT – III

LISTS AND TUPLES: Sequences, Introduction to Lists, List slicing, Finding Items in Lists with the in Operator, List Methods and Useful Built-in Functions, Copying Lists, Processing Lists, Two-Dimensional Lists, Tuples.

STRINGS: Basic String Operations, String Slicing, Testing, Searching, and Manipulating Strings.

DICTIONARIES AND SETS: Dictionaries, Sets, Serializing Objects.

RECURSION: Introduction, Problem Solving with Recursion, Examples of Recursive Algorithms.

UNIT – IV

OBJECT-ORIENTED PROGRAMMING: Procedural and Object-Oriented Programming, Classes, Working with Instances, Techniques for Designing Classes, Inheritance, Polymorphism.

GUI PROGRAMMING: Graphical User Interfaces, Using the tkinter Module, Display text with Label Widgets, Organizing Widgets with Frames, Button Widgets and Info Dialog Boxes, Getting Input with Entry Widget, Using Labels as Output Fields, Radio Buttons, Check Buttons.

TEXT BOOK

1. TONY GADDIS, STARTING OUT WITH PYTHON (3E)

REFERENCE BOOKS

1. KENNETH A. LAMBERT, FUNDAMENTALS OF PYTHON

2. JAMES PAYNE, BEGINNING PYTHON USING PYTHON 2.6 AND PYTHON 3

3. PAUL GRIES, PRACTICAL PROGRAMMING: AN INTRODUCTION TO COMPUTER SCIENCE USING PYTHON 3

4. CHARLES DIERACH, INTRODUCTION TO COMPUTER SCIENCE USING PYTHON

5. CLINTON W. BROWNLEY, FOUNDATIONS FOR ANALYTICS WITH PYTHON

LAB PROGRAMS

1. Write a program that displays the following information: Your name, Full address, Mobile number, College name, Course subjects.
2. Write a program to find the largest three integers using if-else and conditional operator.
3. Write a program with a loop that asks the user to enter a series of positive numbers. the user should enter a negative number to signal the end of the series. The program should display the numbers in order and their sum.
4. Write a program to find the product of two matrices $[A]_{m \times p}$ and $[B]_{p \times r}$
5. Write functions for the following:
 - a. To find GCD of two integers.
 - b. To find the factorial of positive integer
 - c. To print Fibonacci Sequence up to given number n
6. Write a program to display two random numbers that are to be added, such as: $247 + 129$, the program should allow the student to enter the answer. If the answer is correct, a message of congratulations should be displayed. If the answer is incorrect, a message showing the correct answer should be displayed.
7. Write recursive and non-recursive functions to display prime number from 2 to n.
8. Write a program that writes a series of random numbers to a file from 1 to n and display.
9. Write a program to create file, write the content and display the contents of the file with each line preceded with a line number (start with 1) followed by a colon.
10. In a program, write a function that accepts two arguments: a list and a number n. The function displays all of the numbers in the list that are greater than the number n.
11. Write a program with a function that accepts a string as an argument and returns the no. of vowels that the string contains. Another function to return no. of consonants.
- 12 Write a program that opens a specified text file and then displays a list of all the unique words found in the file. (Store each word as an element of a set.)
- 13 Write a program to analyze the contents of two text files using set operations.
14. Write a program to implement the inheritance and dynamic polymorphism.
15. Write a GUI program that converts Celsius temperatures to Fahrenheit temperatures.

ELECTIVE – B - PHP with MySQL

Theory: 4 credits (4 Hours/Week)

Practical: 1 credit (2 Hours/week)

Unit I

Introducing PHP – What is PHP? Why use PHP? Evolution of PHP, Installing PHP, Other ways to run PHP, Creating your first script.

PHP Language Basics – Using variables, Understanding Data Types, Operators and Expressions, Constants. Decisions and Loops – Making Decisions, Doing Repetitive Tasks with Looping, Mixing Decisions and Looping with HTML.

Unit II

Strings – Creating and Accessing Strings, Searching Strings, Replacing Text with Strings, Dealing with Upper and Lowercase, Formatting Strings. Arrays – Creating Arrays, Accessing Array Elements, Looping Through Arrays with for-each, Working with Multidimensional Arrays, Manipulating Arrays.

Functions – What is a Function? Why Functions are useful? Calling Functions, Working with Variable Functions, Writing your own Functions, Working with References, Writing Recursive Functions.

Unit III

Objects – Introduction OOP Concepts, Creating Classes and Objects in PHP, Creating and using Properties, Working with Methods, Object Overloading with `_get()`, `_set()` and `_call()`, Using Inheritance to Extend Power of Objects, Constructors and Destructors, Automatically Loading Class Files, Storing as Strings.

Handling HTML Forms with PHP – How HTML form works, Capturing Form Data with PHP, Dealing with Multi-Value Fields, Generating Web Forms with PHP, Storing PHP Variables in Forms, Creating File Upload Forms, Redirecting After a Form Submission.

Unit IV

Working with Files and Directories - Getting Information on Files, Opening and Closing Files, Reading and Writing to Files, Copying, Renaming, and Deleting Files, Working with Directories.

Introducing Databases and SQL – Deciding How to Store Data, Understanding Relational Databases, Setting Up MySQL, A Quick Play with MySQL, Connecting MySQL from PHP.

Retrieving Data from MySQL with PHP – Setting Up the Book Club Database, Retrieving Data with SELECT, Creating a Member Record Viewer. Manipulating MySQL Data with PHP – Inserting, Updating, and Deleting Records, Building a Member Registration Application.

Text Book:

Matt Doyle, Beginning PHP 5.3 (Wrox – Wiley Publishing)

References:

1. Ellie Quigley, PHP and MySQL by Example
2. Joel Murach, Ray Harris, Murach's PHP and MySQL
3. Brett McLaughlin, PHP & MySQL: The Missing Manual
4. Luke Welling, Laura Thomson, PHP and MySQL Web Development
5. W. Jason Gilmore, Beginning PHP and MySQL From Novice to Professional
6. Andrew Curioso, Ronald Bradford, Patrick Galbraith, Expert PHP and MySQL

PHP with MySQL Lab

Note:

- Programs of all the Concepts from Text Book including exercises must be practice and execute.
- Faculty must take care about UG Standard Programs.
- In the external lab examination student has to execute two programs with compilation and deployment steps are necessary.

1. Write a PHP script to find the factorial of a given number.
2. Write a PHP script to find the sum of digits of a given number.
3. Write a PHP script to find whether the given number is a prime or not.
4. Write a PHP script to demonstrate the use of break, continue statements using nested loops.
5. Write a PHP script to display the Fibonacci sequence with HTML page.
6. Write a PHP script to create a chess board.
7. Write a PHP script using built-in string function like strstr(), strpos(), substr_count(), etc...
8. Write a PHP script to transform a string to uppercase, lowercase letters, make a string's first Character uppercase.
9. Write a PHP script that inserts a new item in an array in any position.
10. Write a PHP function to check whether all array values are strings or not.
11. Write a PHP script to count number of elements in an array and display a range of array elements.
12. Write a PHP script to sort a multi-dimensional array set by a specific key.
13. Write a PHP script using a function to display the entered string in reverse.
14. Write a PHP script using function for sorting words in a block of text by length.
15. Write a PHP script for creating the Fibonacci sequence with recursive function.
16. Write a PHP script using pass by value and pass by reference mechanisms in functions.
17. Write a PHP script to demonstrate defining and using object properties.
18. Write a PHP script to demonstrate inheritance.
19. Write a PHP script to demonstrate the object overloading with _get(), _set(), and _call().
20. Write a PHP script to demonstrate the overloading property accesses with _get() and _set().
21. Write a PHP script to demonstrate the method overloading and method overriding mechanisms.
22. Write a PHP script to demonstrate the use of final classes and final methods.
23. Write a PHP script to demonstrate the use of interfaces.
24. Write a PHP script using constructors and destructors.
25. Write a PHP application to handling HTML forms with PHP script.
26. Write a PHP script to create a file, write data into file and display the file's data.
27. Write a PHP script to check and change file permissions, copying, renaming and deleting files.
28. Write a PHP application for connecting to MySQL and reading data from database table.
29. Write a PHP application for inserting, updating, deleting records in the database table.
30. Write a PHP application for student registration form.

TELANGANA STATE COUNCIL OF HIGHER EDUCATION

B.Sc. (Computer Science) Course Structure

(Common Core Syllabus for All Universities of Telanagana State for the Students Admitted from the Academic Year: 2019-20 Batch Onwards)

CBCS Pattern in Semester System – 2019

Paper	Semester	Course Title	Hours / week		Credits
			Theory	Practical	
DSC – I	I	Programming in C	4	3	4 + 1 = 5
DSC – II	II	Programming in C++	4	3	4 + 1 = 5
DSC – III	III	Data Structures Using C++	4	3	4 + 1 = 5
DSC – IV	IV	Data Base Management Systems (DBMS)	4	3	4 + 1 = 5
DSC – V	V	Programming in Java	4	3	4 + 1 = 5
DSC – VI	VI	Web Technologies	4	3	4 + 1 = 5

Paper	Semester	Course Title	Hours / week		Credits
			Theory	Practical	
SEC – I	III	Python – I	2		2
SEC – II	III	Operating Systems - I	2		2
SEC – III	IV	Python – II	2		2
SEC – IV	IV	Operating Systems - II	2		2

Paper	Semester	Course Title	Hours / week		Credits
			Theory	Practical	
AECC	I	Fundamentals of Computer	2		2
AECC	II	Office Automation	2		2

Paper	Semester	Course Title	Hours / week		Credits
			Theory	Practical	
GENERAL ELECTIVE (GE)	IV	Information Technologies	4		4

PROJECT / OPTINAL

Paper	Semester	Course Title	Hours / week		Credits
			Theory	Practical	
PROJECT / OPTINAL	VI	PHP with MYSQL	3	3	3 + 1 = 4

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 4+1 = 5 Credits

UNIT – I

Computer Fundamentals: Introduction of Computers, Classification of Computers, Anatomy of a Computer, Memory Hierarchy, Introduction to OS, Operational Overview of a CPU.

Program Fundamentals: Generation and Classification of Programming Languages, Compiling, Interpreting, Loading, Linking of a Program, Developing Program, Software Development.

Algorithms: Definitions, Different Ways of Stating Algorithms (Step-form, Pseudo-code, Flowchart), Strategy for Designing Algorithms, Structured Programming Concept.

Basics of C: Overview of C, Developing Programs in C, Parts of Simple C Program, Structure of a C Program, Comments, Program Statements, C Tokens, Keywords, Identifiers, Data Types, Variables, Constants, Operators and Expressions, Expression Evaluation–precedence and associativity, Type Conversions.

UNIT – II

Input-Output: Non-formatted and Formatted Input and Output Functions, Escape Sequences,

Control Statements: Selection Statements – if, if-else, nested if, nested if-else, comma operator, conditional operator, switch; Iterative Statements–while, for, do-while; Special Control Statement–goto, break, continue, return, exit.

Arrays and Strings: One-dimensional Arrays, Character Arrays, Functions from ctype.h, string.h, Multidimensional Arrays.

UNIT – III

Functions: Concept of Function, Using Functions, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions, Scope of Variables, Storage Classes, Inline Functions, and Recursion.

Pointers: Introduction, Address of Operator (&), Pointer, Uses of Pointers, Arrays and Pointers, Pointers and Strings, Pointers to Pointers, Array of Pointers, Pointer to Array, Dynamic Memory Allocation.

UNIT – IV

User-defined Data Types: Declaring a Structure (Union) and its members, Initialization Structure (Union), Accessing members of a Structure (Union), Array of Structures (Union), Structures versus Unions, Enumeration Types.

Files: Introduction, Using Files in C, Working with Text Files, Working with Binary Files, Files of Records, Random Access to Files of Records, Other File Management Functions.

Text Book: Pradip Dey, Manas Ghosh, Computer Fundamentals and Programming in C (2e)

Reference Books:

1. Ivor Horton, Beginning C
2. Ashok Kamthane, Programming in C
3. Herbert Schildt, The Complete Reference C
4. Paul Deitel, Harvey Deitel, C How To Program
5. Byron S. Gottfried, Theory and Problems of Programming with C
6. Brian W. Kernighan, Dennis M. Ritchie, The C Programming Language
7. B. A. Forouzan, R. F. Gilberg, A Structured Programming Approach Using C

C – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to find the largest two (three) numbers using if and conditional operator.
2. Write a program to print the reverse of a given number.
3. Write a program to print the prime number from 2 to n where n is given by user.
4. Write a program to find the roots of a quadratic equation using switch statement.
5. Write a program to print a triangle of stars as follows (take number of lines from user):

```
*
***
*****
*****
*****
```

6. Write a program to find largest and smallest elements in a given list of numbers.
7. Write a program to find the product of two matrices
8. Write a program to find the GCD of two numbers using iteration and recursion
9. Write a program to illustrate use of storage classes.
10. Write a program to demonstrate the call by value and the call by reference concepts
11. Write a program that prints a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.
12. Write a program to illustrate use of data type enum.
13. Write a program to demonstrate use of string functions string.h header file.
14. Write a program that opens a file and counts the number of characters in a file.
15. Write a program to create a structure Student containing fields for Roll No., Name, Class, Year and Total Marks. Create 10 students and store them in a file.
16. Write a program that opens an existing text file and copies it to a new text file with all lowercase letters changed to capital letters and all other characters unchanged.

Note:

1. Write the Pseudo Code and draw Flow Chart for the above programs.
2. Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks on Windows 10.

Programming in C++ (Semester – II)

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 4+1 = 5 Credits

UNIT – I

Introduction to C++: Applications, Example Programs, Tokens, Data Types, Operators, Expressions, Control Structures, Arrays, Strings, Pointers, Searching and Sorting Arrays.

Functions: Introduction, Prototype, Passing Data by Value, Reference Variables, Using Reference Variables as Parameters, Inline Functions, Default Arguments, Overloading Functions, Passing Arrays to Functions.

Object Oriented Programming: Procedural and Object-Oriented Programming, Terminology, Benefits, OOP Languages, and OOP Applications.

UNIT – II

Classes: Introduction, Defining an Instance of a Class, Why Have Private Members? Separating Class Specification from Implementation, Inline Member Functions, Constructors, Passing Arguments to Constructors, Destructors, Overloading Constructors, Private Member Functions, Arrays of Objects, Instance and Static Members, Friends of Classes, Member-wise Assignment, Copy Constructors, Operator Overloading, Object Conversion, Aggregation.

UNIT – III

Inheritance: Introduction, Protected Members and Class Access, Base Class Access Specification, Constructors and Destructors in Base and Derived Classes, Redefining Base Class Functions, Class Hierarchies, Polymorphism and Virtual Member Functions, Abstract Base Classes and Pure Virtual Functions, Multiple Inheritance.

C++ Streams: Stream Classes, Unformatted I/O Operations, Formatted I/O Operations.

UNIT – IV

Exceptions: Introduction, Throwing an Exception, Handling an Exception, Object-Oriented Exception Handling with Classes, Multiple Exceptions, Extracting Data from the Exception Class, Re-throwing an Exception, Handling the bad_alloc Exception.

Templates: Function Templates–Introduction, Function Templates with Multiple Type, Overloading with Function Templates, Class Templates – Introduction, Defining Objects of the Class Template, Class Templates and Inheritance, Introduction to the STL.

Text Book: Tony Gaddis, Starting out with C++: from control structures through objects (7e)

References:

1. B. Lippman, C++ Primer
2. Bruce Eckel, Thinking in C++
3. K.R. Venugopal, Mastering C++
4. Herbert Schildt, C++: The Complete Reference
5. Bjarne Stroustrup, The C++ Programming Language
6. Sourav Sahay, Object Oriented Programming with C++

C++ – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to print the sum of digits of a given number.
2. Write a program to check whether the given number is Armstrong or not
3. Write a program to print the prime number from 2 to n where n is natural number given.
4. Write a program to find largest and smallest elements in a given list of numbers and sort the given list.
5. Write a program to read the student name, roll no, marks and display the same using class and object.
6. Write a program to implement the dynamic memory allocation and de-allocation using new and delete operators using class and object.
7. Write a program to find area of a rectangle, circle, and square using constructors.
8. Write a program to implement copy constructor.
9. Write a program using friend functions and friend class
10. Write a program to implement default Constructor.
11. Write a program to implement parameterized Constructor
12. Write a program to implement Copy Constructor
13. Write a program to define the constructor inside/outside of the class
14. Write a program to implement all three constructors within a single class as well as use multiple classes(individual classes)
15. Write a program to implement the following concepts using class and object
 - a. Function overloading
 - b. Operator overloading (unary/binary(+ and -))
16. Write a program to demonstrate single inheritance, multilevel inheritance and multiple inheritances.
17. Write a program to implement the overloaded constructors in inheritance.
18. Write a program to implement the polymorphism and the following concepts using class and object.
 - a. Virtual functions
 - b. Pure virtual functions
19. Write a program to implement the virtual concepts for following concepts
 - a. Constructor (not applied)
 - b. Destructor (applied)
20. Write a program to demonstrate static polymorphism using method overloading.
21. Write a program to demonstrate dynamic polymorphism using method overriding and dynamic method dispatch.
22. Write a program to implement the template (generic) concepts
 - a. Without template class and object
 - b. With template class and object

Note:

1. Write the Pseudo Code and draw Flow Chart for the above programs.
2. Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks on Windows 10.

Data Structures using C++ (Semester – III)

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 4+1 = 5 Credits

UNIT – I

Basic data Structure: Introduction to Data Structures, Types of Data Structures, and Introduction to Algorithms, Pseudo code, and Relationship among data, data structures, and algorithms, Implementation of data structures, Analysis of Algorithms.

Stacks: Concept of Stacks and Queues, Stacks, Stack Abstract Data Type, Representation of Stacks Using Sequential Organization (Arrays), Multiple Stacks, Applications of Stack, Expression Evaluation and Conversion, Polish notation and expression conversion, Processing of Function Calls, Reversing a String with a Stack, Recursion.

UNIT – II

Recursion: Introduction, Recurrence, Use of Stack in Recursion, Variants of Recursion, Recursive Functions, Iteration versus Recursion.

Queues: Concept of Queues, Queue as Abstract Data Type, Realization of Queues Using Arrays, Circular Queue, Multi-queues, Dequeue, Priority Queue, Applications of Queues,

Linked Lists: Introduction, Linked List, Linked List Abstract Data Type, Linked List Variants, Doubly Linked List, Circular Linked List, Representation of Sparse Matrix Using Linked List, Linked Stack, Linked Queue.

UNIT – III

Trees: Introduction, Types of Trees, Binary Tree, Binary Tree Abstract Data Type, Realization of a Binary Tree, Insertion of a Node in Binary Tree, Binary Tree Traversal, Other Tree Operations, Binary Search Tree, Threaded Binary Tree, Applications of Binary Trees.

Searching and Sorting: Search Techniques-Linear Search, Binary Search, Sorting Techniques-Selection Sort, Bubble Sort, Insertion Sort, Merge Sort, Quick Sort, Comparison of All Sorting Methods, Search Trees: Symbol Table, Optimal Binary Search Tree, AVL Tree (Height-balanced Tree).

UNIT – IV

Graphs: Introduction, Representation of Graphs, Graph Traversal – Depth First Search, Breadth First Search, Spanning Tree, Prim’s Algorithm, Kruskal’s Algorithm.

Hashing: Introduction, Key Terms and Issues, Hash Functions, Collision Resolution Strategies, Hash Table Overflow, Extendible Hashing

Heaps: Basic Concepts, Implementation of Heap, Heap as Abstract Data Type, Heap Sort, Heap Applications.

Text Book:

1. Varsha H. Patil “Data structures using C++” Oxford University press, 2012
2. M.T. Goodrich, R. Tamassia and D. Mount, Data Structures and Algorithms in C++, John Wiley and Sons, Inc., 2011.

References:

1. Adam Drozdek “Data structures and algorithm in C++” Second edition, 2001
2. T.H. Cormen, C.E. Leiserson, R.L. Rivest and C. Stein, Introduction to Algorithms, 2nd Ed., Prentice-Hall of India, 2006.
3. Robert L. Kruse and A.J. Ryba, Data Structures and Program Design in C++, PrenticeHall, Inc., NJ, 1998.
4. B. Stroustrup, The C++ Programming Language, Addison Wesley, 2004
5. D.E. Knuth, Fundamental Algorithms (Vol. I), Addison Wesley, 1997

Data Structures using C++ – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write C++ programs to implement the following using an array
 - a) Stack ADT
 - b) Queue ADT
2. Write a C++ program to implement Circular queue using array.
3. Write C++ programs to implement the following using a single linked list.
 - a) Stack ADT
 - b) Queue ADT
4. Write a C++ program to implement Circular queue using Single linked list.
5. Write a C++ program to implement the double ended queue ADT using double linked list.
6. Write a C++ program to solve tower of Hanoi problem recursively
7. Write C++ program to perform the following operations:
 - a) Insert an element into a binary search tree.
 - b) Delete an element from binary search tree.
 - c) Search for a key in a binary search tree.
8. Write C++ programs for the implementation tree traversal technique BFS.
9. Write a C++ program that uses recursive functions to traverse a binary search tree.
 - a) Pre-order
 - b) In-order
 - c) Post-order
10. Write a C++ program to find height of a tree.
- 11 Write a C++ program to find MIN and MAX element of a BST.
- 12 Write a C++ program to find Inorder Successor of a given node.
13. Write C++ programs to perform the following operations on B-Trees and AVL Trees.
 - a) Insertion
 - b) Deletion
- 14 Write C++ programs for sorting a given list of elements in ascending order using the following sorting methods.
 - a) Quick sort
 - b) Merge sort
15. Write a C++ program to find optimal ordering of matrix multiplication.
16. Write a C++ program that uses dynamic programming algorithm to solve the optimal binary search tree problem
17. Write a C++ program to implement Hash Table
18. Write C++ programs to perform the following on Heap
 - a) Build Heap
 - b) Insertion
 - c) Deletion
19. Write C++ programs to perform following operations on Skip List
 - a) Insertion
 - b) Deletion
20. Write a C++ Program to Create a Graph using Adjacency Matrix Representation.
21. Write a C++ program to implement graph traversal techniques
 - a) BFS
 - b) DFS
22. Write a C++ program to Heap sort using tree structure.

Note:

- Programs of all the Concepts from Text Book including exercises must be practice and execute.
- In the external lab examination student has to execute two programs with compilation and deployment steps are necessary.
- External Vice-Voce is compulsory.

Data Base Management Systems (Semester – IV)

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 4+1 = 5 Credits

UNIT – I

Introduction: Database-System Applications, Purpose of Database Systems, View of Data, Database Languages, Relational Databases, Database Design, Data Storage and Querying, Transaction Management, Database Architecture, Database Users and Administrators.

Introduction to the Relational Model: Structure of Relational Databases, Database Schema, Keys, Schema Diagrams, Relational Query Languages, Relational Operations.

UNIT – II

Database Design and the E-R Model: Overview of the Design Process, The Entity- Relationship Model, Constraints, Removing Redundant Attributes in Entity Sets, Entity-Relationship Diagrams, Reduction to Relational Schemas, Entity-Relationship Design Issues, Extended E-R Features, Alternative Notations for Modeling Data, Other Aspects of Database Design.

Relational Database Design: Features of Good Relational Designs, Atomic Domains and First Normal Form, Decomposition Using Functional Dependencies, Functional- Dependency Theory, Decomposition Using Multivalued Dependencies, Normal Forms-2 NF, 3 NF, BCNF, The Database Design Methodology for Relational Databases.

UNIT – III

Introduction to SQL: Overview of the SQL Query Language, SQL Data Definition, Basic Structure of SQL Queries, Additional Basic Operations, Set Operations, Null Values, Aggregate Functions, Nested Subqueries, Modification of the Database.

Intermediate SQL: Join Expressions, Views, Transactions, Integrity Constraints, SQL Data Types and Schemas, Authorization.

Advanced SQL: Accessing SQL from a Programming Language, Functions and Procedures, Triggers, Recursive Queries.

UNIT – IV

Transaction Management: Transaction Support–Properties of Transactions, Database Architecture, Concurrency Control–The Need for Concurrency Control, Serializability and Recoverability, Locking Methods, Deadlock, Time Stamping Methods, Multi-version Timestamp Ordering, Optimistic Techniques, Granularity of Data Items, Database Recovery–The Need for Recovery, Transactions and Recovery, Recovery Facilities, Recovery Techniques, Nested Transaction Model.

Security: Database Security–Threats, Computer-Based Controls–Authorization, Access Controls, Views, Backup and Recovery, Integrity, Encryption, RAID.

Text book:

1. Silberschatz, H. Korth and S. Sudarshan, Database System Concepts, 6th Ed., Tata McGraw Hill, 2011
2. Thomas M. Connolly, Carolyn E. Begg, Database Systems–A Practical Approach to Design, Implementation, and Management (6e)

Data Base Management Systems – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Create a database having two tables with the specified fields, to computerize a library system of a University College.
LibraryBooks (Accession number, Title, Author, Department, PurchaseDate, Price),
IssuedBooks (Accession number, Borrower)
 - a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
 - b) Delete the record of book titled “Database System Concepts”.
 - c) Change the Department of the book titled “Discrete Maths” to “CS”.
 - d) List all books that belong to “CS” department.
 - e) List all books that belong to “CS” department and are written by author “Navathe”.
 - f) List all computer (Department=“CS”) that have been issued.
 - g) List all books which have a price less than 500 or purchased between “01/01/1999” and “01/01/2004”.

2. Create a database having three tables to store the details of students of Computer Department in your college.
Personal information about Student (College roll number, Name of student, Date of birth, Address, Marks(rounded off to whole number) in percentage at 10 + 2, Phone number)
Paper Details (Paper code, Name of the Paper)
Student’s Academic and Attendance details (College roll number, Paper Code, Attendance, Marks in home examination).
 - a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
 - b) Design a query that will return the records (from the second table) along with the name of student from the first table, related to students who have more than 75% attendance and more than 60% marks in paper2.
 - c) List all students who live in “Warangal” and have marks greater than 60 in paper1.
 - d) Find the total attendance and total marks obtained by each student.
 - e) List the name of student who has got the highest marks in paper2.

3. Create the following tables and answer the queries given below:
Customer (CustID, email, Name, Phone, ReferrerID)
Bicycle (BicycleID, DatePurchased, Color, CustID, ModelNo)
BicycleModel(ModelNo, Manufacturer, Style)
Service (StartDate, BicycleID, EndDate)
 - a) Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
 - b) List all the customers who have the bicycles manufactured by manufacturer “Honda”.
 - c) List the bicycles purchased by the customers who have been referred by Customer “C1”.
 - d) List the manufacturer of red colored bicycles.
 - e) List the models of the bicycles given for service.

4. Create the following tables, enter at least 5 records in each table and answer the queries given below.
Employee (Person_Name, Street, City)
Works (Person_Name, Company_Name, Salary)
Company (Company_Name, City)
Manages (Person_Name, Manager_Name)

- a) Identify primary and foreign keys.
 - b) Alter table employee, add a column “email” of type varchar(20).
 - c) Find the name of all managers who work for both Samba Bank and NCB Bank.
 - d) Find the names, street address and cities of residence and salary of all employees who work for “Samba Bank” and earn more than \$10,000.
 - e) Find the names of all employees who live in the same city as the company for which they work.
 - f) Find the highest salary, lowest salary and average salary paid by each company.
 - g) Find the sum of salary and number of employees in each company.
 - h) Find the name of the company that pays highest salary.
5. Create the following tables, enter at least 5 records in each table and answer the queries given below.
- Suppliers (SNo, Sname, Status, SCity)
Parts (PNo, Pname, Colour, Weight, City)
Project (JNo, Jname, Jcity)
Shipment (Sno, Pno, Jno, Qunatity)
- a) Identify primary and foreign keys.
 - b) Get supplier numbers for suppliers in Paris with status>20.
 - c) Get suppliers details for suppliers who supply part P2. Display the supplier list in increasing order of supplier numbers.
 - d) Get suppliers names for suppliers who do not supply part P2.
 - e) For each shipment get full shipment details, including total shipment weights.
 - f) Get all the shipments where the quantity is in the range 300 to 750 inclusive.
 - g) Get part nos. for parts that either weigh more than 16 pounds or are supplied by suppliers S2, or both.
 - h) Get the names of cities that store more than five red parts.
 - i) Get full details of parts supplied by a supplier in Hyderabad.
 - j) Get part numbers for part supplied by a supplier in Warangal to a project in Chennai.
 - k) Get the total number of project supplied by a supplier (say, S1).
 - l) Get the total quantity of a part (say, P1) supplied by a supplier (say, S1).
6. Write a PL/SQL Program to demonstrate Procedure.
 7. Write a PL/SQL Program to demonstrate Function.
 8. Write a PL/SQL program to Handle Exceptions.
 9. Write a PL/SQL Program to perform a set of DML Operations.
 10. Create a View using PL/SQL program.
 11. Write a PL/SQL Program on Statement Level Trigger.
 12. Write a PL/SQL Program on Row Level Trigger.

Note:

- Programs of all the Concepts from Text Book including exercises must be practice and execute.
- In the external lab examination student has to execute two programs with compilation and deployment steps are necessary.
- External Vice-Voce is compulsory.

Programming in Java (Semester – V)

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 4+1 = 5 Credits

UNIT - I

Introduction: Java Essentials, JVM, Java Features, Creation and Execution of Programs, Data Types, Structure of Java Program, Type Casting, Conditional Statements, Loops, Classes, Objects, Class Declaration, Creating Objects.

UNIT - II

Method Declaration and Invocation, Method Overloading, Constructors – Parameterized Constructors, Constructor Overloading, Cleaning-up unused Objects. Class Variables & Method-static Keyword, this Keyword, One-Dimensional Arrays, Two-Dimensional Arrays, Command-Line Arguments, Inner Class.

Inheritance: Introduction, Types of Inheritance, extends Keyword, Examples, Method Overriding, super, final Keyword, Abstract classes, Interfaces, Abstract Classes Verses Interfaces.

Packages: Creating and Using Packages, Access Protection, Wrapper Classes, String Class, StringBuffer Class.

UNIT - III

Exception: Introduction, Types, Exception Handling Techniques, User-Defined Exception.

Multithreading: Introduction, Main Thread and Creation of New Threads –By Inheriting the Thread Class or Implementing the Runnable Interface, Thread Lifecycle, Thread Priority and Synchronization.

Input/Output: Introduction, java.io Package, File Streams, FileInputStream Class, FileOutputStream Class, Scanner Class, BufferedInputStream Class, BufferedOutputStream Class, RandomAccessFile Class.

UNIT - IV

Applets: Introduction, Example, Life Cycle, Applet Class, Common Methods Used in Displaying the Output (Graphics Class).

Event Handling: Introduction, Types of Events, Example.

AWT: Introduction, Components, Containers, Button, Label, Checkbox, Radio Buttons, Container Class, Layouts.

Swings: Introduction, Differences between Swing and AWT, JFrame, JApplet, JPanel, Components in Swings, Layout Managers, JTable.

Text Book:

1. Sachin Malhotra, SaurabhChoudhary, Programming in Java (2e)

References:

1. Bruce Eckel, Thinking in Java (4e)
2. Herbert Schildt, Java: The Complete Reference (9e)
3. Y. Daniel Liang, Introduction to Java Programming (10e)
4. Paul Deitel, Harvey Deitel, Java: How To Program (10e)
5. Cay S. Horstmann, Core Java Volume I –Fundamentals (10e)

Programming in Java – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to find the largest of n natural numbers.
2. Write a program to find whether a given number is prime or not.
3. Write a menu driven program for following:
 - a. Display a Fibonacci series
 - b. Compute Factorial of a number
4. Write a program to check whether a given number is odd or even.
5. Write a program to check whether a given string is palindrome or not.
6. Write a program to print the sum and product of digits of an Integer and reverse the Integer.
7. Write a program to create an array of 10 integers. Accept values from the user in that Array. Input another number from the user and find out how many numbers are equal to the number passed, how many are greater and how many are less than the number passed.
8. Write a program that will prompt the user for a list of 5 prices. Compute the average of the prices and find out all the prices that are higher than the calculated average.
9. Write a program in java to input N numbers in an array and print out the Armstrong numbers from the set.
10. Write java program for the following matrix operations:
 - a. Addition of two matrices
 - b. Transpose of a matrix
11. Write a java program that computes the area of a circle, rectangle and a Cylinder using function overloading.
12. Write a Java program for the implementation of multiple inheritance using interfaces to calculate the area of a rectangle and triangle.
13. Write a java program to create a frame window in an Applet. Display your name, address and qualification in the frame window.
14. Write a java program to draw a line between two coordinates in a window.
15. Write a java program to display the following graphics in an applet window.
 - a. Rectangles
 - b. Circles
 - c. Ellipses
 - d. Arcs
 - e. Polygons
16. Write a program that reads two integer numbers for the variables a and b. If any other character except number (0-9) is entered then the error is caught by NumberFormatException object. After that ex.getMessage () prints the information about the error occurring causes.
17. Write a program for the following string operations:
 - a. Compare two strings
 - b. concatenate two strings
 - c. Compute length of a string
18. Create a class called Fraction that can be used to represent the ratio of two integers. Include appropriate constructors and methods. If the denominator becomes zero, throw and handle an exception.

Note:

- Programs of all the Concepts from Text Book including exercises must be practice and execute.
- In the external lab examination student has to execute two programs with compilation and deployment steps are necessary.
- External Vice-Voce is compulsory.

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 4+1 = 5 Credits

UNIT – I

Introduction To XHTML: Introduction, first HTML, Headings, Linking, Images, special characters and horizontal rules, Lists, Tables, Frames, Forms, internal linking, meta Elements. CASCADING STYLE SHEETS – Introduction, Inline Styles, Embedded Style Sheets, Conflicting Styles, Linking external sheets, position Elements, box model and text flow, media types, building a CSS drop-down menu, user style sheets, CSS3.

UNIT – II

Introduction To Java Scripting: Introduction, simple program, prompt dialog and alert boxes, memory concepts, operators, decision making, control structures, if... else statement, while, counter-controlled repetitions, switch statement, do... while statement, *break* and *continue* statements. Functions – program modules in JavaScript, programmer-defined functions, functions definition, scope rules, global functions, Recursion.

UNIT – III

Arrays: Introduction, declaring and allocating arrays, references and reference parameters, passing arrays to functions. Multidimensional arrays, **EVENTS**—registering event handling, event onload, onmouseover, onmouseout, onfocus, onblur, onsubmit, onreset, event bubbling, more events. **JAVA SCRIPT OBJECTS** – introduction to object technology, Math Object, String Object, Date Object, Boolean and Number Object, document and window Objects, using cookies.

UNIT – IV

XML : Introduction, XML Basics, Structuring Data, XML Namespaces, Document Type Definitions (DTDs), W3C XML Schema Documents, XML Vocabularies, Extensible Style sheet Language and XSL Transformations, Document Object Model (DOM).

Ajax-Enabled Rich Internet Applications: introduction, history of Ajax, traditional web applications Vs Ajax Applications, RIAs with Ajax, Ajax example using XMLHttpRequest object, XML and DOM, creating full scale Ajax-enabled application, Dojo Toolkit.

Text Book:

1. Internet & World Wide Web: HOW TO PROGRAM- H. M. Deitel, P.J. Deitel, -Fourth Edition- Pearson edition.

Web Technologies – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a HTML program using basic text formatting tags, <p>,
, <pre>.
2. Write a HTML program by using text formatting tags.
3. Write a HTML program using presentational element tags , <i>, <strike>, <sup>, <sub>, <big>, <small>, <hr>
4. Write a HTML program using phrase element tags <blockquote>, <cite>, <abbr>, <acronym>, <kbd>, <address>
5. Write a HTML program using different list types.
6. Create a HTML page that displays ingredients and instructions to prepare a recipe.
7. Write a HTML program using grouping elements <div> and .
8. Write a HTML Menu page for Example cafe site.
9. Write a HTML program using images, audios, videos.
10. Write a HTML program to create your time table.
11. Write a HTML program to create a form using text inputs, password inputs, multiple line text input, buttons, check boxes, radio buttons, select boxes, file select boxes.
12. Write a HTML program to create frames and links between frames.
13. Write a HTML program to create different types of style sheets.
14. Write a HTML program to create CSS on links, lists, tables and generated content.
15. Write a HTML program to create your college web site using multi column layouts.
16. Write a HTML program to create your college web site using for mobile device.
17. Write a HTML program to create login form and verify username and password.
18. Write a JavaScript program to calculate area of rectangle using function.
19. Write a JavaScript program to wish good morning, good afternoon, good evening depending on the current time.
20. Write a JavaScript program using switch case?
21. Write a JavaScript program to print multiplication table of given number using loop.
22. Write a JavaScript programs using any 5 events.
23. Write a JavaScript program using JavaScript built in objects.
24. Write a JavaScript program to create registration Form with Validations.
25. Write a XML Program to represent Student Data using DTD.
26. Write a XML Program to represent Data using XML Schema Definition.

Fundamental of Computers (Semester – I)

Theory: 2 Hrs/Wk

AECC

Total Credits: 2 Credits

UNIT-I

Introduction to Computers: what is a computer, characteristics of Computers, Generations of Computers, Classifications of Computers, Basic Computer organization, Applications of Computers. Input and Output Devices: Input devices, Output devices, Softcopy devices, Hard copy devices. Computer Memory and Processors: Introduction, Memory Hierarchy, Processor, Registers, Cache memory, primary memory, secondary storage devices, magnetic tapes, floppy disks, hard disks, optical drives, USB flash drivers, Memory cards, Mass storage devices, Basic processors architecture.

UNIT-II

Number System and Computer Codes: Binary number system, working with binary numbers, octal number system, hexadecimal number system, working with fractions, signed number representation in binary form, BCD code, other codes. Boolean algebra and logic gates: Boolean algebra, Venn diagrams, representation of Boolean functions, logic gates, logic diagrams and Boolean expressions using karnaugh map. Computer Software: Introduction to computer software, classification of computer software, system software, application software, firmware, middleware, acquiring computer software, design and implementation of correct, efficient and maintainable programs.

Text Book:

Reema Thareja, Fundamentals of Computers.

References:

1. V.Rajaraman, 6th Edition Fundamentals of Computers, Neeharika Adabala.
2. Anita Goel, Computer Fundamentals.

Office Automation (Semester – II)

Theory: 2 Hrs/Wk

AECC

Total Credits: 2 Credits

UNIT-I

MS-Office: Introduction to MS-Office, MS-Word: Word Basics, working with formatted text, Shortcut keys, Formatting documents: Selecting text, Copying & moving data, Formatting characters, changing cases, Paragraph formatting, Indents, Drop Caps, Using format painter, Page formatting, Header & footer, Bullets & numbering, Tabs, Forming tables. Finding & replacing text, go to (F5) command, proofing text (Spell check, Auto correct), Reversing actions, Macros, Inserting pictures, Hyperlinks, Mail merging, Printing documents.

UNIT-II

Spreadsheets, workbooks, creating, saving & editing a workbook, Renaming sheet, cell entries (numbers, labels, and formulas), spell check, find and replace, Adding and deleting rows and columns Filling series, fill with drag, data sort, Formatting worksheet, Functions and its parts, Some useful Functions in excel (SUM, AVERAGE, COUNT, MAX, MIN, IF), Cell referencing (Relative, Absolute, Mixed), What-if analysis Introduction to charts: types of charts, creation of charts, printing a chart, printing worksheet.

Presentation Software, Uses, Presentation tips, components of slide, templates and wizards, using template, choosing an auto layout, using outlines, adding subheadings, editing text, formatting text, using master slide, adding slides, changing color scheme, changing background and shading, adding header and footer, adding clip arts and auto shapes. Various presentation, Working in slide sorter view (deleting, duplicating, rearranging slides), adding transition and animations to slide show, inserting music or sound on a slide, viewing slide show, Printing slides.

Text Book:

1. Computer Fundamentals – P.K. Sinha.
2. Introduction to Computers – N. Subramanian.
3. Introduction to Computers – Peter Norton Mcgraw Hill.
4. Fundamentals of Computers, by RemaTharaja, Oxford University Press India, 2014.
5. MS–Office _ BPB Publications.

Python - I (Semester – III)

Theory: 2 Hrs/Wk

SEC – I

Total Credits: 2 Credits

UNIT – I

Introduction to Python Programming: How a Program Works, Using Python, Program Development Cycle, Input, Processing, and Output, Displaying Output with the Print Function, Comments, Variables, Reading Input from the Keyboard, Performing Calculations (Operators. Type conversions, Expressions), More about Data Output. Decision Structures and Boolean Logic: if, if-else, if-elif-else Statements, Nested Decision Structures, Comparing Strings, Logical Operators, Boolean Variables. Repetition Structures: Introduction, while loop, for loop, Calculating a Running Total, Input Validation Loops, Nested Loops.

UNIT – II

Functions: Introduction, Defining and Calling a Void Function, Designing a Program to Use Functions, Local Variables, Passing Arguments to Functions, Global Variables and Global Constants, Value-Returning Functions- Generating Random Numbers, Writing Our Own Value-Returning Functions, The math Module, Storing Functions in Modules. File and Exceptions: Introduction to File Input and Output, Using Loops to Process Files, Processing Records, Exceptions.

Text Book:

Tony Gaddis, Starting Out With Python (3e)

References:

1. Kenneth A. Lambert, Fundamentals of Python
2. Clinton W. Brownley, Foundations for Analytics with Python
3. James Payne, Beginning Python using Python 2.6 and Python 3
4. Charles Dierach, Introduction to Computer Science using Python
5. Paul Gries, Practical Programming: An Introduction to Computer Science using Python 3

Operating Systems - I (Semester – III)

Theory: 2 Hrs/Wk

SEC – II

Total Credits: 2 Credits

UNIT - I

Operating System: Introduction, The Operating System As A Resource Manager, History Of Operating Systems, The Operating System Zoo(Classifications), Operating System Concepts, System Calls, Operating System Structure(Architecture).

PROCESS: Creation, Hierarchies, States, THREADS- Usage, The Classical Thread Model, POSIX Threads, Pop-Up Threads.

UNIT - II

Scheduling: Introduction, Scheduling in Batch Systems, Scheduling in Interactive Systems, Scheduling in Real-Time Systems, Policy versus Mechanism, Thread Scheduling.

Memory Management: No Memory Abstraction, Memory Abstraction-Address Spaces, Virtual Memory, Page Replacement Algorithms, Design Issues for Paging Systems, Segmentation.

Text book:

1. A.S. Tanenbaum, and Herbert Bos, “Modern Operating Systems”, 4th Ed., Prentice-Hall of India, 2015.

References:

1. William Stallings, Operating Systems: Internals and Design Principles, 5th Ed., Prentice-Hall of India, 2006.
2. Gary Nutt, Operating Systems: A Modern Approach, 3rd Ed., Addison Wesley, 2004.
3. D.M. Dhamdhere, Operating Systems: A Concept Based Approach, 2nd Ed., Tata McGraw-Hill, 2007.

Python - II (Semester – IV)

Theory: 2 Hrs/Wk

SEC – III

Total Credits: 2 Credits

UNIT – I

Lists and Tuples: Sequences, Introduction to Lists, List slicing, Finding Items in Lists with the in Operator, List Methods and Useful Built-in Functions, Copying Lists, Processing Lists, Two-Dimensional Lists, Tuples. **Strings:** Basic String Operations, String Slicing, Testing, Searching, and Manipulating Strings. **Dictionaries and Sets:** Dictionaries, Sets, Serializing Objects.

Recursion: Introduction, Problem Solving with Recursion, Examples of Recursive Algorithms.

UNIT – II

Object-Oriented Programming: Procedural and Object-Oriented Programming, Classes, Working with Instances, Techniques for Designing Classes, Inheritance, Polymorphism.

GUI Programming: Graphical User Interfaces, Using the tkinter Module, Display text with Label Widgets, Organizing Widgets with Frames, Button Widgets and Info Dialog Boxes, Getting Input with Entry Widget, Using Labels as Output Fields, Radio Buttons, Check Buttons.

Text Book:

Tony Gaddis, Starting Out With Python (3e)

References:

1. Kenneth A. Lambert, Fundamentals of Python
2. Clinton W. Brownley, Foundations for Analytics with Python
3. James Payne, Beginning Python using Python 2.6 and Python 3
4. Charles Dierach, Introduction to Computer Science using Python
5. Paul Gries, Practical Programming: An Introduction to Computer Science using Python 3

Operating Systems - II (Semester – IV)

Theory: 2 Hrs/Wk

SEC – IV

Total Credits: 2 Credits

UNIT - I

FILE SYSTEMS: Files, Directories, File System Implementation, File-SystemManagement and Optimization, Example File Systems.

INPUT/OUTPUT: Principles Of I/O Hardware, Principles Of I/O Software, I/O Software Layers, Disks, Clocks, User Interfaces: Keyboard, Mouse, Monitor, Thin Clients, Power Management.

UNIT- II

DEADLOCKS: Resources, Introduction to Deadlocks, Deadlock Detection and Recovery, Deadlock Avoidance, Deadlock Prevention.

SECURITY: The Security Environment, Operating Systems Security, Formal Models ofSecure Systems, Authentication, Insider Attacks, Malware, Defenses.

Text book:

1. A.S. Tanenbaum, and Herbert Bos, “Modern Operating Systems”, 4th Ed., Prentice- Hall of India, 2015.

References:

1. William Stallings, Operating Systems: Internals and Design Principles, 5th Ed., Prentice-Hall of India, 2006.
2. Gary Nutt, Operating Systems: A Modern Approach, 3rd Ed., Addison Wesley, 2004.
3. D.M. Dhamdhere, Operating Systems: A Concept Based Approach, 2nd Ed., Tata McGraw-Hill, 2007.

Information Technologies (Semester – IV)

Theory: 4 Hrs/Wk

General Elective

Total Credits: 4 Credits

UNIT – I

Computer Networks: Introduction, Connection Media, Data Transmission Mode, Data Multiplexing, Data Switching, Network Topologies, Types of Networks, Networking Devices, OSI Model.

The Internet: Internet Services, Types of Internet Connections, Internet Security.

Introduction to Emerging Computer Technologies: Distributed Networking, Peer-to-peer Computing, Grid Computing, Cloud Computing, Utility Computing, On-demand Computing, Wireless Network, Bluetooth, Artificial Intelligence.

UNIT – II

Email: Functions of Email, Browser, Web Browser, Internet Service Providers.

Introduction to Information Security: Need for Information Security, Threats to Information Systems, Information Assurance, Cyber Security.

Introduction to Application Security and Counter Measures: Introduction to Application Security, Data Security Considerations, Security Technologies, Security Threats, Security Threats to E-Commerce, E-Cash and Electronic Payment System.

UNIT – III

Introduction to Security Measures: Secure Information System Development Application Development Security Information Security Governance and Risk Management , Security Architecture and Design Security Issues in Hardware, Data Storage, and Downloadable Devices , Physical Security of IT Assets Backup Security Measures

UNIT – IV

Introduction to Security Policies and Cyber Laws: Need for an Information Security Policy, Information Security Standards – ISO, Introducing Various Security Policies and Their Review Process , Introduction to Indian Cyber Law Objective and Scope of the IT Act, 2000, Intellectual Property Issues, Overview of Intellectual-Property- Related Legislation in India, Patent, Copyright Law Related to Semiconductor Layout and Design , Software Licence

Text Books:

Dr. Surya Prakash T, Ritendra G, Praveen Kumar S, KLSI, Introduction to Information Security and Cyber Laws (Dreamtech Publication)

Theory: 4 Hrs/Wk (3 Credits)

Practical: 3 Hrs/Wk (1 Credit)

Total Credits: 3+1= 4 Credits

UNIT – I

Introducing PHP: What is PHP? Why use PHP? Evolution of PHP, Installing PHP, Other ways to run PHP, Creating your first script. PHP Language Basics – Using variables, Understanding Data Types, Operators and Expressions, Constants. Decisions and Loops – Making Decisions, Doing Repetitive Tasks with Looping, Mixing Decisions and Looping with HTML. Strings – Creating and Accessing Strings, Searching Strings, Replacing Text with Strings, Dealing with Upper and Lowercase, Formatting Strings. Arrays – Creating Arrays, Accessing Array Elements, Looping through Arrays with for-each,

UNIT – II

Creating Function, Reading Data in Web pages: setting up web pages to communicate with PHP, Handling Text Fields, Text Areas, Checkboxes, Radio Buttons, List Boxes, Password Controls, Image Maps, File Uploads, Buttons, and PHP Browser.

Object oriented programming: creating Classes and objects, setting access to properties and methods, constructors, destructors, Inheritance, overriding and overloading methods, auto loading classes.

UNIT – III

Advanced OOP: Static members and inheritance, Abstract classes, Interfaces, object iteration, comparing objects, class constants, final keyword, reflection.

File Handling: fopen, feof, fgets, closing a file, fgetc, file_get_contents, reading a file into an array with file, file_exists, filesize, fread, fscanf, parse_ini_file, stat, fseek, copy, unlink, fwrite, reading and writing binary files, appending a file, file_put_contents, locking files

UNIT – IV

Introducing Databases and SQL: Deciding How to Store Data, Understanding Relational Databases, Setting Up MySQL, A Quick Play with MySQL, Connecting MySQL from PHP. Retrieving Data from MySQL with PHP, Retrieving Data with SELECT, Creating a Member Record Viewer. Manipulating MySQL Data with PHP – Inserting, Updating, and Deleting Records, Building a Member Registration Application. Sessions, Cookies and FTP.

Text Books:

1. Steven Holzner, "PHP: The Complete Reference Paperback", McGraw Hill Education (India), 2007.
2. Timothy Boronczyk, Martin E. Psinas, "PHP and MYSQL (Create-Modify-Reuse)", Wiley India Private Limited, 2008.

PHP with MYYSQL – Lab

Practical: 3 Hrs/Wk (1 Credit)

1. Write a PHP script to display the Fibonacci sequence with HTML page.
2. Write a PHP script to create a chess board.
3. Write a PHP script using built-in string function like strstr(), strpos(), substr_count(), etc...
4. Write a PHP script to transform a string to uppercase, lowercase letters, make a string's first Character uppercase.
5. Write a PHP script to count number of elements in an array and display a range of array elements.
6. Write a PHP script using a function to display the entered string in reverse.
7. Write a PHP script to demonstrate inheritance.
8. Write a PHP script to demonstrate the object overloading with _get(), _set(), and _call().
9. Write a PHP script to demonstrate the method overloading and method overriding mechanisms.
10. Write a PHP script to demonstrate the use of final classes and final methods.
11. Write a PHP script to demonstrate the use of interfaces.
12. Write a PHP script using constructors and destructors.
13. Write a PHP application to handling HTML forms with PHP script.
14. Write a PHP script to create a file, write data into file and display the file's data.
15. Write a PHP script to check and change file permissions, copying, renaming and deleting files.
16. Write a PHP application for connecting to MySQL and reading data from database table.
17. Write a PHP application for inserting, updating, deleting records in the database table.
18. Develop a PHP application for student registration form.
19. Develop a PHP application for creating, updating, reading and deleting the Student records from MYSQL Database.

Note:

- Programs of all the Concepts from Text Book including exercises must be practice and execute.
- External Vice-Voce is compulsory.

B.Sc. (Computer Science)
Model Question Paper (4 – Credits)

Time : 3 Hours

Max Marks : 80

PART -A

Answer any EIGHT questions in part –A

8 x 4 M = 32 Marks

UNIT- I

- 1
- 2
- 3

UNIT- II

- 4
- 5
- 6

UNIT- III

- 7
- 8
- 9

UNIT- IV

- 10
- 11
- 12

PART – B

Answer All Questions

12 x 4 = 48 Marks

UNIT- I

- 13
- OR**
- 14

UNIT- II

- 15
- OR**
- 16

UNIT- III

- 17
- OR**
- 18

UNIT- IV

- 19
- OR**
- 20

**B.Sc. (Computer Science)
Practical Question Paper (1 – Credit)**

Time: 3 Hours

Max Marks: 25

Answer any TWO questions (15 Marks)

UNIT – I 1 Program

UNIT – II 1 Program

UNIT – III 1 Program

UNIT – IV 1 Program

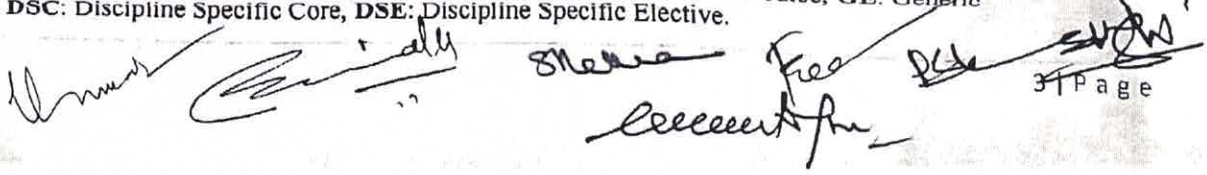
Viva – 5 Marks

Record – 5 Marks

TELANGANA STATE COUNCIL OF HIGHER EDUCATION
PROPOSED CBCS COMMON CORE SCHEME FOR B.SC. COURSE
OPTIONAL -1: BOTANY

CODE	PAPER TITLE	Course Type	HPW	Credits
FIRST YEAR SEMESTER - I				
BS 104	PAPER-I : Microbial Diversity and Lower Plants	DSC-1A	4T+2P=6	4+1=5
FIRST YEAR SEMESTER - II				
BS 204	PAPER-II: Gymnosperms, Taxonomy of Angiosperms and Ecology	DSC-1B	4T+2P=6	4+1=5
SECOND YEAR SEMESTER - III				
BS 301	SEC-1: Nursery and Gardening	SEC-1	2	2
BS 302	SEC-2: Biofertilizers and Organic Farming	SEC-2	2	2
BS 304	PAPER-III: Plant Anatomy and Embryology	DSC-1C	4T+2P=6	4+1=5
SECOND YEAR SEMESTER - IV				
BS 401	SEC-3: Greenhouse Technology	SEC-3	2	2
BS 402	SEC-4: Mushroom Culture Technology	SEC-4	2	2
BS 404	PAPER-IV : Cell Biology, Genetics & Plant Physiology	DSC-1D	4T+2P=6	4+1=5
THIRD YEAR SEMESTER - V				
BS 501	GE-1: Industrial Microbiology	GE-1	4T	4
BS 502	DSE -1A: Biodiversity & Conservation DSE -1B: Economic Botany DSE -1C: Seed Technology	DSE-1A / DSE-1B / DSE-1C	4+2	4+1
THIRD YEAR SEMESTER - VI				
BS 601	DSE-3: Project (Group Projects)	PROJECT	4	4
BS 602	DSE -2A: Plant Molecular Biology DSE -2B: Tissue Culture and Biotechnology DSE -2C: Analytical Techniques in Plant Sciences	DSE-2A / DSE-2B / DSE-5E	4T+2P=6	4+1=5

AECC: Ability Enhancement Compulsory Course, **SEC:** Skill Enhancement Course, **GE:** Generic Elective, **DSC:** Discipline Specific Core, **DSE:** Discipline Specific Elective.



 31 Page

Annexure – I (Credits)
Proposed CBCS Scheme for B.Sc.
w.e.f 2019-20

Courses		Papers	Total Credits	Credits for each paper / Semester					
				B.Sc.					
				I	II	III	IV	V	VI
Core Courses DSC	Optional-1	4	20	5	5	5	5	-	-
	Optional-2	4	20	5	5	5	5	-	-
	Optional-3	4	20	5	5	5	5	-	-
Elective Courses DSE	Optional-1	2	10	-	-	-	-	5	5
	Optional-2	2	10	-	-	-	-	5	5
	Optional-3	2	10	-	-	-	-	5	5
Language	English(First Language)	5	20	4	4	3	3	3	3
	Second Language	5	20	4	4	3	3	3	3
Ability Enhancement Compulsory Course AECC	Environmental Science / Basic Computer Skills	1	2	2	-	-	-	-	-
	Basic Computer Skills / Environmental Science	1	2	-	2	-	-	-	-
Skill Enhancement Course SEC	SEC1	1	2	-	-	2	-	-	-
	SEC2	1	2	-	-	2	-	-	-
	SEC3	1	2	-	-	-	2	-	-
	SEC4	1	2	-	-	-	2	-	-
Generic Elective GE	Open Stream	1	4	-	-	-	-	4	-
Project Work/Optionals		1	4	-	-	-	-	-	4
Total Credits in each semester				25	25	25	25	25	25
Total Credits in UG				150					
Credits under Non-CGPA		NSS /NCC /sports / Extra curricular	6	Upto 6 (2 in each year)					
		Summer Internship	4	Upto 4 (2 in each, after I & II years)					

Annexure II

Proposed New Grading System

SGPA (SEMESTER GRADE POINT AVERAGE)			
S. No.	Grade Point	Range of marks	Grade Letter
1	10	Equal to and above 90 Marks	A+
2	9	More than or equal to 80 and less than 90 Marks	A
3	8	More than or equal to 70 and less than 80 Marks	B+
4	7	More than or equal to 60 and less than 70 Marks	B
5	6	More than or equal to 55 and less than 60 Marks	C+
6	5	More than or equal to 50 and less than 55 Marks	C
7	4	More than or equal to 40 and less than 50 Marks	D
8	0	Below 40 Marks	F

[Handwritten signatures and initials]

B.Sc., BOTANY
First Year, I -Semester
Paper-I
Microbial Diversity and Lower Plants

DSC - 1A (4 hrs./week)

Credits- 4

Theory Syllabus

(60 hours)

(15 hours)

UNIT - I

- 1) **Bacteria:** Structure, nutrition, reproduction and economic importance. Brief account of Archaeobacteria, Actinomycetes and Mycoplasma with reference to little leaf of Brinjal and Papaya leaf curl
- 2) **Viruses:** Structure, replication and transmission; plant diseases caused by viruses and their control with reference to Tobacco Mosaic and Rice Tungro.
- 3) An outline of plant diseases of important crop plants caused by bacteria and their control with reference to Angular leaf spot of cotton and Bacterial blight of Rice.

UNIT-II

(15 hours)

- 1) General characters, structure, reproduction and classification of algae (Fritsch)
- 2) **Cyanobacteria:** General characters, cell structure their significance as biofertilizers with special reference to Oscillatoria, Nostoc and Anabaena.
- 3) Structure and reproduction of the following:
Chlorophyceae- Volvox, Oedogonium and Chara.
Phaeophyceae- Ectocarpus
Rhodophyceae- Polysiphonia.

UNIT-III

(15 hours)

- 1) General characters and classification of fungi (Ainsworth).
- 2) Structure and reproduction of the following:
 - (a) Mastigomycotina- Albugo
 - (b) Zygomycotina- Mucor
 - (c) Ascomycotina- Saccharomyces and Penicillium.
 - (d) Basidiomycotina- Puccinia
 - (e) Deuteromycotina- Cercospora.
- 3) Economic importance of lichens

UNIT-IV

(15 hours)

- 1) **Bryophytes:** Structure, reproduction, life cycle and systematic position of Marchantia, Anthoceros and Polytrichum, Evolution of Sporophyte in Bryophytes.
- 2) **Pteridophytes:** Structure, reproduction, life cycle and systematic position of Rhynia, Lycopodium, Equisetum and Marsilea.
- 3) Stellar evolution, heterospory and seed habit in Pteridophytes.

---:00:---

[Handwritten signatures and marks]

References:

- 1) Alexopolous, J. and W. M. Charles. 1988. Introduction to Mycology. Wiley Eastern, New Delhi.
- 2) Mckane, L. and K. Judy. 1996. Microbiology – Essentials and Applications. McGraw Hill, New York.
- 3) Pandey, B. P. 2001. College Botany, Vol. I: Algae, Fungi, Lichens, Bacteria, Viruses, Plant Pathology, Industrial Microbiology and Bryophyta. S. Chand & Company Ltd, New Delhi.
- 4) Pandey, B. P. 2007. Botany for Degree Students: Diversity of Microbes, Cryptogams, Cell Biology and Genetics. S. Chand & Company Ltd, New Delhi.
- 5) Sambamurthy, A. V. S. S. 2006. A Textbook of Plant Pathology. I. K. International Pvt. Ltd., New Delhi.
- 6) Sambamurthy, A. V. S. S. 2006. A Textbook of Algae. I. K. International Pvt. Ltd., New Delhi.
- 7) Sharma, O. P. 1992. Textbook of Thallophyta. McGraw Hill Publishing Co., New Delhi.
- 8) Thakur, A. K. and S. K. Bassi. 2008. A Textbook of Botany: Diversity of Microbes and Cryptogams. S. Chand & Company Ltd, New Delhi.
- 9) Vashishta, B. R., A. K. Sinha and V. P. Singh. 2008. Botany for Degree Students: Algae. S. Chand & Company Ltd, New Delhi.
- 10) Vashishta, B. R. 1990. Botany for Degree Students: Fungi, S. Chand & Company Ltd, New Delhi.
- 11) Dutta A.C. 2016. Botany for Degree Students. Oxford University Press.
- 12) Watson, E. V. 1974. The structure and life of Bryophytes, B. I. Publications, New Delhi.
- 13) Pandey, B. P. 2006. College Botany, Vol. II: Pteridophyta, Gymnosperms and Paleobotany. S. Chand & Company Ltd, New Delhi.
- 14) Vashishta, P. C., A. K. Sinha and Anil Kumar. 2006. Botany - Pteridophyta (Vascular Cryptogams). S. Chand & Company Ltd, New Delhi.
- 15) Pandey, B. P. 2001. College Botany, Vol. I: Algae, Fungi, Lichens, Bacteria, Viruses, Plant Pathology, Industrial Microbiology and Bryophyta. S. Chand & Company Ltd, New Delhi.
- 16) Pandey, B. P. 2007. Botany for Degree Students: Diversity of Microbes, Cryptogams, Cell Biology and Genetics. S. Chand & Company Ltd, New Delhi.
- 17) Thakur, A. K. and S. K. Bassi. 2008. A Textbook of Botany: Diversity of Microbes and Cryptogams. S. Chand & Company Ltd, New Delhi.
- 18) Vashishta, B. R., A. K. Sinha and Adarsha Kumar. 2008. Botany for Degree Students: Bryophyta. S. Chand & Company Ltd, New Delhi.

[Handwritten signatures and scribbles]

Practical Syllabus

(45 hours)

1. Study of viruses and bacteria using electron micrographs (photographs).
2. Gram staining of Bacteria.
3. Study of symptoms of plant diseases caused by viruses, bacteria, Mycoplasma and fungi:
Viruses: Tobacco mosaic
Bacteria: Angular leaf spot of cotton and Rice tungro.
Mycoplasma: Little leaf of Brinjal and Leaf curl of papaya
Fungi: White rust on Crucifers, Rust on wheat & Tikka disease of Groundnut.
4. Vegetative and reproductive structures of the following taxa:
Algae: Oscillatoria, Nostoc, Volvox, Oedogonium, Chara, Ectocarpus and Polysiphonia.
Fungi: Albugo, Mucor, Saccharomyces, Penicillium, Puccinia and Cercospora
5. Section cutting of diseased material infected by Fungi and identification of pathogens as per theory syllabus. White rust of Crucifers, Rust on wheat & Tikka disease of Groundnut.
6. Lichens: Different types of thalli and their external morphology
7. Examination of important microbial, fungal and algal products:
Biofertilizers, protein capsules, antibiotics, mushrooms, Agar-agar etc.
8. Field visits to places of algal / microbial / fungal interest (e.g. Mushroom cultivation, water bodies).
9. Study of Morphology (vegetative and reproductive structures) and anatomy of the following Bryophytes: Marchantia, Anthoceros and Polytrichum.
10. Study of Morphology (vegetative and reproductive structures) and anatomy of the following Pteridophytes: Lycopodium, Equisetum and Marsilea.
11. Study of Anatomical features of Lycopodium stem, Equisetum stem and Marsilea petiole & rhizome by preparing double stained permanent mounts.

Practical Model Paper

Max. Marks: 25

Time : 3 hrs

1. Identify the given components 'A' & 'B' in the algal mixture .
Describe with neat labeled diagrams & give reasons for the classifications. 2 X 2 = 4M
2. Classify the given bacterial culture 'D' using Gram - staining technique. 3M
3. Take a thin transverse section of given diseased material 'E'.
Identify & describe the symptoms caused by the pathogen. 4M
4. Identify the given specimens 'F', 'G' & 'H' by giving reasons .
(Fungal-1, Bacteria-1 & Viral-1) 3 X 1 = 3M
5. Comment on the given slides 'I' & 'J' (Algae-1, Fungi-1) 2 X 2 = 4M
6. Identify the given specimen 'K' & slide 'L' (Bryophytes & Pteridophytes) 2 X 2 = 4M
7. Record 3M

[Handwritten signatures and marks]

Telangana State Council of Higher Education, Govt. of Telangana B.Sc., CBCS Common
Core Syllabi for all Universities in Telangana
PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN
B.Sc., Chemistry from 2019-2020

FIRST YEAR- SEMESTER I

CODE	COURSE TITLE	COURSE TYPE	HPW	CREDITS
BS 101	Ability Enhancement Compulsory Course AECC-1	ES	2	2
BS 102	English	CC-1A	4	4
BS 103	Second language	CC-2A	4	4
BS 104	Optional I	DSC-1A	4T+3P=7	4+1=5
BS 105	Optional II	DSC-2A	4T+3P=7	4+1=5
BS 106	Optional III- Chemistry - I	DSC-3A	4T } = 7 3P }	4 } = 5 1 }
	Laboratory Course - I (Qualitative Analysis - Semi Micro Analysis of Mixtures)			
Total Credits			31	25

FIRST YEAR- SEMSTER II

BS 201	Ability Enhancement Compulsory Course AECC-2	BCS	2	2
BS 202	English	CC-1B	4	4
BS 203	Second language	CC-2B	4	4
BS 204	Optional I	DSC-1B	4T+3P=7	4+1=5
BS 205	Optional II	DSC-2B	4T+3P=7	4+1=5
BS 206	Optional III- Chemistry - II	DSC-3B	4T } = 7 3P }	4 } = 5 1 }
	Laboratory Course - II (Quantitative Analysis - Titrations)			
Total Credits			31	25

SECOND YEAR- SEMSTER III

BS 301	i) Safety Rules in Chemistry Laboratory and Lab Reagents ii) Remedial methods for pollution, drinking water and Soil fertility	SEC-1 SEC-2	2 2	2 2
BS 302	English	CC-1C	3	3
BS 303	Second language	CC-2C	3	3
BS 304	Optional I	DSC-1C	4T+3P=7	4+1=5
BS 305	Optional II	DSC-2C	4T+3P=7	4+1=5
BS 306	Optional III- Chemistry - III	DSC-3C	4T } = 7 3P }	4 } = 5 1 }
	Laboratory Course - III (Synthesis of Organic compounds)			
Total Credits			31	25

SECOND YEAR- SEMSTER IV

BS 401	i) Materials and their Applications ii) Chemistry of Cosmetics and Food Processing	SEC-3 SEC-4	2 2	2 2
BS 402	English	CC-1D	3	3
BS 403	Second language	CC-2D	3	3
BS 404	Optional I	DSC-1D	4T+3P=7	4+1=5
BS 405	Optional II	DSC-2D	4T+3P=7	4+1=5
BS 406	Optional III- Chemistry - IV	DSC-3D	4T } = 7 3P }	4 } = 5 1 }
	Laboratory Course - IV (Qualitative Analysis of Organic Compounds)			
Total Credits			31	25

* AECC: Ability Enhancement Compulsory Course, SEC: Skill Enhancement Course, DSC: Discipline Specific Course, GE: Generic Elective, ES: Environmental Science, BCS: Basic computer skills.

CHAIRMAN
Board of Studies in Chemistry
SATAVAHANA UNIVERSITY
KADAPATI

B.Sc. I Yr CHEMISTRY
SEMESTER WISE SYLLABUS

SEMESTER I

Paper – I
Chemistry - I

Unit-I (Inorganic Chemistry)

15 h (1 hr/week)

S1- I-1. Chemical Bonding

8 h

Ionic solids- lattice and solvation energy, solubility of ionic solids, Fajan's rule, polarity and polarizability of ions. VSPER Theory - Common hybridization- sp , sp^2 , sp^3 , sp^3d , sp^3d^2 and sp^3d^3 , shapes of molecules. Molecular orbital theory: Shapes and sign convention of atomic orbitals. Modes of bonds. Criteria for orbital overlap. LCAO concept. π and σ overlapping. Concept of Types of molecular orbitals- bonding, antibonding and non bonding. MOED of homonuclear diatomics - H_2 , N_2 , O_2^- , O_2^{2-} , F_2 (unhybridized diagrams only) and heteronuclear diatomics CO , CN^- , NO , NO^+ and HF . Bond order, stability and magnetic properties.

S1-I-2. P-Block Elements 1

7 h

Group-13: Structure of diborane and higher Boranes (B_4H_{10} and B_5H_9), Boron nitrogen compounds ($B_3N_3H_6$ and BN), Lewis acid nature of BX_3 .
Group - 14: Carbides-Classification - ionic, covalent, interstitial - Structures and reactivity. Industrial applications. Silicones - Classification - straight chain, cyclic and cross-linked.
Group - 15: Nitrides - Classification - ionic, covalent and interstitial. Reactivity - hydrolysis. Reactions of hydrazine, hydroxyl amine, phosphazenes.

Unit - II (Organic Chemistry)

15h(1 hr/week)

S1-O-1: Structural Theory in Organic Chemistry

5 h

Bond polarization: Factors influencing the polarization of covalent bonds, electro negativity - inductive effect. Application of inductive effect (a) Basicity of amines (b) Acidity of carboxylic acids (c) Stability of carbonium ions. Resonance - Mesomeric effect, application to (a) acidity of phenol. (b) acidity of carboxylic acids and basicity of anilines. Stability of carbo cations, carbanions and free radicals. Hyper conjugation and its application to stability of carbonium ions, free radicals and alkenes.

S1-O-2: Acyclic Hydrocarbons

6 h

Alkanes- Methods of preparation: From Grignard reagent, Kolbe synthesis. Chemical reactivity - inert nature, free radical substitution, Halogenation example- reactivity, selectivity and orientation.

Alkenes - Preparation of alkenes (with mechanism) (a) by dehydration of alcohols (b) dehydrohalogenation of alkyl halides (c) by dehalogenation of 1,2 dihalides, Zaitsev's rule. Properties: Anti-addition of halogen and its mechanism. Addition of HX , Markonikov's rule, addition of H_2O , HOX , H_2SO_4 with mechanism and addition of HBr in the presence of peroxide (anti - Markonikov's addition). Oxidation (cis - additions) - hydroxylation by $KMnO_4$, OsO_4 ,

M. Saravij
30/7/2019

anti addition- peracids (via epoxidation), hydroboration, ozonolysis – location of double bond. Dienes – Types of dienes, reactions of conjugated dienes – 1,2 and 1,4 addition of HBr to 1,3 – butadiene and Diels – Alder reaction.

Alkynes– Preparation by dehydrohalogenation of vicinal dihalides, dehalogenation of tetrahalides. Physical Properties: Chemical reactivity – electrophilic addition of X_2 , HX, H_2O (tautomerism), Oxidation (formation of enediol, 1,2 diones and carboxylic acids) and reduction (Metal-ammonia reduction, catalytic hydrogenation).

Aromatic Hydrocarbons

4h

Introduction to aromaticity: Huckel's rule – Benzene, Naphthalene and Anthracene. Reactions - General mechanism of electrophilic substitution, mechanism of nitration, sulphonation and halogenation, Friedel Craft's alkylation and acylation. Orientation of aromatic substitution - Definition of ortho, para, and meta directing groups. Ring activating and deactivating groups with examples. Orientation – (i) activating groups: Amino, methoxy and alkyl groups. (ii) Deactivating groups - nitro, nitrile, carbonyl, carboxylic acid, sulphonic acid and halo groups.

Unit – III (Physical Chemistry)

15h(1 hr/week)

S1-P-1: Atomic structure and elementary quantum mechanics

3 h

Black body radiation, heat capacities of solids, Rayleigh Jeans law, Planck's radiation law, photoelectric effect, Limitations of classical mechanics, Compton effect, de Broglie's hypothesis. Heisenberg's uncertainty principle.

S1-P-2: Gaseous State

5 h

Deviation of real gases from ideal behavior. van der Waals equation of state. Critical phenomenon. PV isotherms of real gases, continuity of state. Andrew's isotherms of CO_2 . The van der Waal's equation and critical state. Derivation of relationship between critical constants and van der Waal's constants. The law of corresponding states, reduced equation of states. Joule Thomson effect and inversion temperature of a gas. Liquifaction of gases: i) Linde's method based on Joule Thomson effect ii) Claude's method based on adiabatic expansion of a gas.

S1-P-3: Liquid State and Solutions

4 h

Liquid State

Intermolecular forces, structure of liquids (qualitative description). Structural differences between solids, liquids and gases. Surface tension and its determination using stalagmometer. Viscosity of a liquid and determination of coefficient of viscosity using Ostwald viscometer. Effect of temperature on surface tension and coefficient of viscosity of a liquid (qualitative treatment only).

Solutions

3 h

Liquid - liquid mixtures, ideal liquid mixtures, Raoult's and Henry's laws. Non ideal systems. Azeotropes: $HCl-H_2O$ and $C_2H_5OH - H_2O$ systems. Fractional distillation. Partially miscible liquids: Phenol – Water, Trimethyl amine – Water and Nicotine – Water systems.

M. Saravijith
30/7/2019

Unit - IV (General Chemistry)

15h(1 hr/week)

S1-G-1. General Principles of Inorganic Qualitative Analysis

6 h

Anion analysis: Theory of sodium carbonate extract, classification and reactions of anions- CO_3^{2-} , Cl^- , Br^- , SO_4^{2-} , PO_4^{3-} , BO_3^{3-} , CH_3COO^- , NO_3^- . Interfering ions. Cation Analysis: Principles involved - Solubility product, common ion effect, general discussion for the separation and identification of group I individual cations (Hg_2^{2+} , Ag^+ , Pb^{2+}) with flow chart and chemical equations. Principle involved in separation of group II & IV cations. General discussion for the separation and identification of group II (Hg^{2+} , Pb^{2+} , Bi^{3+} , Cd^{2+} , Sb^{3+}), III (Al^{3+} , Fe^{3+}), IV (Mn^{2+} , Zn^{2+}) individual cations with flow chart and chemical equations. General discussion for the separation and identification of group V individual cations (Ba^{2+} , Sr^{2+} , Ca^{2+}) with flow chart and chemical equations. Theory of flame test. Identification of Group VI cations (Mg^{2+} , NH_4^+).

S1-G-2. Isomerism

5 h

Isomerism: Definition of isomers. Classification of isomers: Constitutional and Stereoisomers - definition and examples. Constitutional isomers: chain, functional and positional isomers. Stereoisomers: enantiomers and diastereomers - definitions and examples. Representation of stereoisomers - Wedge, Fischer projection, Sawhorse, Newmann formulae.

Conformational analysis : Classification of stereoisomers based on energy. Definition and examples - Conformational and configurational isomers. Conformational analysis of ethane, n-butane, 1,2-dichloroethane, 2-chloroethanol. Cyclic compounds: Baeyer's strain theory, Conformational analysis of cyclohexane

Cis-trans isomerism: E-Z-Nomenclature

S1-G-3: Solid state Chemistry

4 h

Laws of Crystallography: (i) Law of Constancy of interfacial angles (ii) Law of Symmetry - Symmetry elements in crystals (iii) Law of rationality of indices. Definition of space lattice, unit cell. Bravais Lattices and Seven Crystal systems (a brief review). X-ray diffraction by crystals; Derivation of Bragg's equation. Determination of structure of NaCl, KCl and CsCl (Bragg's method and Powder method).

References

General reference: B.Sc I Year Chemistry : Semester I, Telugu Academy publication, Hyd

Unit- I

1. Principles of Inorganic Chemistry by Puri, Sharma and Kalia Vishal Publications 1996.
2. Concise Inorganic Chemistry by J.D. Lee 3rd edn.
3. Basic Inorganic Chemistry by F.A.Cotton, G.Wilkinson and Paul.L. Gaus 3rd edn Wiley Publishers 2001. Chem.

5. Inorganic Chemistry Principles of structure and reactivity by James E. Huhey, E.A. Keiter and R.L. Keiter 4th edn.
6. Chemistry of the elements by N.N. Greenwood and A. Earnshaw Pergamon Press 1989.
7. Inorganic Chemistry by Shriver and Atkins 3rd edn Oxford Press 1999.
9. Textbook of Inorganic Chemistry by R. Gopalan.

Unit- II

1. Organic Chemistry by Morrison and Boyd.
2. Organic Chemistry by Graham Solomons.
3. Organic Chemistry by Bruice Yuranis Powla.
4. Organic Chemistry by L. G. Wade Jr.
5. Organic Chemistry by M. Jones, Jr
6. Organic Chemistry by John McMurry.
7. Organic Chemistry by Soni.
8. General Organic chemistry by Sachin Kumar Ghosh.
9. Organic Chemistry by C N pillai

Unit III

1. Principles of physical chemistry by Prutton and Marron.
2. Text Book of Physical Chemistry by Soni and Dharmahara..
3. Text Book of Physical Chemistry by Puri and Sharma.
4. Text Book of Physical Chemistry by K. L. Kapoor.
5. Physical Chemistry through problems by S.K. Dogra.
6. Text Book of Physical Chemistry by R.P. Verma.
7. Elements of Physical Chemistry by Lewis Glasstone.

Unit IV

1. Qualitative analysis by Welcher and Hahn.
2. Vogel's Qualitative Inorganic Analysis by Svehla.
3. Text Book of Organic Chemistry by Morrison And Boyd.
4. Text Book of Organic Chemistry by Graham Solomons.
5. Text Book of Organic Chemistry by Bruice Yuranis Powla.
6. Text Book of Organic Chemistry by Soni.
7. Text Book of Physical Chemistry by Soni And Dharmahara..
8. Text Book of Physical Chemistry by Puri And Sharma.
9. Text Book of Physical Chemistry by K. L. Kapoor.

Laboratory Course

45h (3 h / week)

Paper I - Qualitative Analysis - Semi micro analysis of mixtures

Analysis of two anions (one simple, one interfering) and two cations in the given mixture.

Anions: CO_3^{2-} , SO_3^{2-} , S^{2-} , Cl^- , Br^- , I^- , CH_3COO^- , NO_3^- , PO_4^{3-} , BO_3^{3-} , SO_4^{2-} . .

Cations: Hg_2^{2+} , Ag^+ , Pb^{2+}

Hg^{2+} , Pb^{2+} , Bi^{3+} , Cd^{2+} , Cu^{2+} , $As^{3+/5+}$, $Sb^{3+/5+}$, $Sn^{2+/4+}$

Al^{3+} , Cr^{3+} , Fe^{3+}

Zn^{2+} , Ni^{2+} , Co^{2+} , Mn^{2+}

Ba^{2+} , Sr^{2+} , Ca^{2+}

Mg^{2+} , NH_4^+

M. Sarani

CHAIRMAN
 4 Board of Studies in Chemistry
 SATAVAHANA UNIVERSITY
 KARIMNAGAR- 505 001.

**B.Sc. (Computer Science)
CBCS Pattern in Semester System – 2019**

Semester	Course Title	Hours / week		Credits
		Theory	Practical	
I	Programming in C	4	3	4 + 1 = 5
II	Programming in C++	4	3	4 + 1 = 5
III	Data Structures Using C++	4	3	4 + 1 = 5
IV	Data Base Management Systems (DBMS)	4	3	4 + 1 = 5
V	Programming in Java	4	3	4 + 1 = 5
VI	Web Technologies	4	3	4 + 1 = 5

AECC

Semester	Course Title	Hours / week		Credits
		Theory	Practical	
I	Fundamentals of Computer	2		2
II	Office Automation	2		2

SEC

Semester	Course Title	Hours / week		Credits
		Theory	Practical	
III	Python – I (SEC – I)	2		2
III	Operating Systems (SEC –II)	2		2
IV	Python – II (SEC – III)	2		2
IV	Operating Systems (SEC – IV)	2		2

GENERAL ELECTIVE (GE)

Semester	Course Title	Hours / week		Credits
		Theory	Practical	
IV	Information Technologies	4		4

PROJECT / OPTINAL

Semester	Course Title	Hours / week		Credits
		Theory	Practical	
VI	PHP with MYSQL	3	3	3 + 1 = 4

Theory: 4 Hrs/Wk (4 Credits)
Practical: 3 Hrs/Wk (1 Credits)

Total Credits: 4+1=5Credits

UNIT – I

Computer Fundamentals: Introduction of Computers, Classification of Computers, Anatomy of a Computer, Memory Hierarchy, Introduction to OS, Operational Overview of a CPU.

Program Fundamentals: Generation and Classification of Programming Languages, Compiling, Interpreting, Loading, Linking of a Program, Developing Program, Software Development.

Algorithms: Definitions, Different Ways of Stating Algorithms (Step-form, Pseudo-code, Flowchart), Strategy for Designing Algorithms, Structured Programming Concept.

Basics of C: Overview of C, Developing Programs in C, Parts of Simple C Program, Structure of a C Program, Comments, Program Statements, C Tokens, Keywords, Identifiers, Data Types, Variables, Constants, Operators and Expressions, Expression Evaluation–precedence and associativity, Type Conversions.

UNIT – II

Input-Output: Non-formatted and Formatted Input and Output Functions, Escape Sequences,

Control Statements: Selection Statements – if, if-else, nested if, nested if-else, comma operator, conditional operator, switch; Iterative Statements–while, for, do-while; Special Control Statement–goto, break, continue, return, exit.

Arrays and Strings: One-dimensional Arrays, Character Arrays, Functions from ctype.h, string.h, Multidimensional Arrays.

UNIT – III

Functions: Concept of Function, Using Functions, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions, Scope of Variables, Storage Classes, Inline Functions, and Recursion.

Pointers: Introduction, Address of Operator (&), Pointer, Uses of Pointers, Arrays and Pointers, Pointers and Strings, Pointers to Pointers, Array of Pointers, Pointer to Array, Dynamic Memory Allocation.

UNIT – IV

User-defined Data Types: Declaring a Structure (Union) and its members, Initialization Structure (Union), Accessing members of a Structure (Union), Array of Structures (Union), Structures verses Unions, Enumeration Types.

Files: Introduction, Using Files in C, Working with Text Files, Working with Binary Files, Files of Records, Random Access to Files of Records, Other File Management Functions.

Text Book: Pradip Dey, Manas Ghosh, Computer Fundamentals and Programming in C (2e)

Reference Books:

1. Ivor Horton, Beginning C
2. Ashok Kamthane, Programming in C
3. Herbert Schildt, The Complete Reference C
4. Paul Deitel, Harvey Deitel, C How To Program
5. Byron S. Gottfried, Theory and Problems of Programming with C
6. Brian W. Kernighan, Dennis M. Ritchie, The C Programming Language
7. B. A. Forouzan, R. F. Gilberg, A Structured Programming Approach Using C

1. B. A. Forouzan 2. Ashok Kamthane 3. Herbert Schildt 4. Paul Deitel 5. Byron S. Gottfried

C – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to find the largest two (three) numbers using if and conditional operator.
2. Write a program to print the reverse of a given number.
3. Write a program to print the prime number from 2 to n where n is given by user.
4. Write a program to find the roots of a quadratic equation using switch statement.
5. Write a program to print a triangle of stars as follows (take number of lines from user):

```
*  
***  
*****  
*****  
*****
```

6. Write a program to find largest and smallest elements in a given list of numbers.
7. Write a program to find the product of two matrices
8. Write a program to find the GCD of two numbers using iteration and recursion
9. Write a program to illustrate use of storage classes.
10. Write a program to demonstrate the call by value and the call by reference concepts
11. Write a program that prints a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.
12. Write a program to illustrate use of data type enum.
13. Write a program to demonstrate use of string functions string.h header file.
14. Write a program that opens a file and counts the number of characters in a file.
15. Write a program to create a structure Student containing fields for Roll No., Name, Class, Year and Total Marks. Create 10 students and store them in a file.
16. Write a program that opens an existing text file and copies it to a new text file with all lowercase letters changed to capital letters and all other characters unchanged.

Note:

1. Write the Pseudo Code and draw Flow Chart for the above programs.
2. Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks on Windows 10.

1. B. 2. 3. 4. 5.

Programming in C++ (Semester – II)

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credits)

Total Credits: 4+1=5Credits

UNIT – I

Introduction to C++: Applications, Example Programs, Tokens, Data Types, Operators, Expressions, Control Structures, Arrays, Strings, Pointers, Searching and Sorting Arrays.

Functions: Introduction, Prototype, Passing Data by Value, Reference Variables, Using Reference Variables as Parameters, Inline Functions, Default Arguments, Overloading Functions, Passing Arrays to Functions.

Object Oriented Programming: Procedural and Object-Oriented Programming, Terminology, Benefits, OOP Languages, and OOP Applications.

UNIT – II

Classes: Introduction, Defining an Instance of a Class, Why Have Private Members? Separating Class Specification from Implementation, Inline Member Functions, Constructors, Passing Arguments to Constructors, Destructors, Overloading Constructors, Private Member Functions, Arrays of Objects, Instance and Static Members, Friends of Classes, Member-wise Assignment, Copy Constructors, Operator Overloading, Object Conversion, Aggregation.

UNIT – III

Inheritance: Introduction, Protected Members and Class Access, Base Class Access Specification, Constructors and Destructors in Base and Derived Classes, Redefining Base Class Functions, Class Hierarchies, Polymorphism and Virtual Member Functions, Abstract Base Classes and Pure Virtual Functions, Multiple Inheritance.

C++ Streams: Stream Classes, Unformatted I/O Operations, Formatted I/O Operations.

UNIT – IV

Exceptions: Introduction, Throwing an Exception, Handling an Exception, Object-Oriented Exception Handling with Classes, Multiple Exceptions, Extracting Data from the Exception Class, Re-throwing an Exception, Handling the bad_alloc Exception.

Templates: Function Templates–Introduction, Function Templates with Multiple Type, Overloading with Function Templates, Class Templates – Introduction, Defining Objects of the Class Template, Class Templates and Inheritance, Introduction to the STL.

Text Book: Tony Gaddis, Starting out with C++: from control structures through objects (7e)

References:

1. B. Lippman, C++ Primer
2. Bruce Eckel, Thinking in C++
3. K.R. Venugopal, Mastering C++
4. Herbert Schildt, C++: The Complete Reference
5. Bjarne Stroustrup, The C++ Programming Language
6. Sourav Sahay, Object Oriented Programming with C++

1. B. Lippman

2. Bruce Eckel

3. Strou

4. Sahay

5. Stroustrup



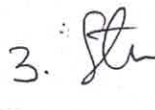
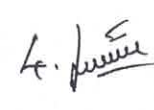

C++ – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to print the sum of digits of a given number.
2. Write a program to check whether the given number is Armstrong or not
3. Write a program to print the prime number from 2 to n where n is natural number given.
4. Write a program to find largest and smallest elements in a given list of numbers and sort the given list.
5. Write a program to read the student name, roll no, marks and display the same using class and object.
6. Write a program to implement the dynamic memory allocation and de-allocation using new and delete operators using class and object.
7. Write a program to find area of a rectangle, circle, and square using constructors.
8. Write a program to implement copy constructor.
9. Write a program using friend functions and friend class
10. Write a program to implement default Constructor.
11. Write a program to implement parameterized Constructor
12. Write a program to implement Copy Constructor
13. Write a program to define the constructor inside/outside of the class
14. Write a program to implement all three constructors within a single class as well as use multiple classes(individual classes)
15. Write a program to implement the following concepts using class and object
 - a. Function overloading
 - b. Operator overloading (unary/binary(+ and -))
16. Write a program to demonstrate single inheritance, multilevel inheritance and multiple inheritances.
17. Write a program to implement the overloaded constructors in inheritance.
18. Write a program to implement the polymorphism and the following concepts using class and object.
 - a. Virtual functions
 - b. Pure virtual functions
19. Write a program to implement the virtual concepts for following concepts
 - a. Constructor (not applied)
 - b. Destructor (applied)
20. Write a program to demonstrate static polymorphism using method overloading.
21. Write a program to demonstrate dynamic polymorphism using method overriding and dynamic method dispatch.
22. Write a program to implement the template (generic) concepts
 - a. Without template class and object
 - b. With template class and object

Note:

1. Write the Pseudo Code and draw Flow Chart for the above programs.
2. Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks on Windows 10.

1. B.  2.  3.  4.  5. 

B.Sc. (Computer Science)
Model Question Paper (4 – Credits)

3 Hours

Max Marks -80

PART -A

Answer any EIGHT questions in part –A
Marks

8 x 4 M = 32

UNIT- I

- 1
- 2
- 3

UNIT- II

- 4
- 5
- 6

UNIT- III

- 7
- 8
- 9

UNIT- IV

- 10
- 11
- 12

PART – B

Answer All Questions

12 x 4 = 48 Marks

UNIT- I

- 13
- OR
- 14

UNIT- II

- 15
- OR
- 16

UNIT- III

- 17
- OR
- 18

UNIT- IV

- 19
- OR
- 20

1. B. L. A 2. J. A. 3. S. K. 4. S. S. 5. S. S.

B.Sc. (Computer Science)
Practical Question Paper (1 - Credit)

3 Hours

Max Marks -50

Answer any TWO questions (15M x 2 = 30 Marks)

UNIT - I	1 Program
UNIT - II	1 Program
UNIT - III	1 Program
UNIT - IV	1 Program

Viva - 10 Marks

Re-cord - 10 Marks

1. B. 2. 3. 4. 5.

B.A. (ECONOMICS) SYLLABUS
Semester - I
MICRO ECONOMICS - I
Discipline Specific Course - Paper - I

MICRO ECONOMICS

Module-I: CONSUMER BEHAVIOUR:

Ordinal utility Analysis: Properties of Indifference curves, concept of budget line, equilibrium of consumer, price consumption curve, income consumption curve, derivation of demand curve with the help of ordinal utility analysis. Concepts of price, income and substitution effects; separation of price effect: compensating variation and cost difference methods.

Module-II PRODUCTION ANALYSIS

Concepts of Short run and long run production function; properties of iso-product curves, concept of factor price line, analysis of least cost input combination, concepts of expansion path and economic region of production, concept of returns scale and types of returns to scale. Linear and homogeneous production function, properties of Cobb-Douglas production function.

Module-III: COST AND REVENUE ANALYSIS

Cost concepts: Accounting, real, opportunity, explicit cost. Total cost, total fixed cost, total variable cost, average cost, average fixed cost, average variable cost, marginal cost and the relationship between average and marginal cost, derivation of long run average cost curve. Economies of scale: internal and external.

Revenue concepts: total, average and marginal, relationship between Average revenue & marginal revenue and price elasticity of demand.

Module--IV: MARKET STRUCTURE: IMPERFECT COMPETITION

Monopoly: Equilibrium of a monopolist with price discrimination, degrees of price discrimination, welfare loss under monopoly. Monopolistic competition: characteristics, concepts of product differentiation and selling cost, analysis of resource wastage under monopolistic competition. Oligopoly: characteristics of oligopoly, reasons for price rigidity in non-collusive oligopoly. Duopoly: Augustin Cournot's modern version of duopoly.

Module-V: ANALYSIS OF BUSINESS FIRM, PROFIT AND PRICING STRATEGIES

Characteristics of a business firm, objectives of business firm: profit maximization, sales revenue maximization, market share maximization, growth maximization. Profit concepts: Accounting and economic; break-even point and profit –volume analysis

Pricing strategies: Cost plus pricing, marginal cost pricing, rate of return pricing, price skimming, penetration pricing, loss-leader pricing, mark-up pricing and administered prices.

B.A Political Science
I st Semester
Paper - I
Understanding Political Theory

Unit- I Political Theory

- What is Political Theory, Evolution, Nature , Significance
- Debates on Political Theory
 - a) Normative b) Contemplative c) Explanatory

Unit-II What is Political?

- State: Theories of origin of the state, Divine, Social Contract, Evolution Theories
- Power and Authority
- Authoritative allocation of Values
- Sovereign state : Challenges

Unit- III Political Values and Theoretical Perspective

- Liberty :- A) Liberal B) Marxist C) Feminist
- Equality :- A) Liberal B) Marxist C) Feminist
- Justice :- A) Liberal B) Marxist C) Feminist

Unit-IV Political Ideologies

- Liberalism
- Nationalism
- Multiculturalism

Unit-V Political Institutions and Functions

- Legislature, Executive and Judiciary
- Political Parties, Pressure Groups, Media

Signature
(M. Satyaprakash)
BOS Member.



Faculty of Commerce, Satavahana University, Karimnagar (T.S.)

B.COM (C.A)

SYLLABUS (CBCS)

(w. e. f. 2019-2020)



FACULTY OF COMMERCE
SATAVAHANA UNIVERSITY
KARIMNAGAR – 505 002
TELANGANA STATE



B.COM (Computer Applications)
CBCS COURSE STRUCTURE
w.e.f. 2019-20

ELS: English Language Skill; SLS: Second Language Skill; AEC: Ability Enhancement Compulsory Course;

Sl.No.	Code	Course Title	HPW	Credits	Exam Hrs	Marks
(1)	(2)	(3)	(5)	(6)	(7)	(8)
SEMESTER - I						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AEC1	Environmental Science	2	2		
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Fundamentals of Information Technology	3T+4P	5	1 ½ hrs	50T+35 P+ 15I
Total			27	25		
SEMESTER - II						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AEC2	Basic Computer Skills	2	2		
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Object Oriented Programming using JAVA	3T+4P	5	1 ½ hrs	50T+35 P+ 15I
Total			27	25		

SEC: Skill Enhancement Course; **DSC:** Discipline Specific Course; **DSE:** Discipline Specific Elective; **GE:** Generic Elective; **T:** Theory; **P:** Practical; **I:** Internal Exam **U:** University Exam; **PR:** Project Report; **VV:** Viva-Voce Examination.



Paper 101: FINANCIAL ACCOUNTING-I

Objective: to acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader.

UNIT-I: ACCOUNTING PROCESS: Financial Accounting: Introduction – Definition – Evolution – Functions-Advantages and Limitations –Users of Accounting Information-Branches of Accounting – Accounting Principles: Concepts and Conventions- Accounting Standards– Meaning – Importance –Types of Accounts – Accounting Cycle – Journal-Ledger and Trial Balance (Including problems).

UNIT-II: SUBSIDIARY BOOKS: Meaning –Types - Purchases Book - Purchases Returns Book - Sales Book - Sales Returns Book - Bills Receivable Book - Bills Payable Book – Cash Book: Single Column, Two Column, Three Column and Petty Cash Book - Journal Proper(Including problems).

UNIT-III: BANK RECONCILIATION STATEMENT: Meaning – Need - Reasons for differences between cash book and pass book balances –Favourable and over draft balances – Ascertainment of correct cash book balance (Amended Cash Book) - Preparation of Bank Reconciliation Statement (Including problems).

UNIT-IV: RECTIFICATION OF ERRORS AND DEPRECIATION:Capital and Revenue Expenditure – Capital and Revenue Receipts: Meaning and Differences - Differed Revenue Expenditure - Errors and their Rectification: Types of Errors - Suspense Account – Effect of Errors on Profit (Including problems).

Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortization and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method (Including problems).

UNIT-V: FINAL ACCOUNTS:Final Accounts of Sole Trader: Meaning -Uses -Preparation of Manufacturing, Trading and Profit & Loss Account and Balance Sheet – Adjustments – Closing Entries(Including problems).

SUGGESTED READINGS:

1. Introduction to Accountancy: T.S.Grewal, S.Chand and Co.
2. Financial Accounting-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
3. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Company.
4. Principles & Practice of Accounting: R.L.Gupta&V.K.Gupta, Sultan Chand.
5. Accountancy-I: S.P. Jain & K.L Narang, Kalyani Publishers.
6. Financial Accounting-I: Dr. Yogeshweran, PBP
7. Financial Accounting-I:Srihari Krishna Rao, Himalaya Publishing House
8. Financial Accounting: B.Vishwanadham, S.Chand.
9. Accountancy–I: Tulasian, Tata McGraw Hill Co.
10. Financial Accounting:N.Padmalatha,L.V Kamala Devi,RachanaSharma,PBP
11. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
12. Fundamentals of Financial Accounting: Deepak Sehgil, Tax Mann Publication.
13. Financial Accounting: JawaharLal, Himalaya Publishing House.
14. Financial Accounting-I: PrasanthaAthma, Himalaya Publishing House.



Paper 102: BUSINESS ORGANISATION AND MANAGEMENT

Objective: To acquaint the students with the basics of Commerce and Business concepts and functions, forms of Business Organization and functions of Management.

UNIT-I: INTRODUCTION AND FORMS OF BUSINESS ORGANISATIONS: Concepts of Business, Trade, Industry and Commerce - Objectives and functions of Business –Social Responsibility of a business - Forms of Business Organization - Meaning, Characteristics, Advantages and Disadvantages of Sole Proprietorship – Meaning, Characteristics, Advantages and Disadvantages of Partnership - Kinds of Partners - Partnership Deed -Concept of Limited liability partnership – Meaning, Characteristics, Advantages and Disadvantages of Hindu Undivided Family – Meaning, Advantages and Disadvantages of Co-Operative Organization.

UNIT-II: JOINT STOCK COMPANY: Joint Stock Company - Meaning - Definition - Characteristics - Advantages and Disadvantages - Kinds of Companies - Promotion - Stages of Promotion - Promoter - Characteristics - Kinds - Preparation of Important Documents - Memorandum of Association - Clauses - Articles of Association - Contents – Prospectus - Contents – Red herring Prospectus-Statement in lieu of Prospectus (As per Companies Act. 2013).

UNIT-III: INTRODUCTION TO FUNCTIONS OF MANAGEMENT: Management - Meaning - Characteristics - Functions of Management - Levels of Management – Skills of Management-Scientific Management - Meaning - Definition - Objectives - Criticism – Fayol’s 14 Principles of Management .

UNIT-IV: PLANNING AND ORGANISING: Meaning - Definition - Characteristics - Types of Plans - Advantages and Disadvantages – Approaches to Planning - Management by Objectives (MBO) - Steps in MBO - Benefits –Weaknesses—Definition of Organizing-Organization-Process of Organizing - Principles of Organization - Formal and Informal Organizations - Line, Staff Organizations - Line and Staff Conflicts - Functional Organization - Span of Management - Meaning - Determining Span - Factors influencing the Span of Supervision.

UNIT-V: AUTHORITY, COORDINATION AND CONTROL: Meaning of Authority, Power, responsibility and accountability - Delegation of Authority - Decentralization of Authority - Definition, importance, process, and principles of Coordination- techniques of Effective Coordination - Control - Meaning - Definition – Relationship between planning and control -Steps in Control – Types (post, current and pre-control) - Requirements for effective control.

SUGGESTED READINGS:

1. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
2. Business Organisation& Management: Patrick Anthony, Himalaya Publishing House
3. Business Organization & Management: Dr. Manish Gupta, PBP.
4. Organization & Management: R. D. Agarwal, McGraw Hill.
5. Modern Business Organization: S.A. Sherlekar, V.S. Sherlekar, Himalaya Publishing House
6. Business Organization & Management: C.R. Basu, Tata McGraw Hill
7. Business Organization & Management: M.C. Shukla S. Chand,
8. Business Organisation and Management: D.S. Vittal, S. Chand
9. Organizational Behaviour Text & Cases: V.S.P. Rao, Himalaya Publishing House
10. Business Organization & Management: Uma Shekaram, Tata McGraw Hill
11. Business Organization & Management: Niranjana Reddy & Surya Prakash, Vaagdevi publishers
12. Business Organisation and Management, Dr.NeeruVasith, Tax Mann Publications.



Paper 103: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Objective: to acquire basic knowledge in Information Technology and its applications in the areas of business.

UNIT-I: INTRODUCTION:

Introduction to computers - Generations of computers – An overview of computer system - Types of computers - Input & Output Devices.

Hardware: Basic components of a computer system - Control unit – ALU - Input/output functions - Memory – RAM – ROM – EPROM - PROM and Other types of memory.

UNIT-II: OPERATING SYSTEM (OS):

Meaning - Definition & Functions - Types of OS - Booting process - DOS – Commands (internal & external) - Wild card characters – Virus & Hackers – Cryptography & cryptology

Windows: Using the Start Menu –Control Panel – Using multiple windows – Customizing the Desktop – Windows accessories (Preferably latest version of windows or Linux Ubuntu).

UNIT-III: WORD PROCESSING:

Application of word processing - Menus & Tool Bars - Word processor – Creating – Entering - Saving & printing the document - Editing & Formatting Text - Mail Merge and Macros (Preferably latest version of MS Word or Libre Office Writer).

UNIT-IV: SPREAD SHEET:

Application of work sheet/spread sheet - Menus & Tool bars - Creating a worksheet - Entering and editing of numbers - Cell referencing - Worksheet to analyze data with graphs & Charts.

Advanced tools: Functions – Formulae – Formatting numbers - Macros – Sorting- Filtering - Validation & Consolidation of Data (Preferably latest version of MS Excel or Libre Office Calc)

UNIT-V: POWER POINT PRESENTATION:

Application of Power Point Presentation – Menus & Tool bars – Creating presentations – Adding - Editing and deleting slides - Templates and manually creating presentation– Slide show – Saving - Opening and closing a Presentation –Types of slides - Slide Views - Formatting – Insertion of Objects and Charts in slides - Custom Animation and Transition (Preferably latest version of MS Power Point presentation - Libre Office Impress).

Internet & Browsing: Services available on internet – WWW – ISP – Browsers.

Multimedia: Application of multimedia – Images – Graphics-Audio and Video – IT security.

SUGGESTED READINGS:

1. Introduction to Computers: Peter Norton, McGraw Hill.
2. Fundamentals of Information Technology: Dr. NVN Chary, Kalyani Publishers.
3. Computer Fundamental: AnithaGoel, Pearson.
4. Information Technology Applications for Business: Dr. S. Sudalaimuthu, Himalaya
5. Introduction to Information Technology: ITL ESL, Pearson.
6. Introduction to Information Technology: V. Rajaraman, PHI.
7. Fundamental of Computers: Balaguruswamy, McGraw Hill.
8. PC Software under Windows: Puneet Kumar, Kalyani Publishers.
9. Information Technology and C language: Rajiv Khanna, New Age International.
10. Fundamentals of Information Technology: Alexis Leon, Vikas Publishing House.
11. Informational Technology: P. Mohan, Himalaya Publishing House.
12. Information Technology: R. Renuka, Vaagdevi Publishers.
13. OS-Linux Spoken Tutorials & Libre Office Spoken Tutorials by IIT Bombay.
14. Fundamentals of Information Technology: Rajiv Midha, Tax Mann Publications



Paper 201: FINANCIAL ACCOUNTING-II

Objective: to acquire conceptual knowledge and application of depreciation methods and single entry system, and preparation of accounts related to non-profit and partnership organisations.

UNIT-I: DEPRECIATION: Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortisation and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method - Sinking Fund Method - Sum of Digits Method - Annuity Method.

UNIT-II: ACCOUNTS FROM INCOMPLETE RECORDS: Features – Ascertainment of Profit - Statement of Affairs and Conversion method.

UNIT-III: ACCOUNTING FOR NOT-FOR-PROFIT ORGANIZATIONS: Not for Profit entities – Features – Receipts and Payments Account – Income and Expenditure Account – Balance Sheet - Accounting for Organization and Individuals.

UNIT-IV: PARTNERSHIP ACCOUNTS-I: Meaning – Partnership Deed - Capital Accounts (Fixed and Fluctuating) – Admission of a Partner – Retirement and Death of a Partner (Excluding Joint Life Policy).

UNIT-V: PARTNERSHIP ACCOUNTS-II: Dissolution of Partnership – Insolvency of a Partner (excluding Insolvency of all partners) – Sale to a Company.

SUGGESTED READINGS:

1. Accountancy-I: S.P. Jain & K.L. Narang, Kalyani.
2. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Co.
3. Financial Accounting-II Dr. Yogeshweran, PBP.
4. Financial Accounting: S. N. Maheshwari & V.L. Maheswari, Vikas.
5. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
6. Accountancy-I: Tulasian, Tata McGraw Hill Co.
7. Advanced Accountancy-I: S. N. Maheshwari & V.L. Maheswari, Vikas.
8. Financial Accounting-I, Prasanthaathma, Himalaya Publishing House
9. Financial Accounting-I, Srihari Krishna Rao, Himalaya Publishing House
10. Financial Accounting: B. Vishwanadham, S Chand.
11. Financial Accounting-II: Padma Priya, Himalaya Publishing house
12. Advanced Accountancy: M Shrinivas & K Sreelatha Reddy, Himalaya Publishers.
13. Financial Accounting: M.N Arora, Tax Mann Publications.



Paper 202: BUSINESS LAWS

Objective: to understand basics of contract act, sales of goods act, IPRs and legal provisions applicable for establishment, management and winding up of companies in India.

UNIT-I: INDIAN CONTRACT ACT: Agreement and contract - Essentials of a valid contract - Types of contracts - Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance - Consideration definition - Essentials of valid consideration - Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach.

UNIT-II: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT: Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell - Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act 1986: Definitions of Consumer - Person - Goods - Service - Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Agencies - Appeals.

UNIT-III: INTELLECTUAL PROPERTY RIGHTS: Trade Marks: Definition - Registration of Trade Marks - Patents: Definition - Kinds of Patents - Transfer of the Patent Rights - Rights of the Patentee - Copy Rights: Definition - Rights of the Copyright Owner - Terms of Copy Right - Copy Rights Infringement - Other Intellectual Property Rights: Trade Secrets - Geographical Indications.

UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS: Director: Qualification - Disqualification - Position - Appointment - Removal - Duties and Liabilities - Loans - Remuneration - Managing Director - Corporate Social Responsibility - Corporate Governance. Meeting: Meaning - Requisites - Notice - Proxy - Agenda - Quorum - Resolutions - Minutes - Kinds - Shareholder Meetings - Statutory Meeting - Annual General Body Meeting - Extraordinary General Body Meeting - Board Meetings.

UNIT-V: WINDING UP: Meaning - Modes of Winding Up - Winding Up by tribunal - Voluntary Winding Up - Compulsory Winding Up - Consequences of Winding Up - Removal of name of the company from Registrar of Companies - Insolvency and Bankruptcy code - 2016.

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law: Rajashree. - HPH
- 3) Business Law - Kavitha Krishna, Himalaya Publishing House
- 4) Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
- 5) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 6) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 7) Corporate Law: PPS Gogna, S Chand.
- 8) Business Law: D.S. Vital, S Chand
- 9) Company Law: Bagriyal AK, Vikas Publishing House.



Faculty of Commerce, Satavahana University, Karimnagar (T.S.)

Paper 203: OBJECT ORIENTED PROGRAMMING USING JAVA

TO BE GIVEN BY DEPT. OF COMPUTER SCIENCE ENGINEERING OR INFORMATICS

Theory: 4 Hrs/Wk (4 Credits)
Practical: 3 Hrs/Wk (1 Credits)

Total Credits: 4+1=5Credits

UNIT – I

Computer Fundamentals: Introduction of Computers, Classification of Computers, Anatomy of a Computer, Memory Hierarchy, Introduction to OS, Operational Overview of a CPU.

Program Fundamentals: Generation and Classification of Programming Languages, Compiling, Interpreting, Loading, Linking of a Program, Developing Program, Software Development.

Algorithms: Definitions, Different Ways of Stating Algorithms (Step-form, Pseudo-code, Flowchart), Strategy for Designing Algorithms, Structured Programming Concept.

Basics of C: Overview of C, Developing Programs in C, Parts of Simple C Program, Structure of a C Program, Comments, Program Statements, C Tokens, Keywords, Identifiers, Data Types, Variables, Constants, Operators and Expressions, Expression Evaluation—precedence and associativity, Type Conversions.

UNIT – II

Input-Output: Non-formatted and Formatted Input and Output Functions, Escape Sequences,

Control Statements: Selection Statements – if, if-else, nested if, nested if-else, comma operator, conditional operator, switch; Iterative Statements—while, for, do-while; Special Control Statement—goto, break, continue, return, exit.

Arrays and Strings: One and Two Dimensional Arrays, Character Arrays, Functions from ctype.h, string.h.

UNIT – III

Functions: Concept of Function, Using Functions, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions, Scope of Variables, Storage Classes, Inline Functions, and Recursion.

Pointers: Introduction, Address of Operator (&), Pointer, Uses of Pointers, Arrays and Pointers, Pointers and Strings, Dynamic Memory Allocation.

UNIT – IV

User-Defined Data Types: Declaring a Structure (Union) and its members, Initialization Structure (Union), Accessing members of a Structure (Union), Structures versus Unions, Enumeration Types.

Files: Introduction, Using Files, Working with Text Files and Binary Files, Other File Management Functions.

Text Book: Pradip Dey, Manas Ghosh, Computer Fundamentals and Programming in C (2e)


Reference Books:

1. Ivor Horton, Beginning C
2. Ashok Kamthane, Programming in C
3. Herbert Schildt, The Complete Reference C
4. Paul Deitel, Harvey Deitel, C How To Program
5. Byron S. Gottfried, Theory and Problems of Programming with C
6. Brian W. Kernighan, Dennis M. Ritchie, The C Programming Language
7. B. A. Forouzan, R. F. Gilberg, A Structured Programming Approach Using C

1. B. 

2. 

3. 

4. 

5. 






C – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to find the largest two numbers using if and conditional operator
2. Write a program to calculate arithmetic operations of two numbers using switch
3. Write a program to print the reverse of a given number
4. Write a program to print whether the given number is a prime or not.
5. Write a program to find largest and smallest elements in a given list of numbers.
6. Write a program to find the sum of two matrices.
7. Write a program to find the product of two matrices.
8. Write a program to print the reverse of a string.
9. Write a program to find the factorial of a positive integers using iteration and recursion
10. Write a program to find the GCD of two positive integers using iteration and recursion.
11. Write a program to demonstrate the call by value and the call by reference concepts.
12. Write a program to illustrate the use of Enumeration data type.
13. Write a program to illustrate the use of structure concept.
14. Write a program to illustrate the use of union concept.
15. Write a program to write content into a file and display contents of a file
16. Write a program to copy content of one file into another file and display the content of new file.

Note:

1. Write the Pseudo Code and draw Flow Chart for the above programs.
2. Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks on Windows 10.

1. B. 
2. 
3.  4. 
5. 

Programming in C++ (Semester – II)

Theory: 4 Hrs/Wk (4 Credits)

Practical: 3 Hrs/Wk (1 Credits)

Total Credits: 4+1=5Credits

UNIT – I

Introduction to C++: Applications, Example Programs, Tokens, Data Types, Operators, Expressions, Control Structures, Arrays, Strings, Pointers, Searching and Sorting Arrays.

Functions: Introduction, Prototype, Passing Data by Value, Reference Variables, Using Reference Variables as Parameters, Inline Functions, Default Arguments, Overloading Functions, Passing Arrays to Functions.

UNIT – II

Object Oriented Programming: Procedural Programming verses Object-Oriented Programming, Terminology, Benefits, OOP Languages, and OOP Applications.

Classes: Introduction, Defining an Instance of a Class, Why Have Private Members? Separating Class Specification from Implementation, Inline Member Functions, Constructors, Passing Arguments to Constructors, Destructors, Overloading Constructors, Private Member Functions, Arrays of Objects, Instance and Static Members, Friends of Classes, Member-wise Assignment, Copy Constructors, Operator Overloading.

UNIT – III

Inheritance: Introduction, Protected Members and Class Access, Base Class Access Specification, Constructors and Destructors in Base and Derived Classes, Redefining Base Class Functions, Polymorphism and Virtual Member Functions, Abstract Base Classes and Pure Virtual Functions, Multiple Inheritance.

C++ Streams: Stream Classes, Unformatted I/O Operations, Formatted I/O Operations.

UNIT – IV

Exceptions: Introduction, Throwing an Exception, Handling an Exception, Object-Oriented Exception Handling with Classes, Multiple Exceptions, Extracting Data from the Exception Class, Re-throwing an Exception.

Templates: Function Templates–Introduction, Function Templates with Multiple Type, Overloading with Function Templates, Class Templates – Introduction, Defining Objects of the Class Template, Class Templates and Inheritance.

Text Book: Tony Gaddis, Starting out with C++: from control structures through objects (7e)

Reference Books:

1. B. Lippman, C++ Primer
2. Bruce Eckel, Thinking in C++
3. K.R. Venugopal, Mastering C++
4. Herbert Schildt, C++: The Complete Reference
5. Bjarne Stroustrup, The C++ Programming Language
6. Sourav Sahay, Object Oriented Programming with C++

1. B. Lippman 2. Bruce Eckel 3. K.R. Venugopal 4. Bjarne Stroustrup 5. Herbert Schildt




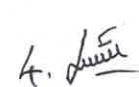

C++ – Lab

Practical: 3 Hrs/Wk (1 Credits)

1. Write a program to print the sum of digits of a given number.
2. Write a program to check whether the given number is Armstrong or not.
3. Write a program to check whether the given string is Palindrome or not.
4. Write a program to read student name, roll no, marks and display the same using class and object.
5. Write a program to find area of a rectangle, circle, and square using class and object.
6. Write a program to implement inline function inside and outside of a class for
 - a. Finding the area of a square
 - b. Finding the area of a cube
7. Write a program to implement friend function and friend class.
8. Write a program to implement constructor and destructor with in a class.
9. Write a program to demonstrate hierarchical inheritance.
10. Write a program to demonstrate multiple inheritances.
11. Write a program to demonstrate the constructor overloading.
12. Write a program to demonstrate static polymorphism.
13. Write a program to demonstrate dynamic polymorphism.
14. Write a program to implement polymorphism using pure virtual functions.
15. Write a program to demonstrate the function templates and class templates.
16. Write a program to demonstrate exception handling using try, catch, and finally.

Note:

1. Write the Pseudo Code and draw Flow Chart for the above programs.
2. Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocks on Windows 10.

1. B.  2.  3.  4.  5. 

B.A/B.Sc. (Computer Applications)

Model Question Paper (4 – Credits)

3 Hours

Max Marks -80

PART -A

Answer any EIGHT questions in part –A

8 x 4 M = 32

Marks

UNIT- I

- 1
- 2
- 3

UNIT- II

- 4
- 5
- 6

UNIT- III

- 7
- 8
- 9

UNIT- IV

- 10
- 11
- 12

PART – B

Answer All Questions

12 x 4 = 48 Marks

UNIT- I

- 13
- OR
- 14

UNIT- II

- 15
- OR
- 16

UNIT- III

- 17
- OR
- 18

UNIT- IV

- 19
- OR
- 20

1. B. Unit 2. A 3. Stu 4. Unit 5. Shr

SATAVAHANA UNIVERSITY, KARIMNAGAR
B.A. (Computer Applications)/B.Sc. (BZ Computer Applications)
V- SEMESTER

Object Oriented Programming with C++ (Paper-I)

Unit I: *Introduction to C++* : structure of C++ program, creating the source file, compiling and linking ,Tokens, Keywords, Identifiers and Constants , Basic Data types, User defined Data types, storage classes, Derived data types, Operators in C++,Arrays, Strings. *Functions in C++*: Introduction, The main function, Function Prototyping, Call by Reference, Return by reference, Inline Functions, Recursion, , Function Overloading, Friend and Virtual functions. *Principles of Object Oriented Programming* : A look at Procedure oriented programming, Object oriented programming paradigm, Basic concepts of Object Oriented Programming , Benefits of OOP, Object oriented languages, Applications of OOP.

Unit II: *Classes and Objects* : Specifying a Class, Defining member functions, making an Outside function inline, Nesting of member functions, Private member functions, Memory allocation for Objects , Static Data members, Static Member Functions, Arrays Of Objects, Objects as function arguments, returning objects, Pointers to members, Local Classes. *Constructors and Destructors*: Introduction, Constructors , Parameterized Constructors, Multiple constructors in a class, Constructor with default arguments , Dynamic initialization of Objects, Copy Constructor, Dynamic Constructors , Destructors. *Operator overloading and Type Conversions* : Defining Operator Overloading, Overloading Unary Operators, Overloading Binary Operators, Rules for Operator Overloading , Type Conversions.

Unit III: *Inheritance* : Introduction , Defining Derived Classes , Single Inheritance, Multi level Inheritance, Multiple Inheritance, Hierarchical Inheritance, Hybrid Inheritance, Virtual Base Classes , Abstract Classes, Constructors in derived classes, Nesting of classes. *Virtual functions and polymorphism* : Virtual Functions, Pure Virtual Functions, Virtual Constructors and Destructors. *Managing Console I/O operations* : C++ streams, C++ stream classes, Unformatted I/O Operations, Formatted console I/O Operations.

Unit IV: *Templates* : Introduction, Class templates , Function templates, Class templates with multiple parameters , Function templates with multiple parameters, Overloading of Template Functions. *Exception handling* : Introduction, Exception handling mechanism , Throwing and Catching an Exception, Re-throwing an Exception , Exceptions in Constructors and Destructors, Introduction to the Standard Template Library .

Text Book: E. Balagurusamy —Object Oriented Programming with C++|| TMH, 6th edition, 2013.

- Recommended Books :**
1. Reema Thareja —Object Oriented Programming with C++ Oxford university Press, 2015
 2. Richard Johnson, *An Introduction to Object-Oriented Application Development*, Thomson Learning, 2006
 3. B. Stroustrup, *The C++ Programming Language*, Addison Wesley, 2004.
 4. Herbert Schildt, C++: The Complete Reference Page 4 of 43

Object Oriented Programming with C++ Lab

1. Write a program to.
 - a. Print the sum of digits of a given number.
 - b. Check whether the given number is Armstrong or not
 - c. Print the prime number from 2 to n where n is natural number given.
2. Write a program to find largest and smallest elements in a given list of numbers and sort the given list.
3. Write a program to read the student name, roll no, marks and display the same using class and object.
4. Write a program to implement the dynamic memory allocation and de-allocation using new and delete operators using class and object.
5. Write a program to find area of a rectangle, circle, and square using constructors.
6. Write a program to implement copy constructor.
7. Write a program using friend functions and friend class.
8. Write a program to implement constructors
 - Default Constructor, Parameterized Constructor, Copy Constructor
 - Define the constructor inside/outside of the class
 - Implement all three constructors within a single class as well as use multiple classes(individual classes)
9. Write a program to implement the following concepts using class and object
 - Function overloading
 - Operator overloading (unary/binary(+ and -))
10. Write a program to demonstrate single inheritance, multilevel inheritance and multiple inheritances.
11. Write a program to implement the overloaded constructors in inheritance.
12. Write a program to implement the polymorphism and the following concepts using class and object.
 - Virtual functions
 - Pure virtual functions
13. Write a program to demonstrate inline functions
14. Write a program to demonstrate static polymorphism using method overloading.
15. Write a program to demonstrate dynamic polymorphism using method overriding and dynamic method dispatch.
16. Write a program to implement the template (generic) concepts
 - Without template class and object
 - With template class and object

SATAVAHANA UNIVERSITY, KARIMNAGAR
B.A. (Computer Applications)/B.Sc. (BZ Computer Applications)
V-SEMESTER
OPERATING SYSTEMS (Paper-II)

Unit I: Introduction: Computer-System Architecture, Computing Environments.

Operating-System Structures: Operating-System Services, User Interface for Operating-System, System Calls, Types of System Calls, Operating System Structure.

Process Management: Process Concept, Process Scheduling, Operations on Processes, Inter process Communication, Examples–Producer-Consumer Problem.

Unit II: CPU Scheduling: Concepts, Scheduling Criteria, Scheduling Algorithms.

Process Synchronization: Critical-Section Problem, Peterson’s Solution, Synchronization, Semaphores, Monitors. Deadlocks: System Model, Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock.

Unit III: Main Memory: Introduction, Swapping, Contiguous Memory Allocation, Segmentation, Paging.

Virtual Memory: Introduction, Demand Paging, Page Replacement, Allocation of Frames, Thrashing.

Unit IV: Mass-Storage Structure: Overview, Disk Scheduling, RAID Structure.

File Systems: File Concept, Access Methods, Directory and Disk Structure, File-System Mounting, Protection. File System Implementation, Directory Implementation, Allocation Methods, Free-Space Management.

Text Book:

Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Concepts (9e)

References:

1. Naresh Chauhan, Principles of Operating Systems
2. Thomas W. Doeppner, Operating Systems in Depth
3. Andrew S. Tanenbaum, Modern Operating Systems
4. William Stallings, Operating Systems – Internals and Design Principles
5. Dhananjay M. Dhandhere, Operating Systems – A Concept Based Approach

OPERATING SYSTEMS LAB

1.
 - a) Use vi editor to create different files, writing data into files, modifying data in files.
 - b) Use different types of Unix commands on the files created in first program.
2. Write shell programs using 'case', 'then' and 'if' & 'else' statements.
3. Write shell programs using while, do-while and for loop statements.
4.
 - a) Write a shell script that accepts two integers as its arguments and compute the value of first number raised to the power of the second number.
 - b) Write a shell script that takes a command –line argument and reports on whether it is directory, a file, or something else.
5.
 - a) Write a shell script that accepts a file name, starting and ending line numbers as arguments and displays all the lines between the given line numbers..
 - b) Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.
6.
 - a) Write a shell script that displays a list of all the files in the current directory to which the user has read, write and execute permissions.
 - b) Develop an interactive script that ask for a word and a file name and then tells how many times that word occurred in the file.
7. Write a program to simulate the UNIX commands like ls, mv, cp.
8. Write a program to convert upper case to lower case letters of a given ASCII file.
9. Write a program to program to search the given pattern in a file.
10. Write a program to demonstrate FCFS process schedules on the given data.
11. Write a program to demonstrate SJF process schedules on the given data.
12. Write a program to demonstrate Priority Scheduling on the given burst time and arrival times.
13. Write a program to demonstrate Round Robin Scheduling on the given burst time and arrival times.
14. Write a program to implementing Producer and Consumer problem using Semaphores.
15. Write a program to simulate FIFO, LRU, LFU Page replacement algorithms.
16. Write a program to simulate Sequential, Indexed and Linked file allocation.

SATAVAHANA UNIVERSITY, KARIMNAGAR
B.A. (Computer Applications)/B.Sc. (BZ Computer Applications)
VI-SEMESTER
VISUAL PROGRAMMING (Paper-I)

Unit I: Introduction to VB: Writing windows application with VB, Programming languages - procedural, object oriented, event driven; VB Environment, Writing first VB project, compiling, debugging, and running the programs.

Controls : Introduction to controls textboxes, frames, check boxes, option buttons, images, setting borders and styles, the shape control, the line control, working with multiple controls and their properties, designing the user interface, keyboard access, tab controls, default & cancel property, coding for controls.

Variables, constants, and Calculation: Data types, naming rules and conversion, constants-named and intrinsic, declaring variables, scope of variables, val function, arithmetic operations, formatting data Counting and accumulating Sums.

Unit II: Decisions and Conditions : If statement, Conditions comparing numeric variables and constants, comparing strings, compound conditions (and, or, not), nested if statements, using if statements with option buttons & check boxes, displaying message in message box, input validation. Calling event procedures, debugging VB projects, Debugging Step-by-Step Tutorial.

Modular programming: Menus, using common dialog box, writing general procedure.

Unit III: Forms Handling: Multiple forms, creating, adding, removing forms, hide, show method, load, unload statement, me keyword, referring to objects on a different forms, Variables and constants in Multiple-Forms.

Iteration Handling: Lists Boxes and Combo Boxes, Do/loops, for/next loops, using msgbox function, using string function Arrays: control Arrays, the case structure, single-dimension arrays, for Each/Next statement, table lookup, using list boxes with array, multi dimensional arrays.

Unit IV: Database Connectivity: VB and database, using the data control, viewing a database file-step-bystep, Navigating the Database in code, using list boxes and comboboxes as data-bound controls, adding a lookup table and navigation-step-by-step, updating a database file, Record sets, working with database fields, creating a new Dynaset.

Advanced topics in VB: ActiveX controls, Dynamic link libraries (DLL), Multiple Document interface (MDI).

Text Book:

1. Programming in Visual Basic 6.0 by Julia Case Bradley, Anita C. Millispangh (Tata Mcgraw Hill Edition 2000 (Fourteenth Reprint 2004))

VISUAL PROGRAMMING LAB

1. Print a table of numbers from 5 to 15 and their squares & Cubes.
2. Print the largest of three numbers.
3. Find the factorial of a number n.
4. Enter a list of positive numbers terminated by zero. Find the sum and average of these numbers.
5. A person deposits Rs. 1000 in a fixed account yielding 5% interest. Complete the amount in the account at the end of each year for n years.
6. Read n numbers. Count the number of negative numbers, positive numbers and zeros in the list.
7. Read n numbers. Count the number of negative numbers, positive numbers and zeroes in the list(use arrays)
8. Read a single dimension array. Find the sum and average of these numbers.
9. Read a two dimension array. Find the sum of two 2D Array
10. Write a program to Demonstrate Control Array.
11. Write a Program to perform String Manipulation Operations.
12. Develop a VB Application to check for Input Validations.
13. Develop a VB Application to Demonstrate MDI.
14. Develop a VB Application to Demonstrate Combobox and Listbox.
15. Develop a VB Application to Demonstrate Option Buttons and Check Boxes.
16. Develop a VB Application to deal the following Database Operations
 - a) Insert
 - b) Delete
 - c) Update
 - d) Display

SATAVAHANA UNIVERSITY, KARIMNAGAR
B.A. (Computer Applications)/B.Sc. (BZ Computer Applications)
VI-SEMESTER
COMPUTER NETWORKS (Paper-II)

Unit I: Introduction: Data Communication Components, Line Configuration, Topologies, Transmission Mode, Categories of Networks, ISO Reference Model–Layered Architecture, Functions of Layers, TCP/IP Reference Model.

Transmission Media: Guided Media–Twisted Pair Cable, Coaxial Cable, Optical Fiber, Unguided Media– Satellite Communication, and Cellular Telephony. Multiplexing: Frequency–Division Multiplexing, Time–Division Multiplexing.

Unit II: Data Link Layer: Error Detection–VRC, LRC, CRC, Checksum, Error Correction–Hamming Code, Burst Error Correction, Line Discipline–ENQ/ACK, Poll/Select, Flow Control–Stop-and- Wait, Sliding Window, Error Control–Stop-and-Wait ARQ, Sliding Window ARQ Go-Back-n ARQ, Selective-Reject ARQ.

Unit III: Local Area Networks: Introduction to IEEE 802, Ethernet-CSMA/CD, Implementation, Token Ring,-Token Passing, Implementation.

Switching: Circuit Switching, Packet Switching, Message Switching.

Unit IV: Networking and Internetworking Devices: Repeaters, Bridges, Routers, Gateways, Routers, Switches, Distance Vector Routing Algorithm, Link State Routing Algorithm.

Transport Layer: Duties of Transport Layer, Connection. Upper OSI Layers; Session Layer, Presentation Layer, Application Layer.

Text Book:

Behrouz A. Forouzan, Data Communication and Networking (2e Update)

References:

1. S.S. Shinde, Computer Networks
2. William Stallings, Data and Computer Communications
3. Andrew S. Tanenbaum, David J Wetherall, Computer Networks
4. Behrouz A Forouzan, Firouz Mosharraf, Computer Networks A Top-Down Approach
5. James F. Kurose, Keith W. Ross, Computer Networking: A Top-Down Approach
Featuring the Internet.

Computer Networks Lab

1. Write a program to create a socket and implement connect function.
2. Write a program to get MAC address.
3. Write a program to display hello world using signals.
4. Write a program for socket pair system call using IPC.
5. Write a program to implement the sliding window protocol.
6. Write a program to identify the category of IP address for a given IP address.
7. Write a program to print details of DNS host.
8. Write a program to implement listener and talker.
9. Write a program to implement TCP echo using client–server program.
10. Write a program to implement UDP echo using client–server program.
11. Write a UDP client–server program to convert lowercase letters to uppercase letters.
12. Write a TCP client–server program to convert a given string into reverse.
13. Write a UDP client–server program to convert a given string into reverse.
14. Write a program to implement TCP iterative client–server program.
15. Write a program to implement time service using TCP client–server program.
16. Write a program to implement time service using UDP client–server program.

Note: Write above program using ‘C’ or C++

B.Com (Computer Applications) Syllabus (CBCS)

(w.e.f. 2019–2020)



**FACULTY OF COMMERCE
SATAVAHANA UNIVERSITY
KARIMNAGAR - 505002 T.S.**

B.COM (Computer Applications)
CBCS COURSE STRUCTURE
 w.e.f. 2019-'20

Sl.No.	Code	Course Title	HPW	Credits	Exam Hrs	Marks
(1)	(2)	(3)	(5)	(6)	(7)	(8)
SEMESTER - I						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AECC1	Environmental Science	2	2	1 ½ hrs	40U+10I
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Fundamentals of Information Technology	3T+4P	5	1 ½ hrs	50T+35P + 15I
Total			27	25		
SEMESTER - II						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AECC2	Basic Computer Skills	2	2	1 ½ hrs	40U+10I
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Programming with C & C++	3T+4P	5	1 ½ hrs	50T+35P + 15I
Total			27	25		
SEMESTER - III						
13.	ELS3	English (First Language)	3	3		
14.	SLS3	Second Language	3	3		
15.	SEC1	a)Principles of Insurance/ b)Foundation of Digital Marketing/ c)Fundamentals of Business Analytics	2	2	1 ½ hrs	40U+10I
16.	SEC2	a)Practice of Life Insurance/ b)Web Design & Analytics/ c)Application of Business Analytics	2	2	1 ½ hrs	40U+10I
17.	DSC301	Advanced Accounting	5	5	3 hrs	80U+20I
18.	DSC302	Business Statistics-I	5	5	3 hrs	80U+20I
19.	DSC303	Relational Database Management System	3T+4P	5	1 ½ hrs	50T+35P + 15I
Total			27	25		
SEMESTER - IV						
20.	ELS4	English (First Language)	3	3		
21.	SLS4	Second Language	3	3		
22.	SEC3	a)Practice of General Insurance/ b)Social Media Marketing c)Business Intelligence	2	2	1 ½ hrs	40U+10I
23.	SEC4	a)Regulation of Insurance Business/ b)Search Engine Optimization & Online Advertising c)Data Visualisation&Storytelling	2	2	1 ½ hrs	40U+10I
24.	DSC401	Income Tax/Excel Foundation	5	5	3 hrs	80U+20I
25.	DSC402	Business Statistics-II	5	5	3 hrs	80U+20I

Faculty of Commerce, Satavahana University, Karimnagar Common syllabus (B.Com (C.A))

26.	DSC403	Web Technologies	3T+4P	5	1 ½ hrs	50T+35P+15I
		Total	27	25		
		SEMESTER - V				
27.	ELS5	English (First Language)	3	3		
28.	SLS5	Second Language	3	3		
29.	GE	a) Business Economics / b) Advanced Aspects of Income Tax	4	4	3 hrs	80U+20I
30.	DSE501	a) Cost Accounting/ b) Financial Planning & Performance/ c) International Financial Reporting-I	5	5	3 hrs	80U+20I
31.	DSE502	a) Computerized Accounting/ b) Financial Decision Making-I/ c) International Tax & Regulation	3T+4P/ 5	5	3 hrs	50T+35P + 15I/ 80U+20I
32.	DSE503	a) Management Information Systems/ b) Ecommerce/c) Mobile Applications	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	29/27	25		
		SEMESTER - VI				
33.	ELS6	English (First Language)	3	3		
34.	SLS6	Second Language	3	3		
35.	PR	Research Methodology and Project Report	2T+4R	4	1 ½ hrs	40U+10I 35R+15VV
36.	DSE601	a) Cost Control and Management Accounting/ b) Financial control/ c) International Financial Reporting-II	5	5	3 hrs	80U+20I
37.	DSE602	a) Theory and Practice of GST/ b) Financial Decision Making-II / c) International Auditing	3T+4P/ 5	5	3 hrs	50T+35P + 15I/ 80U+20I
38.	DSE603	a) Multimedia Systems/ b) Cyber Security/c) Data Analytics	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	31/29	25		
		GRAND TOTAL	168/164	150		

ELS: English Language Skill; **SLS:** Second Language Skill; **AEC:** Ability Enhancement Compulsory Course; **SEC:** Skill Enhancement Course; **DSC:** Discipline Specific Course; **DSE:** Discipline Specific Elective; **GE:** Generic Elective; **T:** Theory; **P:** Practical; **I:** Internal Exam **U:** University Exam; **PR:** Project Report; **VV:** Viva-Voce Examination.

Note: If a student should opt for "a" in SEC in III semester, the student has to opt for "a" only in IV semester and so is the case with "b" and "c". In the case of DSE also the rule applies.

SUMMARY OF CREDITS

Sl. No.	Course Category	No. of Courses	Credits Per Course	Credits
1	English Language	6	4/3	20
2	Second Language	6	4/3	20
3	AECC	2	2	4
4	SEC	4	2	8
5	GE	1	4	4
6	Project Report	1	4	4
7	DSC	12	5	60
8	DSE	6	5	30
	TOTAL	40		150
	Commerce	24		106
CREDITS UNDER NON-CGPA		NSS/NCC/Sports/Extra Curricular	Up to 6 (2 in each year)	
		Summer Internship	Up to 4 (2 in each after I & II years)	

Paper DSC 101: FINANCIAL ACCOUNTING - I

Objective: To acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader.

UNIT-I: ACCOUNTING PROCESS:

Financial Accounting: Introduction – Definition – Evolution – Functions-Advantages and Limitations –Users of Accounting Information- Branches of Accounting – Accounting Principles: Concepts and Conventions- Accounting Standards– Meaning – Importance – List of Accounting Standards issued by ASB – Accounting System- Types of Accounts – Accounting Cycle- Journal- Ledger and Trial Balance. (Including problems)

UNIT-II: SUBSIDIARY BOOKS:

Meaning –Types - Purchases Book - Purchases Returns Book - Sales Book - - Sales Returns Book - Bills Receivable Book - Bills Payable Book – Cash Book - Single Column, Two Column, Three Column and Petty Cash Book - Journal Proper.(Including problems)

UNIT-III: BANK RECONCILIATION STATEMENT:

Meaning – Need - Reasons for differences between cash book and pass book balances – Favourable and over draft balances – Ascertainment of correct cash book balance (Amended Cash Book) - Preparation of Bank Reconciliation Statement. (Including problems)

UNIT-IV: RECTIFICATION OF ERRORS AND DEPRECIATION:

Capital and Revenue Expenditure – Capital and Revenue Receipts: Meaning and Differences - Differed Revenue Expenditure. Errors and their Rectification: Types of Errors - Suspense Account – Effect of Errors on Profit. (Including problems)

Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortization and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method (Including problems)

UNIT-V: FINAL ACCOUNTS:

Final Accounts of Sole Trader: Meaning -Uses -Preparation of Manufacturing, Trading and Profit & Loss Account and Balance Sheet – Adjustments – Closing Entries.(Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Company.
2. Principles & Practice of Accounting: R.L.Gupta&V.K.Gupta, Sultan Chand.
3. Accountancy-I: S.P. Jain & K.L Narang, Kalyani Publishers.
4. Accountancy–I: Tulasian, Tata McGraw Hill Co.
5. Introduction to Accountancy: T.S.Grewal, S.Chand and Co.
6. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheshwari, Vikas.
7. Fundamentals of Financial Accounting: Deepak Sehgil, Tax Mann Publication.
8. Financial Accounting: JawaharLal, Himalaya Publishing House.

Paper DSC 102: BUSINESS ORGANISATION AND MANAGEMENT

Objective: To acquaint the students with the basics of Commerce and Business concepts and functions, forms of Business Organization and functions of Management.

UNIT-I: INTRODUCTION AND FORMS OF BUSINESS ORGANISATIONS:

Concepts of Business, Trade, Industry and Commerce - Objectives and functions of Business –Social Responsibility of a business - Forms of Business Organization - Meaning, Characteristics, Advantages and Disadvantages of Sole Proprietorship – Meaning, Characteristics, Advantages and Disadvantages of Partnership - Kinds of Partners - Partnership Deed -Concept of Limited liability partnership – Meaning, Characteristics, Advantages and Disadvantages of Hindu Undivided Family – Meaning, Advantages and Disadvantages of Co-Operative Organization.

UNIT-II: JOINT STOCK COMPANY:

Joint Stock Company - Meaning - Definition - Characteristics - Advantages and Disadvantages - Kinds of Companies - Promotion - Stages of Promotion - Promoter - Characteristics - Kinds - Preparation of Important Documents - Memorandum of Association - Clauses - Articles of Association - Contents – Prospectus - Contents – Red herring Prospectus- Statement in lieu of Prospectus (As per Companies Act. 2013).

UNIT-III: INTRODUCTION TO FUNCTIONS OF MANAGEMENT:

Management - Meaning - Characteristics - Functions of Management - Levels of Management – Skills of Management- Scientific Management - Meaning - Definition - Objectives - Criticism – Fayol’s 14 Principles of Management .

UNIT-IV: PLANNING AND ORGANISING: Meaning - Definition - Characteristics - Types of Plans - Advantages and Disadvantages – Approaches to Planning - Management by Objectives (MBO) - Steps in MBO - Benefits –Weaknesses—Definition of Organizing-Organization-Process of Organizing - Principles of Organization - Formal and Informal Organizations - Line, Staff Organizations - Line and Staff Conflicts - Functional Organization - Span of Management - Meaning - Determining Span - Factors influencing the Span of Supervision.

UNIT-V: AUTHORITY, COORDINATION AND CONTROL:

Meaning of Authority, Power, responsibility and accountability - Delegation of Authority - Decentralization of Authority - Definition, importance, process, and principles of Coordination-techniques of Effective Coordination - Control - Meaning - Definition – Relationship between planning and control -Steps in Control – Types (post, current and pre-control) - Requirements for effective control.

SUGGESTED READINGS:

1. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
2. Business Organisation & Management: Patrick Anthony, Himalaya Publishing House
3. Business Organization & Management: Dr. Manish Gupta, PBP.
4. Organization & Management: R. D. Agarwal, McGraw Hill.
5. Modern Business Organization: S.A. Sherlekar, V.S. Sherlekar, Himalaya Publishing House
6. Business Organization & Management: C.R. Basu, Tata McGraw Hill
7. Business Organization & Management: M.C. Shukla S. Chand,
8. Business Organisation and Management: D.S. Vittal, S. Chand
9. Organizational Behaviour Text & Cases: V.S.P. Rao, Himalaya Publishing House
10. Business Organization & Management: Uma Shekaram, Tata McGraw Hill
11. Business Organization & Management: Niranjan Reddy & Surya Prakash, Vaagdevi publishers
12. Business Organisation and Management, Dr.Neeru Vasihth, Tax Mann Publications.
- 13.

Paper DSC 103: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Hours Per Week: 6 (4T+2P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: To understand the basic concepts and terminology of information technology and to identify issues related to information security.

UNIT-I: INTRODUCTION TO COMPUTERS:

Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Generations of Computer, Classification of Computers, Applications of Computer, Capabilities and limitations of computer.

Role of I/O devices in a computer system. **Input Units:** Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, **Output Units:** Monitors and its types. Printers: Impact Printers and its types. Non-Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.

UNIT -II: COMPUTER ARITHMETIC & STORAGE FUNDAMENTALS:

Binary, Binary Arithmetic, Number System: Positional & Non Positional, Binary, Octal, Decimal, Hexadecimal, Converting from one number system to another.

Primary Vs Secondary Storage, Data storage & retrieval methods. **Primary Storage:** RAM ROM, PROM, EPROM, EEPROM. **Secondary Storage:** Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives.

UNIT-III: SOFTWARE:

Software and its needs, Types of S/W. **System Software:** Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages. **Application S/W** and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w.

UNIT-IV: OPERATING SYSTEM:

Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multiprogramming, Multi Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.

UNIT-V: DATA COMMUNICATION:

Data, Communication, Basic Networking Devices, Communication Process, Data Transmission speed, Communication Types (modes), Data Transmission Media, Modem and its working, characteristics, Types of Networks, LAN Topologies, Computer Protocols, Concepts relating to networking.

SUGGESTED READINGS:

Computer Fundamentals: P.K. Sinha

Paper AEC2: BASIC COMPUTER SKILLS

Hours Per Week: 2

Credits: 2

Exam Hours: 1 ½

Marks: 40U+10I

Objective: to impart a basic level understanding of working of a computer and its usage.

UNIT I: UNDERSTANDING OF COMPUTER AND WORD PROCESSING:

Knowing computer: What is Computer, Basic Applications of Computer; Components of Computer System, Central Processing Unit (CPU), VDU, Keyboard and Mouse, Other input/output Devices, Computer Memory, Concepts of Hardware and Software; Concept of Computing, Data and Information; Applications of IECT; Connecting keyboard, mouse, monitor and printer to CPU and checking power supply.

Operating Computer using GUI Based Operating System:What is an Operating System; Basics of Popular Operating Systems; The User Interface, Using Mouse; Using right Button of the Mouse and Moving Icons on the screen, Use of Common Icons, Status Bar, Using Menu and Menu-selection, Running an Application, Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Opening and closing of different Windows; Using help; Creating Short cuts, Basics of O.S Setup; Common utilities.

Understanding Word Processing:Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.

UNIT II: SPREAD SHEET, PRESENTATION SOFTWARE & INTRODUCTION TO INTERNET, WWW AND WEB BROWSERS:

Using Spread Sheet:Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.

Basics of presentation software: Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts.

Introduction to Internet, WWW and Web Browsers:

Introduction to Internet:Basic of Computer networks; LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting.

World Wide Web: Search Engines; Understanding URL; Domain name; IP Address; Using e-governance website.

Web Browsing: Software, Communications and collaboration: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging; Netiquettes.

SUGGESTED READINGS:

1. Introduction to Computers, Peter Norton, McGrawHill , 2012.
2. Using Information Technology, Brian K williams, StaceyC.Sawyer, Tata McGrawHill.

Web Resources:

1. <https://online.stanford.edu/courses/soe-yccscs101-sp-computer-science-101>
2. <https://www.extension.harvard.edu/open-learning-initiative/intensive-introduction-computer-science>.

Paper DSC 201: FINANCIAL ACCOUNTING-II

Objective: To acquire accounting knowledge of bills of exchange and other business accounting methods.

UNIT-I: BILLS OF EXCHANGE:

Bills of Exchange - Definition- Distinction between Promissory note and Bills of exchange- Accounting treatment of Trade bills: Books of Drawer and Acceptor- Honour and Dishonour of Bills- Renewal of bills- Retiring of bills under rebate- Accommodation bills.(Including problems)

UNIT-II: CONSIGNMENT ACCOUNTS:

Consignment – Meaning – Features– Proforma invoice - Account sales – Del credere commission-Accounting treatment in the books of the consignor and the consignee - Valuation of consignment stock –Treatment of Normal and abnormal Loss - Invoice of goods at a price higher than the cost price. (Including problems)

UNIT-III: JOINT VENTURE ACCOUNTS:

Joint Venture – Meaning –Features-Difference between Joint Venture and Consignment-Accounting Procedure-Methods of Keeping Records for Joint Venture Accounts-Method of Recording in co-ventures books-Separate Set of Books Method- Joint Bank Account-Memorandum Joint Venture Account (Including problems)

UNIT-IV: ACCOUNTS FROM INCOMPLETE RECORDS:

Single Entry System – Meaning -Features–Difference between Single Entry and Double Entry systems -Defects in Single Entry System - Books and accounts maintained - Ascertainment of Profit - Statement of Affairs and Conversion method (Including problems)

UNIT-V: ACCOUNTING FOR NON-PROFIT ORGANIZATIONS:

Non- Profit Organization – Meaning – Features – Receipts and Payments Account – Income and Expenditure Account – Balance Sheet(Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Co.
2. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
3. Accountancy–I: Tulasian, Tata McGraw Hill Co.
4. Accountancy–I: S.P. Jain & K.L Narang, Kalyani.
5. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
6. Advanced Accountancy: M Shrinivas& K Sreelatha Reddy, Himalaya Publishers.
7. Financial Accounting: M.N Arora, Tax Mann Publications.

Paper DSC 202: BUSINESS LAWS

Objective: To understand basics of contract act, sales of goods act, IPRs and legal provisions applicable for establishment, management and winding up of companies in India.

UNIT-I: INDIAN CONTRACT ACT:

Agreement and contract - Essentials of a valid contract - Types of contracts - Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance – Consideration definition - Essentials of valid consideration -Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach - Significance of Information Technology Act.

UNIT-II: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT:

Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell – Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act 1986: Definitions of Consumer – Person – Goods - Service -Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Agencies - Appeals.

UNIT-III: INTELLECTUAL PROPERTY RIGHTS:

Trade Marks: Definition - Registration of Trade Marks - Patents: Definition - Kinds of Patents - Transfer of the Patent Rights - Rights of the Patentee - Copy Rights: Definition -- Rights of the Copyright Owner - Terms of Copy Right - Copy Rights Infringement - Other Intellectual Property Rights: Trade Secrets - Geographical Indications.

UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS:

Director: Qualification - Disqualification - Position - Appointment - Removal – Duties and Liabilities – Loans – Remuneration – Managing Director – Corporate Social Responsibility – Corporate Governance. Meeting: Meaning – Requisites - Notice – Proxy - Agenda – Quorum – Resolutions – Minutes – Kinds – Shareholder Meetings - Statutory Meeting - Annual General Body Meeting – Extraordinary General Body Meeting – Board Meetings.

UNIT-V: WINDING UP:

Meaning – Modes of Winding Up –Winding Up by tribunal – Voluntary Winding Up – Compulsory Winding Up – Consequences of Winding Up – Removal of name of the company from Registrar of Companies – Insolvency and Bankruptcy code - 2016.

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law: Rajashree. – HPH
- 3) Business Law - Kavitha Krishna, Himalaya Publishing House
- 4) Business Laws – Dr. B. K. Hussain, Nagalakshmi - PBP
- 5) Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
- 6) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 7) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 8) Corporate Law: PPS Gogna, S Chand.
- 9) Business Law: D.S. Vital, S Chand
- 10) Company Law: Bagrial AK, Vikas Publishing House.

Paper DSC 203:PROGRAMMING WITH C & C++

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: To understand the fundamental concepts of programming in C and Object Oriented Programming using C++.

UNIT-I: INTRODUCTION TO C LANGUAGE, VARIABLES, DATA TYPES AND OPERATORS

Introduction: Types of Languages- History of C language – Basic Structure –Programming Rules – Flow charts-algorithms–Commonly used library functions - Executing the C Program - Pre-processors in “C”- Keywords & Identifiers – Constants – **Variables:** Rules for defining variables - Scope and Life of a Variable– **Data types** - Type Conversion - Formatted Input and Output operations. **Operators:** Introduction – Arithmetic – Relational – Logical – Assignment - Conditional - Special - Bitwise - Increment / Decrement operator.

UNIT-II: WORKING WITH CONTROL STATEMENTS, LOOPS

Conditional statements: Introduction - If statements - If-else statements – nested if-else – break statement-continue statement-go to statement-Switch statements. **Looping statements:** Introduction- While statements – Do-while statements - For Statements-nested loop statements.

UNIT-III: FUNCTIONS, ARRAYS AND STRINGS

Functions: Definition and declaration of functions- Function proto type-return statement- types of functions-formatted and unformatted functions. **Built in functions:** Mathematical functions - String functions - Character functions - Date functions.**User defined functions:** Introduction - Need for user defined functions - Elements of functions – Function call – call by value and call by reference - Recursive functions.**Arrays:** Introduction - Defining an array - Initializing an array –characteristics of an array- One dimensional array – Two dimensional array – Multi dimensional array. **Strings:** Introduction - Declaring and initializing string - Reading and Writing strings - String standard functions.

UNIT-IV: POINTERS, STRUCTURES AND UNIONS

Pointers: Features of pointers- Declaration of Pointers-arithmetic operations with pointers

Structures: Features of Structures - Declaring and initialization of Structures –Structure within Structure- Array of Structures- Enumerated data type-**Unions**-Definition and advantages of Unions comparison between Structure & Unions.

UNIT-V: OBJECT ORIENTED CONCEPTS USING C++

Object Oriented Programming: Introduction to Object Oriented Programming - Structure of C++ – Simple program of C++– Storage Classes-Similarities and Differences between C & C++ - Data Members-Member Functions - Object Oriented Concepts-Class-Object-Inheritance-Polymorphism-Encapsulation-Abstraction.

SUGGESTED READINGS:

1. Programming with C& C++ :IndrakantiSekhar, V.V.R.Raman&V.N.Battu, Himalaya Publishers.
2. Programming in ANSI C: Balagurusamy, McGraw Hill.
3. Mastering C: K.R. Venugopal, McGraw Hill.
4. C: The Complete Reference: H.Schildt, McGraw Hill.
5. Let Us C: Y.Kanetkar, BPB.
6. Objected Oriented Programming with C++: E. Balagurusamy, McGraw Hill.
7. Mastering C++: KR.Venugopal&R.Buyya, McGraw Hill.
8. Schaum’s Outlines: Programming with C++: by John R Hubbard.
9. Let Us C++: Y.Kanetkar, BPB.

Paper SEC1 (a): PRINCIPLES OF INSURANCE

Objective: To make students to learn the Principles of Insurance.

UNIT I: RISK MANAGEMENT AND INSURANCE & INSURANCE TERMINOLOGY:

Risk Management –Types of Risks – Actual and Consequential Losses – Management of Risks – Different Classes of Insurance – Importance of Insurance – Management of Risk by Individuals and Insurers – Fixing of Premiums – Reinsurance– Role of Insurance in Economic Development and Social Security – Constituents of Insurance Market – Operations of Insurance Companies – Operations of Intermediaries – Specialist Insurance Companies – Role of Regulators – Common and specific terms in Life and Non Life Insurance - Understanding Insurance Customers – Customer Behavior at Purchase Point – Customer Behavior when Claim Occurs – Importance of Ethical Behavior.

UNIT II: INSURANCE CONTRACT AND INSURANCE PRODUCTS:

Insurance Contract Terms – Principles of Insurance: Principle of Insurable Interest, Principle of Indemnity, Principle of Subrogation, Principle of Contribution, Relevant Information Disclosure, Principle of utmost Good Faith, Relevance of Proximate Cause - Life Insurance Products: Risk of Dying Early – Risk of Living too Long – Products offered – Term Plans – Pure Endowment Plans – Combinations of Plans – Traditional Products – Linked Policies – Features of Annuities and Group Policies - General Insurance Products: Risks faced by Owner of Assets – Exposure to Perils – Features of Products Covering Fire and Allied Perils – Products covering Marine and Transit Risks – Products covering Financial Losses due to Accidents – Products covering Financial Losses due to Hospitalization – Products Covering Miscellaneous Risks.

SUGGESTED READINGS:

1. Principles of Insurance : A Publication of the Insurance Institute of India
2. Principles of Insurance : Telugu Academy, Hyderabad
3. Guide to Risk Management : SagarSanyal
4. Principles of Insurance : Dr V Padmavathi, Dr V Jayalakshmi - PBP
5. Insurance and Risk Management : P.K. Gupta
6. Insurance Theory and Practice : Tripathi PHI
7. Principles of Insurance Management: Neelam C Gulati, Excel Books
8. Life and Health Insurance : Black, JR KENNETH & Harold Skipper, Pearson
9. Principles of Risk Management and Insurance: George E Rejda (13th Edition)
10. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt . South Western College Publishing, Cincinnati, Ohio

Suggested Websites:

- 1) www.irda.gov.in 2) www.policyholder.gov.in 3) www.irdaindia.org.in

Paper SEC1 (b): FOUNDATION OF DIGITAL MARKETING

Objective: To make students to learn Foundation of digital marketing.

UNIT I: DIGITAL MARKETING FOUNDATIONS:

Digital Marketing Strategy – Exploring Digital Marketing – Starting with the Website – Foundations of Analytics – Search Engine Optimization – Search and Display Marketing – Social Media Marketing – Video Marketing.

UNIT II: OPTIMIZING MARKETING EMAILS, MOBILE MARKETING

FOUNDATIONS AND CONTENT MARKETING FOUNDATIONS:

Email marketing tools and setup – Email marketing segmentation, personalization and mobile friendly design – Content marketing foundations – Blogs for content marketing – Content marketing for staying relevant – Newsletters for content marketing – Mobile marketing foundations.

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Foundations of Digital Marketing: Dr. K.V. NAgaraj.KUsha Rani - PBP
4. Digital Marketing by Vandana Ahuja, Oxford
5. Digital Marketing by Seema Gupta, McGraw Hill
6. Digital Marketing For Dummies by Ryan Deiss and Russ Henneberry

Paper SEC1 (c) FUNDAMENTALS OF BUSINESS ANALYTICS

Objective: To make students to understand the Fundamentals of Business Analytics.

UNIT I: USING DATA TO DRIVE BUSINESS DECISIONS:

Need for data-driven decision making: Solving the business problem using Analytics - Overview of the Business Analytics cycle - Hierarchy of information user - The complete Business Analytics professional: Understanding Business Analyst roles and responsibilities - Identify the Popular Business Analytics Tools.

UNIT II: DATA ANALYTICS USING EXCEL:

Basics of Excel: Organizing data with Excel - Performing simple computations and aggregations using Excel - Working with Summing and other Reporting functions in Excel - Working with pivot tables and charts - Using Excel for Data Analytics: Power Query - Power Pivot - Power view - Power Map - Building tips - Display tips - Keyboard shortcuts - Mouse shortcuts - Standardized layouts - Understanding table based and spreadsheet-based layouts - Best practices - Setting data rules and Cleaning data - Format as table - Data cleansing techniques using External Data - Searching and Combining Data with Power Query: Getting started with Power Query - Know the Environment tabs and toolbars - Access new or existing reports - Importing and combining data from databases, web, files - Splitting and aggregating data - Query data from SQL - Working in the Select Part of an SQL Query - Managing SQL commands - Managing Tables - Discovering and Analyzing Data with Power Pivot: Database concepts - Loading Data into Power Pivot - Using Power Query and Power map add-ins - Designing Pivot Table reports - Filtering data - Creating Custom functions and formulas - Formatting Pivot Tables - Managing Power Pivot Data - Setting Connection properties - Managing Data sources - Configuring Pivot Table Options

SUGGESTED READINGS:

1. Fundamentals of Business Analytics, 2nd Edition; R N Prasad; Wiley
2. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
3. Monetizing Your Data: A Guide to Turning Data into Profit-Driving Strategies and Solutions; Andrew Roman Wells, Kathy Williams Chiang; Wiley
4. Excel Data Analysis: Your visual blueprint for creating and analyzing data, charts and PivotTables, 3rd Edition; Denise Etheridge; Wiley
5. Microsoft Excel 2019 Formulas and Functions (Business Skills), 1st Edition; Paul McFedries; Microsoft
6. Excel Statistics: A Quick Guide, 3rd edition; Neil J. Salkind; Sage Publications
7. Microsoft Excel 2019: For Beginners; J. Davidson
8. Microsoft Excel 2019: Learn Excel Basics with Quick Examples; James Jackson

Paper SEC2 (a): PRACTICE OF LIFE INSURANCE

Objectives: To make students to learn Practice of Life Insurance.

UNIT-I: INTRODUCTION TO LIFE INSURANCE AND TYPES OF LIFE INSURANCE POLICIES AND PREMIUM CALCULATION: Meaning evolution, growth and principles of Life Insurance –Life Insurance Organizations in India – Competition and Regulation of Life Insurance - Types of Life Insurance Policies – Term, Whole Life, Endowment, Unit Linked and with or without Profit Policies – Customer Evaluation – Policy Evaluation – Group and Pension Insurance Policies – Special features of Group Insurance/Super Annuation Schemes – Group Gratuity Schemes. Computation of Premiums - Meaning of Premium, its calculation- Rebates – Mode of Rebates – Large sum assured Rebates – Premium Loading – Rider Premiums – Computation of Benefits – Surrender value – Paid up value.

UNIT-II: SETTLEMENT OF CLAIMS RISK & UNDERWRITINGS AND FINANCIAL PLANNING & TAX SAVING: Settlement of claims: Intimation Procedure, documents and settlement procedures - Underwriting: The need for underwriting – Guiding principles of Underwriting – Factors affecting Insurability – Methods of Life Classification – Laws affecting Underwriting - Financial Planning and taxation: Savings – Insurance vis-à-vis- Investment in the Units Mutual Funds, Capital Markets – Life Insurance in Individual Financial Planning – Implications in IT treatment.

SUGGESTED READINGS:

1. Practice of Life Insurance: Insurance Institute of India, Mumbai.
2. Insurance and Risk Management: P.K.Gupta, Himalaya Publishing House, Mumbai.
3. Fundamentals of Life Insurance Theories and Applications: Kanika Mishra, Prentice Hall
4. Principles of Life Insurance – Dr. V. Padmavathi, Dr. V. Jayalakshmi - PBP
5. Managing Life Insurance: Kutty, S.K., Prentice Hall of India: New Delhi
6. Life and Health Insurance: Black, Jr. Kenneth and Harold Skipper Jr., Prentice Hall, Inc., England.
7. Life Insurance: Principles and Practice: K.C. Mishra and C.S. Kumar, Cengage Learning, New Delhi.
8. Life Insurance in India: Sadhak, Respose Books, New Delhi.

Paper SEC2 (b): WEB DESIGN AND ANALYTICS

Objective: To make students to understand the Web Design and Analytics.

UNIT I: WEB DESIGN AND OPTIMIZING CONVERSION RATES:

Exploring and learning web design – Understanding Conversion rate optimization (CRO) – Setting CRO – Understanding target audience – Pptimization champion

UNIT II: GOOGLE ANALYTICS:

Getting started with Google Analytics – Core concepts – Additional interface features – Using reports – Audience reports – Acquisition reports – Social reports – Behavior reports – Track events – Conversion reports – Additional features

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Digital Marketing by Vandana Ahuja, Oxford
4. Digital Marketing by Seema Gupta, McGraw Hill
5. Digital Marketing For Dummies by Ryan Deiss and Russ Henneberry
6. Don't Make Me Think Revisited: A Common Sense Approach to Web Usability By Steve Krug
7. Web Analytics 2.0 – Avinash Kaushik
8. Successful Analytics by Brian Clifton
9. Math and Stats for Web Analytics and Conversion Optimization by Himanshu Sharma

Paper SEC2 (c): APPLICATION OF BUSINESS ANALYTICS

Objective: To make students to understand the Analytics of Application of Business Analytics..

UNIT I: STATISTICS USING EXCEL:

Descriptive statistics using Excel: Describe data using charts and basic statistical measures – Histograms - Pareto charts – Boxplots - Treemap and Sunburst charts - Inferential Statistics using Excel: Correlation and Regression - Probability distribution – Sampling techniques – Hypothesis testing

UNIT II: GETTING STARTED WITH R:

Introduction to R and RStudio components: Read datasets into R - Export data from R - Manipulate and Process Data in R - Use functions and packages in R - Demonstrate with a Case Study to perform basic analytics using R

SUGGESTED READINGS:

1. Microsoft Business Intelligence Tools for Excel Analysis; Michael Alexander, Jared Decker, Bernard Wehbe; Wiley
2. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
3. Excel Data Analysis: Your visual blueprint for creating and analyzing data, charts and PivotTables, 3rd Edition; Denise Etheridge; Wiley
4. Microsoft Excel 2019 Formulas and Functions (Business Skills), 1st Edition; Paul McFedries; Microsoft
5. Microsoft Excel Data Analysis for Dummies, 3rd edition; Stephen L. Nelson, E. C. Nelson; Wiley
6. Data Analytics with R; BhartiMotwani; Wiley

Paper DSC 301: ADVANCED ACCOUNTING

Objective: To acquire accounting knowledge of partnership firms and joint stock companies

UNIT-I: PARTNERSHIP ACCOUNTS-I:

Meaning – Partnership Deed - Capital Accounts (Fixed and Fluctuating) – Admission of a Partner – Retirement and Death of a Partner (Excluding Joint Life Policy)(Including problems)

UNIT-II: PARTNERSHIP ACCOUNTS–II:

Dissolution of Partnership – Insolvency of a Partner (excluding Insolvency of all partners) – Sale to a Company (Including problems)

UNIT-III: ISSUE OF SHARES, DEBENTURES, UNDERWRITING AND BONUS SHARES:

Issue of Shares at par, premium and discount – Pro-rata allotment – Forfeiture and Re-issue of Shares – Issue of Debentures with Conditions of Redemption – Underwriting: Meaning – Conditions- Bonus Shares: Meaning – SEBI Guidelines for Issue of Bonus Shares – Accounting of Bonus Shares(Including problems)

UNIT-IV: COMPANY FINAL ACCOUNTS AND PROFIT PRIOR TO INCORPORATION:

Companies Act 2013: Structure – General Instructions for preparation of Balance Sheet and Statement of Profit and Loss – Part-I: Form of Balance Sheet – Part-II: Statement of Profit and Loss – Preparation of Final Accounts of Companies - Profits Prior to Incorporation- Accounting treatment. (Including problems)

UNIT-V: VALUATION OF GOODWILL AND SHARES:

Valuation of Goodwill: Need – Methods: Average Profits, Super Profits and Capitalization Methods -Valuation of Shares: Need –Net Assets, Yield and Fair Value Methods. (Including problems)

SUGGESTED READINGS:

1. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
2. Advanced Accountancy: Shukla and Grewal, S.Chand & Co.
3. Advanced Accountancy: R.L.Gupta & Radhaswamy, Sultan Chand & Sons.
4. Advanced Accountancy (Vol-II): S.N.Maheshwari & V.L.Maheshwari, Vikas.
5. Advanced Accountancy: Dr. G. Yogeshwaran, Julia Allen - PBP
6. Accountancy–III: Tulasian, Tata McGraw Hill Co.
7. Advanced Accountancy: Arulanandam; Himalaya.
8. Accountancy–III: S.P. Jain & K.L Narang, Kalyani Publishers.
9. Guidance Note on the Revised Schedule VI to the Companies Act, 1956, The Institute of Chartered Accounts of India.
10. Advanced Accounting (IPCC): D. G. Sharma, Tax Mann Publications.

Paper DSC 302: BUSINESS STATISTICS -I

Objective: to inculcate analytical and computational ability among the students.

UNIT-I: INTRODUCTION:

Origin and Development of Statistics – Definition - Importance and Scope - Limitations of Statistics - Distrust of Statistics.

Statistical Investigation: Planning of statistical investigation - Census and Sampling methods - Collection of primary and secondary data - Statistical errors and approximation - classification and Tabulation of data - Frequency distribution.

UNIT – II: DIAGRAMMATIC AND GRAPHIC PRESENTATION:

Diagrammatic presentation: One Dimensional and Two Dimensional Diagrams – Pictograms – Cartograms Graphic presentation: Technique of Construction of Graphs - Graphs of Frequency Distribution - Graphs of Time Series or Histograms.

UNIT-III: MEASURES OF CENTRAL TENDENCY:

Introduction –Significance -Arithmetic Mean- Geometric Mean - Harmonic Mean - Mode – Median - Quartiles and Percentiles - Simple and Weighted Averages - Uses and Limitations of different Averages.

UNIT-IV: MEASURES OF DISPERSION, SKEWNESS AND KURTOSIS:

Measures of Dispersion: Significance - Characteristics - Absolute and Relative Measures - Range - Quartile Deviation - Mean Deviation- Standard Deviation - Coefficient of Variation.

Measures of Skewness - Karl Pearson's Coefficient of Skewness - Bowley's Coefficient of Skewness - Kelly's Measure of Skewness – Kurtosis: Mesokurtosis, Platy kurtosis and Leptokurtosis.

UNIT-V: CORRELATION:

Meaning -Types - Correlation and Causation – Methods: Scatter Diagram - Karl Person's Coefficient of Correlation - Probable Error and Interpretation of Coefficient of Correlation - Rank Correlation - Concurrent Deviation Method.

SUGGESTED READINGS:

1. Statistics for Management: Levin & Rubin, Pearson
2. Fundamentals of Statistics: Gupta S.C, Himalaya
3. Statistics: E. Narayanan Nadar, PHI Learning
4. Business Statistics –I: Dr. Obul Reddy, Dr. D. Shridevi - PBP
5. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
6. Business Statistics: K. Alagar, Tata McGraw Hill
7. Fundamentals of Statistical: S. P Gupta, Sultan Chand
8. Business Statistics: J. K. Sharma, Vikas Publishers
9. Business Statistics: S. L Aggarwal, S. L. Bhardwaj, Kalyani Publications
10. Statistics-Problems and Solutions: Kapoor V.K, S. Chand
11. Statistics - Theory, Methods and Applications: Sancheti D.C. &Kapoor V.K
12. Business Statistics: S. K. Chakravarty, New Age International Publishers
13. Statistics: Andasn,Sweenly,Williams,Cingage.

Paper DSC 303: RELATIONAL DATABASE MANAGEMENT SYSTEM

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: to acquire basic conceptual background necessary to design and develop simple database system, Relational database mode, ER model and distributed databases, and to write good queries using a standard query language called SQL.

UNIT-I: BASIC CONCEPTS: Database Management System - File based system - Advantages of DBMS over file based system - Database Approach - Logical DBMS Architecture - Three level architecture of DBMS or logical DBMS architecture - Need for three level architecture - Physical DBMS Architecture - Database Administrator (DBA) Functions & Role - Data files indices and Data Dictionary - Types of Database. Relational and ER Models: Data Models - Relational Model – Domains - Tuple and Relation - Super keys - Candidate keys - Primary keys and foreign key for the Relations - Relational Constraints - Domain Constraint - Key Constraint - Integrity Constraint - Update Operations and Dealing with Constraint Violations - Relational Operations - Entity Relationship (ER) Model – Entities – Attributes – Relationships - More about Entities and Relationships - Defining Relationship for College Database - E-R Diagram - Conversion of E-R Diagram to Relational Database.

UNIT-II: DATABASE INTEGRITY AND NORMALISATION: Relational Database Integrity - The Keys - Referential Integrity - Entity Integrity - Redundancy and Associated Problems – Single Valued Dependencies – Normalisation - Rules of Data Normalisation - The First Normal Form - The Second Normal Form - The Third Normal Form - Boyce Codd Normal Form - Attribute Preservation - Lossless-join Decomposition - Dependency Preservation. File Organisation : Physical Database Design Issues - Storage of Database on Hard Disks - File Organisation and Its Types - Heap files (Unordered files) - Sequential File Organisation - Indexed (Indexed Sequential) File Organisation - Hashed File Organisation - Types of Indexes - Index and Tree Structure - Multi-key File Organisation - Need for Multiple Access Paths - Multi-list File Organisation - Inverted File Organisation.

UNIT-III: STRUCTURES QUERY LANGUAGE (SQL): Meaning – SQL commands - Data Definition Language - Data Manipulation Language - Data Control Language - Transaction Control Language - Queries using Order by – Where - Group by - Nested Queries. Joins – Views – Sequences - Indexes and Synonyms - Table Handling.

UNIT-IV: TRANSACTIONS AND CONCURRENCY MANAGEMENT: Transactions - Concurrent Transactions - Locking Protocol - Serialisable Schedules - Locks Two Phase Locking (2PL) - Deadlock and its Prevention - Optimistic Concurrency Control. Database Recovery and Security: Database Recovery meaning - Kinds of failures - Failure controlling methods - Database errors - Backup & Recovery Techniques - Security & Integrity - Database Security - Authorization.

UNIT-V: DISTRIBUTED AND CLIENT SERVER DATABASES: Need for Distributed Database Systems - Structure of Distributed Database - Advantages and Disadvantages of DDBMS - Advantages of Data Distribution - Disadvantages of Data Distribution - Data Replication - Data Fragmentation. Client Server Databases: Emergence of Client Server Architecture - Need for Client Server Computing - Structure of Client Server Systems & its advantages.

ADVANCED TOPICS: Overview: Parallel Database - Multimedia Database - Mobile Database - Web Database - Multidimensional Database. Data Warehouse - OLTP Vs OLAP - NoSQL Database.

LAB: SQL QUERIES BASED ON VARIOUS COMMANDS.

SUGGESTED READINGS: 1) Database Systems: R.Elmasri & S.B. Navathe, Pearson.; 2) Introduction to Database Management System: ISRD Group, McGraw Hill.; 3) Database Management System: R.Ramakrishnan & J.Gehrke, McGraw Hill.; 4) Modern Database Management: J.A.Hoffer, V.Rames & H.Topi, Pearson.; 5) Database System Concepts: Silberschatz, Korth & Sudarshan, McGraw Hill. 6) Simplified Approach to DBMS: Parteek Bhaia Kalyani Publishers. 7) Database Management System: Nirupma Pathak, Himalaya. 8) Database Management Systems: Pannerselvam, PHI. 9) Relational Database Management System: Srivastava & Srivastava, New Age 10) PHP MySQL Spoken Tutorials by IIT Bombay. 11) Oracle Database: A Beginner's Guide: I.Abramson, McGraw Hill.

Paper SEC3 (a): PRACTICE OF GENERAL INSURANCE

Objective: To make the student understand general policies and accounting.

UNIT I: GENERAL INSURANCE POLICIES:

Introduction to General Insurance-Origin of general insurance—Classification of General Insurance Companies—Indian and International Insurance Market—various roles in Insurance industry—Policy Documents and forms—insurance proposals and forms—General Insurance Products-Fire, Marine, Motor, Liability, Personal Accident and Specialty Insurance, Engineering and other insurance.

UNIT II: UNDERWRITING, PREMIUMS, CLAIMS AND INSURANCE RESERVES AND ACCOUNTING:

Concept of Underwriting—Underwriting Process—Risk sharing and its methods—risk management and steps involved in it—Rating and Premiums—concept of soft and hard markets—Concept of Claim-understanding the process of claim management—claims fraud and fraud prevention—Insurance reserves and accounting—different types of reserves of insurance companies—reserving process followed by insurance companies—Insurance accounting.

SUGGESTED READINGS:

1. Practice of General Insurance – Insurance Institute of India.
2. Practice of General Insurance – D.S. Vittal-HPH.
3. Principles & Practice of Insurance- Dr. P. Periasamy – HPH.
4. Risk Management : A Publication of the Insurance Institute of India.,
5. Practice of General Insurance: Dr. V. Padmavathi, Dr. V. Jayalakshmi, PBP.
6. Insurance Theory and Practice: Tripathi PHI
7. Life and Health Insurance: Black, JR KENNETH & Harold Skipper, Pearson
8. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt
9. South Western College Publishing Cincinnati, Ohio.

Paper SEC3 (b): SOCIAL MEDIA MARKETING

Objective: To make students to understand the Social Media Marketing.

UNIT I: SOCIAL MEDIA MARKETING:

Building an online community – Understanding Social Media Marketing – Marketing and building presence on Facebook – Marketing and building presence on Twitter – Employer branding on LinkedIn

UNIT II: ONLINE ADVERTISING ON SOCIAL MEDIA:

Facebook advertising overview – How Facebook ads work – How to create Facebook ads – Additional advertising options and best practices for Facebook advertising – Marketing and monetizing on YouTube – Customize your YouTube Channel – Video optimization on YouTube – YouTube Analytics

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Digital Marketing by Vandana Ahuja, Oxford
4. Tuten: Social Media Marketing, sage
5. Digital Marketing by Seema Gupta, McGraw Hill
6. Social Media Marketing All-In-One for Dummies By Jan Zimmerman and Deborah Ng
7. Facebook Growth Hacking: How to Correctly Set Up and Maintain Your Facebook Presence and Gain Massive Amounts of Fans (Social Media Marketing) by Jeff Abston
8. Youtube Influencer: How To Become a Youtube Influencer, Why Influencer Marketing Matters, and How To Monetize Your Channel by Jeff Abston

Paper SEC-3 (c): BUSINESS INTELLIGENCE

Objective: To make students to understand the Business Intelligence.

UNIT I: BUSINESS INTELLIGENCE USING POWER BI:

Getting data in Power BI: Overview of Power BI Desktop - Connect to data sources in Power BI Desktop - Clean and transform data with the Query Editor - advanced data import and cleaning techniques - Cleaning irregularly formatted data - Modeling the data: Manage data relationships – Create calculated columns – Optimizing data models – Create calculated measures – Create calculated tables – Explore time-based data - Exploring data: Introduction to the Power BI service - Turn business intelligence data into data insights

UNIT II: POWER BI AND EXCEL:

Using Excel data in Power BI: Uploading an Excel workbook with a simple table into Power BI - Upload workbooks created with Excel Power Pivot and Power View - Publishing and sharing: Publish Power BI Desktop reports - Print and export dashboards and reports - Manually republish and refresh data - Power BI Mobile - Create groups in Power BI – Publish to web

SUGGESTED READINGS:

1. Introducing Microsoft Power BI; Alberto Ferrari, Marco Russo; Microsoft Press
2. Introduction to Microsoft Power Bi: Bring Your Data to Life; M.O. Cuddley; Createspace Independent Pub
3. Applied Microsoft Power BI: Bring your data to life; TeoLachev; Prologika Press
4. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson

Paper SEC4 (a): REGULATION OF INSURANCE BUSINESS

Objective: To equip the students with the knowledge regarding Insurance Business Regulations

UNIT I: INSURANCE LEGISLATION IN INDIA:

History of life and non-life insurance legislation—nationalization—insurance reforms—insurance business Act, 1972—IRDA and its functions including licensing functions—Web aggregators—regulation for intermediaries—CCS-SPV-PoS-insurance repositories-TPAs—Role and duties of surveyors—Origin and development of micro-insurance—regulation of ULIPs—pension schemes—money laundering—KYC—methods of receipt of premium—Exchange control regulations relating to General and Life Insurance—IRDA Health Insurance Regulations, 2016—Health plus life combo products.

UNIT II: POLICY HOLDERS RIGHTS OF ASSAINGMENT, NOMINATION AND TRANSFER:

Assignment and transfer of insurance policies—provisions related to nomination—repudiation—Fraud—protection of policyholder interest—stages in insurance policy-presale stage-post sale stage-free look period—grievance redressal—claim settlement—key feature document—dispute resolution mechanism—insurance ombudsman—solvency margin and investments—international trends in insurance regulation.

SUGGESTED READINGS:

1. Regulation of Insurance Business – Insurance Institute of India
2. Regulation of Insurance Business – D.S. Vittal, HPH
3. Regulation of Insurance Business: Dr. V. Padmavathi, PBP
4. Risk Management : A Publication of the Insurance Institute of India
5. Insurance Theory and Practice: Tripathi PHI
6. Life and Health Insurance: Black, JR KENNETH & Harold Skipper, Pearson
7. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt
8. South Western College Publishing Cincinnati, Ohio.
9. Insurance Management – S.C. Sahoo& S.C. Das-HPH.

Paper SEC4 (b): SEARCH ENGINE OPTIMIZATION AND ONLINE ADVERTISING

Objective: To make students to understand the Search engine optimization and online advertising.

UNIT I: SEO FOUNDATIONS AND SEO KEYWORD STRATEGY:

Understanding SEO – Keyword strategy – Content optimization – Long-term content planning – Link-building strategies – Measuring SEO effectiveness – SEO for Ecommerce – Local search – Mobile SEO

UNIT II: GOOGLE ADWORDS AND REMARKETING:

Pay-Per-Click Advertising – Getting started with Google Adwords – Advertising tracking – Key Google Adwords strategies – Remarketing with Google – Budget and ROI tips – B2B Remarketing Campaigns

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Digital Marketing by Vandana Ahuja, Oxford
4. Digital Marketing by Seema Gupta, McGraw Hill
5. SEO for Dummies, 6th Edition, by John Kent
6. SEO Fitness Workbook: 2018 Edition: The Seven Steps to Search Engine Optimization Success on Google By Jason McDonald
7. The Art of SEO: Mastering Search Engine Optimization By Eric Enge, Stephan Spencer and Jessie Stricchiola
8. Google Adwords for Beginners: A Do-It-Yourself Guide to PPC Advertising By Cory Rabazinsky, 2015

Paper SEC-4 (c) DATA VISUALIZATION & STORYTELLING

Objective: To make students to understand the Data visualization & Storytelling.

UNIT I: DATA VISUALIZATION USING POWER BI:

Visuals in Power BI: Bar charts – Pie charts – Treemaps – Combination charts – Slicers – Map visualizations – Matrixes and Tables – Scatter charts – Waterfall and funnel charts - Gauges and single-number cards - Modifying visuals and reports: Modify colors in charts and visuals – Add shapes, text boxes, and images to reports - Page layout and formatting - Other Data Visualization features and options: Group interactions among multiple visualizations on the same report page - Summarization and category options – Z-order - Visual hierarchies and drill-down

UNIT II: TELLING STORIES WITH DATA:

Data Storytelling: Apply storytelling principles to business analytics - Improve business analytics presentations through storytelling - Creating high-impact reports and presentations: Guidelines and best practices

SUGGESTED READINGS:

1. Introducing Microsoft Power BI; Alberto Ferrari, Marco Russo; Microsoft Press
2. Introduction to Microsoft Power Bi: Bring Your Data to Life; M.O. Cuddley; Createspace Independent Pub
3. Applied Microsoft Power BI: Bring your data to life; TeoLachev; Prologika Press
4. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
5. Microsoft Power BI Dashboards Step by Step, Errin O'Connor, Microsoft Press
6. Storytelling with Data: A Data Visualization Guide for Business Professionals; Cole NussbaumerKnaflic; Wiley

Paper DSC 401: INCOME TAX

Objective: To acquire conceptual and legal knowledge about Income Tax provisions relating to computation of Income from different heads with reference to an Individual Assessee.

UNIT-I: INTRODUCTION:

Direct and Indirect Taxes – Canons of Taxation - Features and History of Income Tax in India – Definitions and Basic Concepts of Income Tax: Assessee – Deemed Assessee – Assessee-in-default – Assessment Year – Previous Year - Person – Agricultural Income – Heads of Income – Gross Total Income – Total Income — Incomes Exempt from Tax. Residential Status and Scope of Total Income: Meaning of Residential Status – Conditions applicable to an Individual Assessee – Incidence of Tax – Types of Incomes. (Theory only)

UNIT-II: INCOME FROM SALARIES:

Definition of ‘Salary’ – Characteristics of Salary – Computation of Salary Income: Salary u/s 17(1) – Annual Accretion – Allowances – Perquisites – Profits in lieu of Salary – Deductions u/s. 16 – Problems on computation of Income from Salary.

UNIT-III: INCOME FROM HOUSE PROPERTY:

Definition of ‘House Property’ – Exempted House Property incomes– Annual Value – Determination of Annual Value for Let-out House and Self-occupied House – Deductions u/s.24 – Problems on computation of Income from House Property.

UNIT-IV: PROFITS AND GAINS OF BUSINESS OR PROFESSION:

Definition of ‘Business and Profession’ – Procedure for computation of Income from Business – Revenue and Capital nature of Incomes and Expenses – Allowable Expenses u/s. 30 to 37 – Expenses expressly disallowed – Deemed Profits – Miscellaneous provisions u/s 44. Depreciation: Meaning – Conditions for charge of depreciation – Problems on computation of Income from Business. Income from Profession: Rules– procedure – problems on computation of Income from Profession.

UNIT-V: CAPITAL GAINS AND INCOME FROM OTHER SOURCES:

Introduction - Meaning – Scope of charge – Basis of charge – Short term and Long term Capital Assets – Transfer of Capital Asset – Deemed Transfer –Determination of Cost of Acquisition – Procedure for computation of Long-term and Short-term Capital Gains/Losses – Exemptions in respect of certain Capital Gains u/s. 54 – Problems on computation of capital gains - General Incomes u/s. 56(1) – Specific Incomes u/s. 56(2) – Dividends u/s. 2(22) – Winnings from lotteries Puzzles, crown world puzzles, Races – Interest on Securities – Gifts received by an Individual – Casual Income – Family Pension – Rent received on let out of Furniture- Plant and Machinery with/without Building – Deductions u/s. 57. (Theory only)

SUGGESTED READINGS:

1. Income Tax Law and Practice: V.P. Gaur & D.B Narang, Kalyani Publishers.
2. Taxation: Dr. M.N. Ravi, PBP.
3. Direct Taxes Law & Practice: Dr.Vinod K. Singhanian&Dr.KapilSinghanian, Taxmann
4. Income Tax: B.B. Lal, Pearson Education.
5. Taxation: R.G. Saha, Himalaya Publishing House Pvt. Ltd.
6. Income Tax: Johar, McGrawHill Education.
7. Taxation Law and Practice: Balachandran&Thothadri, PHI Learning.
8. Direct Tax Law and Practice : AhujaGirish

Paper DSC 401: EXCEL FOUNDATION

Objective: Students will learn how to start working with M S Excel right from basics to Tables, Templates and Printing of their work.

UNIT-I: INTRODUCTION TO EXCEL:

Workbooks and Worksheets, Moving Around a Worksheet, Ribbon tabs, Types of commands on the Ribbon, Using Shortcut Menus, Working with Dialogue Boxes, Task Panes, Getting started on your worksheet, Creating a chart, Printing your worksheet, Saving your worksheet, Exploring Data Types, Modifying Cell Contents, Deleting, Replacing, Editing of a cell. Some handy data entry techniques, Number Formatting.

UNIT-II: WORKSHEET OPERATIONS:

Moving and resizing windows, Switching among windows, Activating a worksheet, Adding, Deleting a worksheet, Changing a sheet tab color, Rearranging your worksheets, Hiding, un-hiding a worksheet, Worksheet View, Comparing sheets side by side, Selecting ranges, complete rows and columns, noncontiguous ranges, multi-sheet ranges, special types of cells. Copying or Moving Ranges. Paste Special dialogue box, Adding comments to cells.

UNIT-III: TABLES AND FORMATTING:

Creating a Table, Changing the Look of a Table, Navigating in a Table, Selecting parts of a Table, Adding, Deleting new rows or columns, Moving a Table, Working with the Total Row, Removing duplicate rows from a table. Sorting and filtering a table, Converting Table into Range. Formatting tools on the Home tab, Mini Toolbar, Fonts, Text Alignment, Wrapping text to fit a cell, Colors and Shading, Borders and Lines. Naming Styles.

UNIT-IV: EXCEL FILES & TEMPLATES:

Creating a New Workbook, Filtering filenames, Saving and Auto Recovery, Password-Protecting a Workbook, Recovering unsaved work, Protect Workbook options, Checking Compatibility. Creating a Excel Templates, Modifying a template, Custom Excel Templates, Default Templates, Editing your Template, Resetting the default workbook, Saving your Custom Templates, Getting ideas for creating Templates.

UNIT-V: PRINTING YOUR WORK: Normal, Page Layout, Page Break View, Choosing your printer, Specifying what you want to print, Changing Page Orientation, Specifying paper size, Adjusting page margins, Inserting a page break, Removing manual page breaks, Printing Row and Column Titles, Scaling printed output, Header or Footer Options, Preventing certain cells, Objects from being printed, Creating Custom Views of your Worksheet. Creating PDF files. Introducing Excel:

SUGGESTED READINGS:

1. Excel 2013 Bible: John Walkenbach, Wiley.
2. Microsoft Excel 2013: Data Analysis and Business Modeling: Winston, PHI
3. Excel Data Analysis - Modeling and Simulation: Hector Guerrero, Springer.
4. Excel Functions and Formulas: Bernd Held, BPB Publications.
5. Financial Analysis and Modeling using Excel and VBA: ChandanSengupta, Wiley

Paper DSC 402: BUSINESS STATISTICS - II

Objective: To inculcate analytical and computational ability among the students.

UNIT-I: REGRESSION:

Introduction - Linear and Non Linear Regression – Correlation Vs. Regression - Lines of Regression - Derivation of Line of Regression of Y on X - Line of Regression of X on Y - Using Regression Lines for Prediction.

UNIT-II: INDEX NUMBERS:

Introduction - Uses - Types - Problems in the Construction of Index Numbers - Methods of Constructing Index Numbers - Simple and Weighted Index Number (Laspeyre - Paasche, Marshall – Edgeworth) - Tests of Consistency of Index Number: Unit Test - Time Reversal Test - Factor Reversal Test - Circular Test - Base Shifting - Splicing and Deflating of Index Numbers.

UNIT-III: TIME SERIES:

Introduction - Components – Methods-Semi Averages - Moving Averages – Least Square Method - Deseasonalisation of Data – Uses and Limitations of Time Series.

UNIT-IV: PROBABILITY:

Probability – Meaning - Experiment – Event - Mutually Exclusive Events - Collectively Exhaustive Events - Independent Events - Simple and Compound Events - Basics of Set Theory – Permutation – Combination - Approaches to Probability: Classical – Empirical – Subjective - Axiomatic - Theorems of Probability: Addition – Multiplication - Baye’s Theorem.

UNIT-V: THEORITCAL DISTRIBUTIONS:

Binomial Distribution: Importance – Conditions – Constants - Fitting of Binomial Distribution.
Poisson Distribution: – Importance – Conditions – Constants - Fitting of Poisson Distribution.
Normal Distribution: – Importance - Central Limit Theorem - Characteristics – Fitting a Normal Distribution (Areas Method Only).

SUGGESTED READINGS:

1. Statistics for Management: Levin & Rubin, Pearson,
2. Fundamentals of Statistics: Gupta S.C, Himalaya
3. Business Statistics: Theory & Application, P. N. Jani, PHI Learning
4. Business Statics – II: Dr. OBul Reddy, Dr. D. Shridevi - PBP
5. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
6. Business Statistics: K. Alagar, Tata McGraw Hill
7. Fundamentals of Statistical: S. P Gupta , Sultan Chand
8. Business Statistics: J. K. Sharma, Vikas Publishers
9. Business Statistics: Vora, Tata McGraw Hill
10. Statistics-Problems and Solutions: Kapoor V.K, S. Chand
11. Statistics-Teory, Methods and Applications: SanchetiD.C. &Kapoor V.K
12. Business Statistics: S. K. Chakravarty, New Age International Publishers
13. Business Statistics-G.Laxman, Vasudeva Reddy, K.Goud, TaxmannPublications,Hyderabad.

Paper DSC 403: WEB TECHNOLOGIES

Hours Per Week:7(3T+4P)
Exam Hours:1½

Credits: 5
Marks: 50U+35P+15I

Objective:To gain skills of usage of Web Technologies to design Web pages.

UNIT-I: INTRODUCTION:

Introduction to web technology – HTML – types of HTML tags-basic Structure of HTML – Web design principles – HTML attributes – styles – Hypertext - Formatting text – Forms & formulating instructions & formulation elements – Commenting code – Back grounds – Images- Hyperlinks – Lists – Tables – Frames

UNIT-II: AN OVER VIEW OF DYNAMIC WEB PAGES & DYNAMIC WEB PAGE:

An over view of dynamic web pages – technologies: Introduction to Dynamic HTML programming - Cascading style sheets (CSS) – types and advantages of CSS – CSS basic syntax and structure - Changing Text and Attributes - Dynamically changing style - Text Graphics and placements - Creating multimedia effects with filters and Transactions.

UNIT-III: JAVA SCRIPT&:

Java Script: Introduction - Client side Java script - Server side Java script - Core features - Data types and variables – Operators - Expressions and statements – Functions – Objects – Array - Date and math related objects - Document object model - Event handling.

UNIT-IV: EVENTS AND EVENT HANDLERS:

Events And Event Handlers: General information about Events – Event – OnAbort – OnClick - Ondbl click - On drag drop – Onerror - Onfocus - Onkey Press – Onkey Up – Onload - Onmouse Down – Onmouse Move - Onmouse Out – Onmouse Over - Onmove - Onrest – Onresize - Onselect - Onsubmit - Onunload.

UNIT-V: EXTENSIBLE MARKUP LANGUAGE (XML):

Extensible Markup Language (XML): Introduction - Creating XML Documents - XML style Sheet – Hyperlinks in XML Document Object Model - XML Query Language.

LAB WORK: CREATING A WEBSITE WITH DYNAMIC FUNCTIONALITY USING CLIENT- SIDE AND SERVER SIDE SCRIPTING.

SUGGESTED READINGS:

1. Web Technology: IndrakantiSekhar, V.N. Battu, Himalaya Publishers.
2. Internet & World Wide Web How to Program: Deitel&Deitel, Pearson.
3. Web programming: ChrisBates.
4. HTML & XML An Introduction NIIT, PHI.
5. HTML for the WWW with XHTML & CSS: Wlizabeth Castro, Pearson
6. Internet and Web Technologies: Raj Kamal, McGrawHill.
7. Web Technology: A Developer's Perspective: Gopalan&Sivaselvan, PHI.
8. Internet Technology and Web Page Design: R.Singh&M.Sonia, Kalyani.
9. Web Technology and Design by Xavier, New Age International Pub.

Paper GE: a) BUSINESS ECONOMICS

Objective: To acquire knowledge for application of economic principles and tools in business practices.

UNIT-I: INTRODUCTION:

Business Economics: Meaning - Nature – Characteristics - Importance and Role - Micro & Macro Economics - Scope - Objectives - Law of Diminishing marginal utility - Law of Equi-marginal utility.

UNIT- II: DEMAND ANALYSIS:

Meaning – Function - Factors influencing Demand -Types of Demand -Demand Curve - Law of Demand –Exceptions to the law of demand-Elasticity of Demand: Concept - Types of elasticity of demand-price, income and cross Elasticity of Demand –measurement of elasticity—arc and point methods—Importance of various Elasticity of Demand

UNIT-III: SUPPLY ANALYSIS:

Law of Supply - Factors influencing Supply - Market Equilibrium- Consumer Surplus - Theory of Consumer behavior - Utility and indifference curve analysis.

UNIT-IV: PRODUCTION ANALYSIS:

Concept of Production –production function-Total Production - Marginal Production - Average Production –returns to a factor- Law of Variable Proportions - Law of Returns to Scale – Isocost – Isoquants - Economies and Dis-economies of Scale.

UNIT-V: COST AND REVENUE ANALYSIS:

Theory of Cost - Concepts of Cost - Short run and Long run cost curves - Traditional and Modern Approaches -Revenue Curves—relationship between total marginal and average revenues- --Break Even Analysis—Meaning – Assumptions – Uses and Limitations.

SUGGESTED READINGS:

1. Business Economics: V. G. Mankar, Himalaya Publishing House
2. Managerial Economics: VanithAgrawal, Pearson Education
3. Business Economics: H. L. Ahuja, S. Chand & Co. Ltd.
4. Business Economics : R. K. Lekhi, Kalyani Publishers
5. Business Economics: D. M. Mithani, Himalaya Publishing House
6. Business Economics: P. N. Chopra, Kalyani Publishers
7. Essential of Business Economics: D. N. Dwivedi, Vikas Publishers
8. Managerial Economics: Varshney and Maheswari, Sultan Chand
9. Business Economics: P. K. Mehta, Tax Mann Publication.

Paper GE: b) ADVANCED ASPECTS OF INCOME TAX

Objective: To acquire conceptual and legal knowledge about Income Tax provisions relating to computation of Income from certain heads and other provisions relating to clubbing, aggregation of income and assessment procedure.

UNIT-I: PROFITS AND GAINS OF BUSINESS OR PROFESSION:

Valuation of Stock Depreciation: Meaning – Assets used for Business – Block of Assets – Rates of Depreciation – Miscellaneous Provisions about depreciation – Computation of Depreciation.

UNIT-II: INCOME FROM OTHER SOURCES:

Winnings from lotteries Puzzles, crown world puzzles, Races Problems on computation on Income from Other Sources. Treatment of Agricultural Income. Heads of income: Gross Total Income – Taxable Income – Income Tax Rates. Problems on computation of Total Income of an Individual based on Residential Status.

UNIT-III: CLUBBING AND AGGREGATION OF INCOME:

Income of other persons included in the total income of Assesse – Income from Firm and AOP – Clubbing Provisions – Deemed Incomes – Provisions of set-off and Carry forward of losses – computation of Gross Total Income – Deductions from GTI u/s 80C to 80U – Problems on Computation of Taxable Income.

UNIT-IV: ASSESSMENT OF INDIVIDUALS:

Computation of Tax Liability – Applicability of Alternate Minimum Tax on Individual u/s 115JC – Problems on Computation of tax liability.

UNIT-V: ASSESSMENT PROCEDURE:

Income tax returns – Types of returns – Filing of e-return – Assessment – Types of assessment: Self-assessment – Provisional assessment – Regular assessment – Best judgement assessment – Reassessment – Rectification of mistakes – Notice on demand.

SUGGESTED READINGS:

1. Income Tax Law and Practice: V.P. Gaur & D.B Narang, Kalyani Publishers.
2. Direct Taxes Law & Practice: Dr. Vinod K. Singhanian & Dr. Kapil Singhanian, Taxmann
3. Income Tax: M. Jeevarathinam & C. Vijay Vishnu Kumar, SCITECH Publications.
4. Taxation: R.G. Saha, Himalaya Publishing House Pvt. Ltd.
5. Income Tax: B. Lal, Pearson Education.
6. Income Tax: Johar, McGrawHill Education.
7. Taxation Law and Practice: Balachandran & Thothadri, PHI Learnin

Paper DSE 501 (a) : COST ACCOUNTING

Objective: To make the students acquire the knowledge of cost accounting methods.

UNIT-I: INTRODUCTION:

Cost Accounting: Definition – Features – Objectives – Functions – Scope – Advantages and Limitations - Essentials of a good cost accounting system- Difference between Cost Accounting and Financial Accounting – Cost concepts – Cost Classification.

UNIT-II: MATERIAL:

Direct and Indirect Material cost – Inventory Control Techniques – Stock Levels – EOQ – ABC Analysis – JIT - VED - FSND - Issue of Materials to Production – Pricing methods: FIFO - LIFO with Base Stock and Simple and Weighted Average methods.

UNIT-III: LABOUR AND OVERHEADS:

Labour: Direct and Indirect Labour Cost – Methods of Payment of Wages (only Incentive Plans): Halsey, Rowan, Taylor Piece Rate and Merrick Multiple Piece Rate Methods.
Overheads: Classification - Methods of Allocation - Apportionment and Absorption of overheads.

UNIT-IV: UNIT AND JOB COSTING:

Unit Costing: Features - Cost Sheet – Tender and Estimated Cost Sheet.
Job Costing: Features - Objectives – Procedure - Preparation of Job Cost Sheet.

UNIT-V: CONTRACT AND PROCESS COSTING:

Contract Costing: Features – Advantages - Procedure of Contract Costing – Guidelines to Assess profit on incomplete Contracts.
Process Costing: Meaning – Features – Preparation of Process Account – Normal and Abnormal Losses.

SUGGESTED READINGS:

1. Cost Accounting: Jain and Narang, Kalyani
2. Cost Accounting: Srihari Krishna Rao, Himalaya
3. Cost and Management Accounting: PrashantaAthma, Himalaya
4. Cost Accounting: Dr. G. Yogeshweran, PBP.
4. Cost Accounting: Jawaharlal, Tata Mcgraw Hill
5. Cost Accounting: Theory and Practice: Banerjee, PHI
6. Introduction to Cost Accounting: Tulsian, S.Chand
7. Cost Accounting: Horngren, Pearson
8. Cost Accounting: Ravi M. Kishore, Tax Mann Publications.

Paper DSE 501 (b) : FINANCIAL PLANNING & PERFORMANCE

Objective: To make students to understand the Financial planning & Performance.

UNIT I: STRATEGIC PLANNING:

Strategic planning: Analysis of external and internal factors affecting strategy - Long-term mission and goals - Alignment of tactics with long-term strategic goals - Strategic planning models and analytical techniques - Characteristics of successful strategic planning process - Annual profit plan and supporting schedules: Operational budgets - Financial budgets - Capital budgets - Top-level planning and analysis: Pro forma income - Financial statement projections - Cash flow projections.

UNIT II: BUDGETING AND FORECASTING:

Budgeting Concepts: Operations and performance goals - Characteristics of a successful budget process - Resource allocation - Forecasting techniques: Regression analysis - Learning curve analysis - Expected value - Budgeting Methodologies: Annual business plans (master budgets) - Project budgeting - Activity-based budgeting - Zero-based budgeting - Continuous (rolling) budgets - Flexible budgeting

UNIT III: COST AND VARIANCE ANALYSIS:

Cost and Variance Analysis: Comparison of actual to planned results - Use of flexible budgets to analyze performance - Management by exception - Standard Cost System: Use of standard cost systems - Analysis of variation from standard cost expectations

UNIT IV: PERFORMANCE MEASURES:

Performance Measures: Product profitability analysis - Business unit profitability analysis - Customer profitability analysis - Return on investment - Residual income - Investment base issues - Key performance indicators (KPIs) - Balanced scorecard - Responsibility Centers and Reporting Segments: Types of responsibility centers - Transfer pricing - Reporting of organizational segments

UNIT V: TECHNOLOGY AND ANALYTICS:

Information Systems: Accounting information systems - Enterprise resource planning systems - Enterprise performance management systems - Data Governance: Data policies and procedures - Life cycle of data - Controls against security breaches - Technology-enabled finance transformation: System Development Life Cycle - Process automation - Innovative applications
Data analytics: Business intelligence - Data mining - Analytic tools - Data visualization

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 1: Planning, Performance & Analytics
2. Strategic Management and Business Policy: Globalization, Innovation and Sustainability, 15th edition; Wheelen, Thomas L., et. al.; Prentice Hall
3. Cost Management: A Strategic Emphasis, 6th edition; Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary; McGraw Hill
4. Horngreen's Cost Accounting: A Managerial Emphasis, 16th edition; Charles T., Datar, Srikant, and Rajan, Madhav; Pearson
5. Quantitative Methods for Business, 13th Edition; Anderson, David, R., Sweeney, Dennis J., Williams, Thomas A., Camm, Jeff, and Martin, R. Kipp; Cengage Learning
6. Management Accounting: An Integrative Approach; McNair-Connolly, C.J., Merchant, Kenneth A.; IMA.

Paper DSE 501 (c): INTERNATIONAL FINANCIAL REPORTING -I

Objective: To make students to understand the International Financial Reporting.

UNIT I: GENERAL PURPOSE OF FINANCIAL ACCOUNTING AND REPORTING AS PER US GAAP AND IFRS:

Conceptual framework: Standard Setting Bodies & Hierarchy - Elements of F/S - Primary objectives of financial reporting - Qualitative Characteristics of F/S - Fundamental Assumptions & Principles - Accounting Cycle & Preparation of F/S - General-purpose financial statements: Balance sheet - Income statement - Statement of comprehensive income - Statement of changes in equity - Statement of changes cash flows - Public company reporting requirements: SEC Reporting Requirements - Interim Financial Reporting - Segment Reporting - Revenue recognition: 5-Step approach to Revenue Recognition - Certain Customer's Rights & Obligations - Specific Arrangements - Long Term Construction Contracts

UNIT II: CURRENT ASSETS AND CURRENT LIABILITIES (AS PER US GAAP AND IFRS):

Monetary Current Assets & Current Liabilities: Cash & Cash Equivalents - Accounts Receivable - Notes Receivable - Transfers & Servicing of Financial Assets - Accounts Payable - Employee-related Expenses Payable - Inventory: Determining Inventory & Cost of Goods Sold - Inventory Valuation - Inventory Estimation Methods

UNIT III: FINANCIAL INVESTMENTS AND FIXED ASSETS (AS PER US GAAP AND IFRS):

Financial Investments: Investments in Equity Securities - Investment in Debt Securities - Financial Instruments - Tangible Fixed Assets: Acquisition of Fixed Assets - Capitalization of Interest - Costs Incurred After Acquisition - Depreciation - Impairment - Asset Retirement Obligation - Disposal & Involuntary Conversions - Intangible Assets: Knowledge-based intangibles (R&D, software) - Legal rights based intangibles (patent, copyright, trademark, franchise, license, leasehold improvements) - Goodwill

UNIT IV: FINANCIAL LIABILITIES (AS PER US GAAP AND IFRS):

Bonds Payable: Types of Bonds - Convertible bonds vs. Bonds with detachable warrants - Bond Retirement - Fair Value Option & Fair Value Election - Debt Restructuring: Settlement - Modification of terms

UNIT V: SELECT TRANSACTIONS (AS PER US GAAP AND IFRS):

Fair value measurements: Valuation techniques - Fair value hierarchy - Fair value concepts - Accounting changes and error correction: Changes in accounting estimate - Changes in accounting principle - Changes in reporting entity - Correction of an error - Contingencies: Possibility of occurrence (remote, reasonably possible or probable) - Disclosure vs. Recognition

Derivatives and Hedge Accounting: Speculation (non-hedge) - Fair value hedge - Cash flow hedge - Non-monetary exchanges: Exchanges with commercial substance - Exchanges without commercial substance - Leases: Operating lease - Finance lease - Sale leaseback

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Financial Accounting & Reporting, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Financial Accounting and Reporting, Wiley
3. IFRS & US GAAP Best Practices in Accounting World: GAAP Analysis, Rajesh Dhawan
4. Transparency in Financial Reporting: A concise comparison of IFRS and US GAAP 1st Edition, Ruth Ann McEwen, Harriman House Ltd.
5. IFRS and US GAAP: A Comprehensive Comparison, Steven E. Shamrock, Wiley
6. Wiley GAAP: Interpretation and Application of Generally Accepted Principles, Barry J. Epstein and Ralph Nach, Wiley
7. IFRS Simplified with Practical Illustration Part 1 & 2, Mr RammohanBhave and Dr Mrs Anjali RammohanBhave, CNBC TV 18.

Paper DSE 502 (a) : COMPUTERIZED ACCOUNTING

Objective: To make the students to acquire the knowledge of computer software

UNIT I: MAINTAINING CHART OF ACCOUNTS IN ERP:

Introduction-Getting Started with ERP - Mouse/Keyboard Conventions-Company Creation-Shut a Company-Select a Company-Alter Company Details-Company Features and Configurations-F11: Company Features-F12: Configuration-Chart of Accounts-Ledger-Group-Ledger Creation-Single Ledger Creation-Multi Ledger Creation-Altering and Displaying Ledgers-Group Creation-Single Group Creation-Multiple Group Creation-Displaying Groups and Ledgers-Displaying Groups-Display of Ledgers-Deletion of Groups and Ledgers – P2P procure to page.

UNIT II: MAINTAINING STOCK KEEPING UNITS (SKU):

Introduction-Inventory Masters in ERP - Creating Inventory Masters-Creation of Stock Group-Creation of Units of Measure-Creation of Stock Item-Creation of Godown-Defining of Stock Opening Balance in ERP Stock Category-Reports.

UNIT III: RECORDING DAY-TO-DAY TRANSACTIONS IN ERP:

Introduction-Business Transactions-Source Document for Voucher-Recording Transactions in ERP - Accounting Vouchers-Receipt Voucher (F6)-Contra Voucher (F4)-Payment Voucher (F5)-Purchase Voucher (F9)-Sales Voucher (F8)-Debit Note Voucher-Credit Note (Ctrl+F8)-Journal Voucher (F7).

UNIT IV: ACCOUNTS RECEIVABLE AND PAYABLE MANAGEMENT:

Introduction-Accounts Payables and Receivables-Maintaining Bill-wise Details-Activation of Maintain Bill-wise Details Feature-New Reference-Against Reference-Advance-On Account-Stock Category Report-Changing the Financial Year in ERP.

UNIT V: MIS REPORTS:

Introduction-Advantages of Management Information Systems-MIS Reports in ERP - Trial Balance - Balance Sheet-Profit and Loss Account-Cash Flow Statement-Ratio Analysis-Books and Reports - Day Book-Receipts and Payments-Purchase Register-Sales Register-Bills Receivable and Bills Payable.

SUGGESTED READINGS:

1. Computerised Accounting: GarimaAgarwal, Himalaya
2. Computerised Accounting: A. Murali Krishna, Vaagdevi publications
3. Computerised Accounting: Dr. G. Yogeshweran, PBP.
4. Aakash Business Tools: Spoken Tutorial Project IIT Bombay
5. Mastering Tally: Dinesh Maidasani, Firewal Media
6. Implementing Tally ERP 9: A.K Nadhani and K.K Nadhani, BPB Publications
7. Computerised Accounting and Business Systems: Kalyani Publications
8. Manuals of Respective Accounting Packages
9. Tally ERP 9: J.S. Arora, Kalyani Publications.

Paper DSE 502 (b): FINANCIAL DECISION MAKING - I

Objective: To make students to understand the Financial Decision Making.

UNIT I: FINANCIAL STATEMENT ANALYSIS

Basic Financial Statement Analysis: Common size financial statements - Common base year financial statements - Financial Ratios: Liquidity - Leverage - Activity - Profitability - Market Profitability analysis: Income measurement analysis - Revenue analysis - Cost of sales analysis - Expense analysis - Variation analysis - Special issues: Impact of foreign operations - Effects of changing prices and inflation - Off-balance sheet financing - Impact of changes in accounting treatment - Accounting and economic concepts of value and income - Earnings quality

UNIT II: FINANCIAL MANAGEMENT

Risk & Return: Calculating return - Types of risk - Relationship between risk and return
Long-term Financial Management: Term structure of interest rates - Types of financial instruments - Cost of capital - Valuation of financial instruments

UNIT III: RAISING CAPITAL

Raising Capital: Financial markets and regulation - Market efficiency - Financial institutions - Initial and secondary public offerings - Dividend policy and share repurchases - Lease financing

UNIT IV: WORKING CAPITAL MANAGEMENT

Managing working capital: Cash management - Marketable securities management - Accounts receivable management - Inventory management - Short-term Credit: Types of short-term credit - Short-term credit management

UNIT V: CORPORATE RESTRUCTURING AND INTERNATIONAL FINANCE

Corporate Restructuring: Mergers and acquisitions - Bankruptcy - Other forms of restructuring
International Finance: Fixed, flexible, and floating exchange rates - Managing transaction exposure - Financing international trade - Tax implications of transfer pricing

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 2: Strategic Financial Management
2. Interpretation and Application of International Financial Reporting Standards; Mackenzie, Bruce, Coetsee, Danie, Njikizana, Tapiwa, Chamboko, Raymond, Colyvas, Blaise, and Hanekom, Brandon; Wiley
3. Financial Reporting & Analysis, 13th edition; Gibson, Charles H.; South-Western Cengage Learning
4. Financial Statement Analysis, 10th edition; Subramanyam, K.R., and Wild, John L.; McGraw Hill
5. Principles of Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
6. Fundamentals of Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall

Paper DSE 502 (c) : INTERNATIONAL TAX & REGULATION

Objective: To make students to understand the International Tax & Regulation.

UNIT I: TAXATION OF INDIVIDUALS:

Individual Income Tax Return: Filing Status - Cash basis and Accrual basis

Gross Income: Wages, Salaries, Bonus, Commission, Fees & Tips - Interest & Dividend Income - Business Income - Capital Gains & Losses - Passive Income - Farming Income - Deductions: Adjustments - Deductions from AGI - Calculating Tax: Tax Credits - Alternative Minimum Taxes - Other Taxes - Estimated Tax penalty

UNIT II: PROPERTY TRANSACTIONS & DEPRECIATION:

Capital Gains & Losses - Gains & Losses from Sale of Long-term Business Property - Depreciation & Amortization

UNIT III: TAXATION OF CORPORATIONS:

C-Corporations: Formation - Income Tax Return - Income - Deductions - Reconciliation of Taxable Income with books - Calculating Tax - Corporate Earnings & Distributions - Corporate Liquidation & Reorganizations - S-Corporations: Eligibility criteria - Income Tax Return - Shareholder basis - Earnings and Distribution - Termination of Election

UNIT IV: TAXATION OF OTHER ENTITIES:

Partnerships: Formation - Income Tax Return - Partner basis - Partnership Distributions - Sale of Partnership Interest by a Partner - Termination of Partnership - Estate, Trust & Gift Taxation: Estate and Trust Fiduciary Income Tax Return - Estate Tax Return - Gift Tax Return - Generation-skipping transfer Tax - Tax Exempt Organizations: Formation - Income Tax Return

UNIT V: STATUTORY REGULATIONS, ACCOUNTANT RESPONSIBILITIES, BUSINESS STRUCTURES:

Federal Security Regulations: Securities Act of 1933 - Securities Exchange Act of 1934 - Other federal security regulations - Professional & Legal Responsibilities: Accountant Common Law Liabilities - Accountant Statutory Liabilities - Accountant Liabilities for Privileged Information - Accountant Criminal Liabilities - Employment Regulations - Environmental Regulations - Antitrust Regulations - Business Structures: Sole Proprietorships - Partnerships - Corporations

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Regulation, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Regulation, Wiley
3. Internal Revenue Code: Income, Estate, Gift, Employment and Excise Taxes, CCH Tax Law Editors
4. Federal Income Tax: Code and Regulations--Selected Sections, Martin B. Dickinson, Wolters Kluwer
5. Federal Income Taxation by Katherine Pratt and Thomas D. Griffith, Wolters Kluwer
6. Federal Income Taxation (Concepts and Insights), Marvin Chirelstein and Lawrence Zelenak, Foundation Press

Paper DSE 503 (a) :MANAGEMENT INFORMATION SYSTEMS

Hours Per Week: 7 (3T+4P)

Exam Hours: 1 ½

Credits: 5

Marks: 50U+35P+15I

Objective: To equip the students with finer nuances of MIS.

UNIT-I: INTRODUCTION TO MIS:

The Technical and Business Perspective, Organization Structure, Evaluation of MIS through Information System, The Decision Making Process , System Approach to Problem Solving, The Structure of Management Information System, MIS Organization within the Company.

UNIT-II: INFORMATION SYSTEMS FOR DECISION MAKING:

Evolution of an Information System, Basic Information Systems, Decision Making and MIS, Decision Assisting Information System, Concepts of Balanced MIS Effectiveness and Efficiency Criteria.

UNIT-III: DEVELOPMENT OF MIS:

Methodology and Tools/Techniques for Systematic Identification, Evaluation and Modification of MIS. *Enterprise Resource Planning*: Introduction, Basics of ERP, Evolution of ERP, Enterprise Systems in Large Organizations, Benefits and Challenges of Enterprise Systems, *E-Enterprise System* : Introduction: Managing the E-enterprise, Organisation of Business in an E-enterprise, E-business, E-commerce, E-communication, E-collaboration.

UNIT-IV: ADVANCED MIS:

Concepts, Needs and Problems in Achieving Advanced MIS, DSS., Business intelligence + process management, systems development, and security.

UNIT-V: COLLABORATION, IMPACT & PITFALLS IN MIS:

Collaboration processes and information systems, Impact of Web 2.0 and social media on business process, Pitfalls in MIS Development: Fundamental Weakness, Soft Spots in Planning and Design Problems.

SUGGESTED READINGS:

1. Murdic, Rose and Clagett- Information Systems for Modern Management, PHI, New Delhi.
2. Process, Systems, and Information, David M. Kroenke,
3. MIS Cases Decision Making with Application Software, 4th Edition, Lisa Miller
4. Laudon-Laudon- Management Information Systems, Pearson Education, New Delhi.

Paper DSE 503 (b) :E-COMMERCE

Hours Per Week: 7 (3T+4P)

Exam Hours: 1 ½

Credits: 5

Marks: 50U+35P+15I

Objective: to acquire conceptual and application knowledge of ecommerce.

UNIT-I: INTRODUCTION:

E-Commerce: Meaning - Advantages & Limitations - E-Business: Traditional & Contemporary Model, Impact of E-Commerce on Business Models - Classification of E-Commerce: B2B - B2C - C2B - C2C - B2E - Applications of Ecommerce: E-Commerce Organization Applications - E-Marketing - E-Advertising - E-Banking - Mobile Commerce - E-Trading - E-Learning - E-Shopping.

UNIT-II:FRAMEWORK OF E-COMMERCE:

Framework of E-Commerce: Application Services - Interface Layers - Secure Messaging - Middleware Services and Network Infrastructure - Site Security - Firewalls & Network Security - TCP/IP – HTTP - Secured HTTP – SMTP - SSL.

Data Encryption: Cryptography – Encryption – Decryption - Public Key - Private Key - Digital Signatures - Digital Certificates.

UNIT-III:CONSUMER ORIENTED E-COMMERCE APPLICATIONS:

Introduction - Mercantile Process Model: Consumers Perspective and Merchant's Perspective - Electronic Payment Systems: Legal Issues & Digital Currency - E-Cash & E-Cheque - Electronic Fund Transfer (EFT) - Advantages and Risks - Digital Token-Based E-Payment System - Smart Cards.

UNIT-IV:ELECTRONIC DATA INTERCHANGE:

Introduction - EDI Standards - Types of EDI - EDI Applications in Business – Legal - Security and Privacy issues if EDI - EDI and E-Commerce - EDI Software Implementation.

UNIT-V: E-MARKETING TECHNIQUES:

Introduction - New Age of Information - Based Marketing - Influence on Marketing - Search Engines & Directory Services - Charting the On-Line Marketing Process - Chain Letters - Applications of 5P's (Product, Price, Place, Promotion, People) E-Advertisement - Virtual Reality & Consumer Experience - Role of Digital Marketing.

Lab work: Using Microsoft Front Page Editor and HTML in Designing a Static Webpage/Website.

SUGGESTED READINGS:

1. Frontiers of Electronic Commerce: Ravi Kalakota, Andrew B Whinston, Pearson
2. E-Commerce: Tulasi Ram Kandula, HPH.
3. E-Commerce: An Indian Perspective: P.T. Joseph, S.J, PHI
4. Electronic Commerce, Framework Technologies & Applications: Bharat Bhasker, McGraw Hill
5. Introduction To E-Commerce: Jeffrey F Rayport, Bernard J. Jaworski: Tata McGraw Hill
6. Electronic Commerce, A Managers' Guide: Ravi Kalakota, Andrew B Whinston
7. E-Commerce & Computerized Accounting: Rajinder Singh, Er. KaisarRasheed, Kalyani
8. E-Commerce & Mobile Commerce Technologies: Pandey, SaurabhShukla, S. Chand
9. E-Business 2.0, Roadmap For Success: Ravi Kalakota, Marcia Robinson, Pearson
10. Electronic Commerce: Pete Loshin / John Vacca, Firewall Media
11. E-Commerce, Strategy, Technologies And Applications : David Whiteley, Tata Mcgraw Hill

Paper DSE 503 (c) :MOBILE APPLICATIONS

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: To understand and apply the mobile applicatios.

UNIT-I: INTRODUCTION:

What is Android, Android versions and its feature set The various Android devices on the market, The Android Market application store ,Android Development Environment - System Requirements, Android SDK, Installing Java, and ADT bundle - Eclipse Integrated Development Environment (IDE), Creating Android Virtual Devices (AVDs), the Android Software Stack, The Linux Kernel, Android Runtime - Dalvik Virtual Machine, Android Runtime – Core Libraries, Dalvik VM Specific Libraries, Java Interoperability Libraries, Android Libraries, Application Framework, Creating a New Android Project ,Defining the Project Name and SDK Settings, Project Configuration Settings, Configuring the Launcher Icon, Creating an Activity, Running the Application in the AVD, Stopping a Running Application, Modifying the Example Application, Reviewing the Layout and Resource Files,

UNIT-II: MOBILE SOFTWARE:

Understanding Java SE and the Dalvik Virtual Machine, The Directory Structure of an Android Project , Common Default Resources Folders, The Values Folder, Leveraging Android XML, Screen Sizes, Launching Your Application: The AndroidManifest.xml File, Creating Your First Android Application, Android Application Components, Android Activities: Defining the UI, Android Services: Processing in the Background, Broadcast Receivers: Announcements and Notifications Content Providers: Data Management, Android Intent Objects: Messaging for Components.

Android Manifest XML: Declaring Your Components, Designing for Different Android Devices, Views and View Groups, Android Layout Managers, The View Hierarchy, Designing an Android User Interface using the Graphical Layout Tool.

UNIT-III: MOBILE DISPLAY:

Displaying Text with TextView, Retrieving Data from Users, Using Buttons, Check Boxes and Radio Groups, Getting Dates and Times from Users, Using Indicators to Display Data to Users, Adjusting Progress with SeekBar, Working with Menus using views, Gallery, ImageSwitcher, GridView, and ImageView views to display images, Creating Animation, Saving and Loading Files, SQLite Databases, Android Database Design, Exposing Access to a Data Source through a Content Provider, Content Provider Registration, Native Content Providers

UNIT-IV: MOBILE APPLICATIONS:

Intent Overview, Implicit Intents, Creating the Implicit Intent Example Project, Explicit Intents, Creating the Explicit Intent Example Application, Intents with Activities, Intents with Broadcast Receivers, An Overview of Threads, The Application Main Thread, Thread Handlers, A Basic Threading Example, Creating a New Thread, Implementing a Thread Handler, Passing a Message to the Handler. Sending SMS Messages Programmatically, Getting Feedback after Sending the Message Sending SMS Messages Using Intent Receiving, sending email, Introduction to location-based service, configuring the Android Emulator for Location-Based Services, Geocoding and Map-Based Activities,Playing Audio and Video, Recording Audio and Video, Using the Camera to Take and Process Pictures

UNIT-V: MOBILE APP DEVELOPMENT & INSTALLATION:

Introduction to Windows Phone App Development, Installing the Windows Phone SDK, Creating Your First XAML for Windows Phone App. Understanding the Role of XAP Files, the Windows Phone Capabilities Model, the Threading Model for XAML-Based Graphics and Animation in Windows Phone, Understanding the Frame Rate Counter, The Windows Phone Application Analysis Tool, Reading Device Information, Applying the Model-View-ViewModel Pattern to a Windows Phone App, Property Change Notification, Using Commands

SUGGESTED READINGS:

1. Erik Hellman, “Android Programming – Pushing the Limits”, 1st Edition, Wiley India Pvt Ltd, 2014.
2. Dawn Griffiths and David Griffiths, “Head First Android Development”, 1st Edition, O’Reilly SPD Publishers, 2015
3. J F DiMarzio, “Beginning Android Programming with Android Studio”, 4th Edition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126565580
4. AnubhavPradhan, Anil V Deshpande, “ Composing Mobile Apps” using Android, Wiley 2014, ISBN: 978-81-265-4660-2

Web Resource :

Google Developer Training, "Android Developer Fundamentals Course – Concept Reference”, Google Developer Training Team, 2017. <https://www.gitbook.com/book/google-developer-training/android-developerfundamentals-course-concepts/details> (Download pdf file from the above link)

Paper PR : RESEARCH METHODOLOGY & PROJECT REPORT

Objective: To introduce the basics of conducting research in social sciences.

UNIT-I: INTRODUCTION, MEASUREMENT AND HYPOTHESIS TESTING:

Meaning of Research-Steps involved- Identification of Problem- Steps involved in the selection of problem-Research Design-Meaning and Types- Measurement Levels/Scales - Scaling Techniques-Hypothesis-Meaning - Types – Testing Procedure.

UNIT-II:PARAMETRIC AND NON PARAMETRIC TESTS AND RESEARCH REPORT:

Introduction - t-Test - F-Test - Chi Square Test - Anova (One-Way Anova, Two-Way Anova).concepts only Contents of a Research Report.

SUGGESTED READINGS:

1. Research Methodology: Himalaya Publications.
2. Methodology of Research in Social Sciences: Krishna Swamy,
3. Research Methodology: Kothari &Garg, New Age Publication
4. Research Methodology: Paneerselvam R, PHI
5. Research Methodology: Dr Vijay Upagade& Dr ArvindShende, S. Chand Publications
6. Research Methodology: Ranjit Kumar, Pearson Publication
7. Reading in Research Methodology in Commerce & Business Management: Achalapathi KV,
8. Research Methodology: Sashi.K Gupta, PraneethRangi, Kalyani Publishers.

GUIDELINES FOR PROJECT WORK

- 1) Project work is a part of the prescribed curriculum to B. Com students.
- 2) Project work is allotted to a group of 4 students.
- 3) During the IV semester, students are expected to undergo internship at a business firm/ Government Department /Software organization/Voluntary organization as per the guidance of teacher concerned.
- 4) Students should get a certificate from the organization.
- 5) At the end of Semester-VI, the project reports would be evaluated by the external examiner designated by the Controller of Examinations, from the panel submitted by the Board of Studies in Commerce. The Examiner would evaluate the project reports for a maximum of 35 marks and conduct Viva-Voce examination for 15 marks. The award lists duly signed would be sent the Controller of Examinations.
- 6) Examiners will examine the following in the project report: i) Survey/Analysis on the topic chosen; ii) Method of data collection; iii) Presentation: Style, Comprehensiveness, graphs, charts etc.; iv) Analysis and inference and implications of the study; v) Bibliography.
- 7) Students must ensure that they maintain **regular contact with their supervisor** and also that they provide the supervisor with drafts of their work at regular intervals.
- 8) Students are required to submit a project report on a topic related/connected with trade, industry & commerce. Project can be done by taking the information from the select organization focusing on areas like marketing, finance, human resource, operations, general management etc.

- 9) Project should be a practical, in-depth study of a problem, issue, opportunity, technique or procedure or some combination of these aspects of business. The Students are required to define an area of investigation, assemble relevant data, analyse the data, draw conclusions and make recommendations.

ORGANISATION OF PROJECT REPORT

1) Project report should be presented in the following sequence:

- i) Title page; ii) Student's declaration; iii) Supervisor's certificate; iv) Internship certificate; v) Abstract; vi) Acknowledgements; vii) Table of contents; viii) List of tables; ix) List of figures; x) List of appendices.

2) Chapter Design should be as follows:

Chapter-I: Introduction: this chapter includes the research problem, need for study/significance of the project, objectives, methodology (hypotheses, statistical tools, data source, scope, sample, chapter design).

Chapter-II: Company Profile: this chapter should contain a brief historical retrospect about the entity of your study.

Chapter-III: Data Analysis and interpretation: this chapter should present the data analysis and inferences.

Chapter-IV: Summary and Conclusions: This Chapter should give an overview of the project, conclusions, implications, recommendations and scope for further research.

Bibliography: lists the books, articles, and websites that are referred and used for research on the topic of the specific project. Follow Harvard style of referencing.

Appendices: the data, used to prepare the tables for analysis, may not be feasible to incorporate as part of chapters, may given as appendices.

TECHNICAL SPECIFICATIONS OF THE PROJECT

- 1) Project should be typed on **A4 white paper**, and be **1.5 spaced**.
- 2) All pages should be **numbered**, and numbers should be placed at the centre of the bottom of the page.
- 3) **All tables, figures and appendices** should be consecutively numbered or lettered, and suitably labeled.
- 4) **3 bound copies&a soft-copy** should be handed in to the **principal/director of your college/institute** at the time of submission.
- 5) **bibliography and referencing: Referencing** is necessary to avoid plagiarism, to verify quotations and to enable readers to follow-up and read more fully the cited author's arguments. Reference is given within the text of the project as well as at the end of the project. The basic difference between citation and a reference list (bibliography) is that the latter contains full details of all the in-text citations.
 - **Citation** provides brief details of the author and date of publication for referencing the work in the body of the text.
 - **Reference list** is given at the end of the text and is a list of all references used with additional details provided to help identify each source.

Proper referencing is as crucial aspect of your project. You are therefore strongly advised to talk to your supervisor about this, in order to make sure that your project report follows the appropriate referencing system.

Paper DSE 601 (a) : COST CONTROL AND MANAGEMENT ACCOUNTING

Objective: To be acquaint with Cost Control techniques, Managerial Accounting decision-making techniques and reporting methods.

UNIT-I: INTRODUCTION TO MANAGEMENT ACCOUNTING & MARGINAL COSTING:

Meaning and Importance of Management Accounting – Marginal Cost Equation – Difference between Marginal Costing and Absorption Costing – Application of Marginal Costing – CVP Analysis – Break Even Analysis: Meaning – Assumptions – Importance - Limitations. Marginal Costing for Decision Making-Make or Buy – Add or Drop Products – Sell or Process Further – Operate or Shut-down – Special Order Pricing – Replace or Retain.

UNIT-II: BUDGETARY CONTROL AND STANDARD COSTING:

Budget: Meaning – Objectives – Advantages and Limitations – Essentials of Budgets - Budgetary Control - Classification of Budgets - Preparation of Fixed and Flexible Budgets. Standard Costing: Meaning – Importance – Standard Costing and Historical Costing - Steps involved in Standard Costing. Variance Analysis: Material variance - Labour variance - Overhead variance .

UNIT-III: TECHNIQUES OF FINANCIAL STATEMENT ANALYSIS:

Meaning – Objectives - Techniques: Comparative Statement, Common Size Statement, Trend Analysis. Ratios- Meaning , Objectives and Classification—Computation of Activity, Liquidity, Solvency and Profitability Ratios.

UNIT-IV: FUNDS FLOW ANALYSIS:

Concept of Funds – Meaning and Importance – Limitations – Statement of Changes in Working Capital – Statement of Sources and Application of Funds.

UNIT-V: CASH FLOW ANALYSIS (AS-3):

Meaning – Importance – Differences between Funds Flow and Cash Flow Statements – Procedure for preparation of Cash Flow Statement.

SUGGESTED READINGS:

1. Management Accounting- Principles & Practice: Sharma RK & Shashi K. Gupta, Kalyani
2. Advanced Managerial Accounting: Srihari Krishna Rao, Himalaya
3. Advanced Managerial Accounting: Dr. Sundaram, PBP
3. Advanced Management Accounting: Robert S. Kaplan & Anthony A. Atkinson, Prentice-Hall
4. Management Accounting: Rustagi R.P, Galgotia
5. Managerial Accounting: Ronald W. Hilton, TMH

Paper DSE 601 (b) : FINANCIAL CONTROL

Objective: To make students to understand the Financial Control.

UNIT I: EXTERNAL FINANCIAL REPORTING DECISIONS (AS PER US GAAP & IFRS):

Financial Statements: Balance sheet - Income statement - Statement of Comprehensive Income - Statement of changes in equity - Statement of cash flows - Integrated reporting

UNIT II: RECOGNITION, MEASUREMENT, VALUATION, AND DISCLOSURE (AS PER US GAAP & IFRS) :

Assets, Liabilities & Equity: Asset valuation - Valuation of liabilities - Equity transactions - Income: Revenue recognition - Income measurement - Major differences between U.S. GAAP and IFRS

UNIT III: COST MANAGEMENT:

Measurement concepts: Cost behavior and cost objects - Actual and normal costs - Standard costs - Absorption (full) costing - Variable (direct) costing - Joint and by-product costing - Costing Systems: Joint and by-product costing - Job order costing - Process costing - Activity-based costing - Life-cycle costing -Overhead costs: Fixed and variable overhead expenses - Plant-wide versus departmental overhead -Determination of allocation base - Allocation of service department costs

UNIT IV: SUPPLY CHAIN MANAGEMENT AND BUSINESS PROCESS IMPROVEMENT:

Supply chain management: Lean resource management techniques - Enterprise resource planning (ERP) - Theory of constraints - Capacity management and analysis - Business Process Improvement: Value chain analysis - Value-added concepts - Process analysis, redesign, and standardization - Activity-based management - Continuous improvement concepts - Best practice analysis - Cost of quality analysis - Efficient accounting processes

UNIT V: INTERNAL CONTROLS:

Governance, Risk & Compliance: Internal control structure and management philosophy - Internal control policies for safeguarding and assurance - Internal control risk - Corporate governance - External audit requirements - System Controls & Security Measures: General accounting system controls - Application and transaction controls - Network controls - Backup controls - Business continuity planning

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 1: Planning, Performance & Analytics
2. Intermediate Accounting, 17th edition; Kieso, Donald E., Weygandt, Jerry J., and Warfield, Terry D.; Wiley
3. Intermediate Accounting, 11th edition; Nikolai, Loren A., Bazley John D., and Jones, Jefferson P., South-Western Cengage Learning
4. Cost Management: A Strategic Emphasis, 6th edition; Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary; McGraw Hill
5. Horngreen's Cost Accounting: A Managerial Emphasis, 16th edition; Charles T., Datar, Srikant, and Rajan, Madhav; Pearson
6. Management Accounting: An Integrative Approach; McNair-Connolly, C.J., Merchant, Kenneth A.; IMA

Paper DSE 601(c) :INTERNATIONALFINANCIAL REPORTING - II

Objective: To make students to understand the International Financial Reporting.

UNIT I: PENSIONS & POST-EMPLOYMENT BENEFITS (AS PER US GAAP & IFRS):

Defined contribution pension plans - Defined benefit pension plans: Pension obligations - Pension plan assets - Net pension expense - Other Post-retirement benefits

UNIT II: INCOME TAXES (AS PER US GAAP & IFRS):

Income tax expense: Current income tax expense - Deferred income tax expense - Deferred taxes on balance sheet: Deferred tax assets - Deferred tax liabilities - Specific accounting - considerations: Net Operating Losses (NOL) - Investee's undistributed dividends

UNIT III: EQUITY (AS PER US GAAP & IFRS):

Equity accounts: Common Stock - Preferred Stock - Additional Paid-In Capital - Retained Earnings - Accumulated Other Comprehensive Income - Treasury Stock - Specific accounting considerations: Share-based Payments to Employees - Equity Securities Classified as Debt
Presentation of Equity: On Balance sheet - On Statement of Changes in Equity - Earnings per Share (EPS): Basic EPS - Diluted EPS

UNIT IV: SELECT TRANSACTIONS (AS PER US GAAP & IFRS):

Business Combinations and Consolidations: Acquisitions - Non-controlling Interest - Intercompany Transactions - Variable Interest Entities (VIE) - Foreign currency: Remeasurement - Translation

UNIT V: NOT-FOR-PROFIT AND GOVERNMENTAL ACCOUNTING AND REPORTING (AS PER US GAAP):

Not-for-Profit (NFP) Entities: NFP Financial Statements - Contribution Revenue - Specific Accounting Considerations - Colleges and Universities - Voluntary Health and Welfare Organizations - Health Care Organizations - Governmental Entities: Fund types (Governmental funds, Proprietary funds, Fiduciary funds) - Modified Accrual Accounting - Inter-fund transactions - Government Financial Reporting

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Financial Accounting & Reporting, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Financial Accounting and Reporting, Wiley
3. IFRS & US GAAP Best Practices in Accounting World: GAAP Analysis, Rajesh Dhawan
4. Transparency in Financial Reporting: A concise comparison of IFRS and US GAAP 1st Edition, Ruth Ann McEwen, Harriman House Ltd.
5. IFRS and US GAAP: A Comprehensive Comparison, Steven E. Shamrock, Wiley
6. Wiley GAAP: Interpretation and Application of Generally Accepted Principles, Barry J. Epstein and Ralph Nach, Wiley
7. IFRS Simplified with Practical Illustration Part 1 & 2, Mr RammohanBhave and Dr Mrs Anjali RammohanBhave, CNBC TV 18

Paper DSE 602(a) : THEORY AND PRACTICE OF GST

Objective: To equip the students with the knowledge regarding Theory and Practice of GST.

UNIT I: INTRODUCTION TO GST:

Introduction – GST - Taxes Subsumed under GST -Determination of Tax - Registration -Process of Registration - Cancellation and renovation of registration - Supply of Goods and Services - Transition to GST - Registered Business -Availed Input Tax Credit -Unavailed CENVAT credit and Input VAT on capital goods-Availing the input credit held in closing stock -Invoicing -Tax Invoice -Bill of Supply - Credit Note, Debit Note and Supplementary Invoice-Transportation of goods without issue of Invoice - Input Credit Mechanism - Input Tax - GST Returns - Payment of Tax.

UNIT II: GETTING STARTED WITH GST:

Introduction - Enabling GST and Defining Tax Details-Transferring Input Tax credit to GST -Intrastate Supply of Goods-Intrastate Inward Supply -Intrastate Outward Supply -Interstate -Interstate Outward Supply - Return of Goods -Purchase Returns -Sales Returns -Supplies Inclusive of Tax -Defining Tax Rates at Master and Transaction Levels - Defining GST Rates at Stock Group Level-Defining GST Rate at Transaction Level -Hierarchy of Applying Tax Rate Details –Reports.

UNIT III: RECORDING ADVANCED ENTRIES, GST ADJUSTMENT AND RETURN FILING:

Introduction -Accounting of GST Transactions -Purchases from Composition Dealer -Purchases from Unregistered Dealers-Exports -Imports -Exempted Goods -SEZ Sales -Advance Receipts and payments - Mixed Supply and Composite Supply under GST -Mixed Supply of Goods -Composite Supply of Goods -GST Reports - Generating GSTR- Report in ERP -Input Tax Credit Set Off -GST Tax Payment -Time line for payment of GST tax -Modes of Payment -Challan Reconciliation -Exporting GSTR- return and uploading in GST portal.

UNIT IV: GETTING STARTED WITH GST (SERVICES):

Introduction -Determination of supply of services -Determining the Place of Supply of Services -Enabling GST and Defining Tax Details-Transferring Input Tax credit to GST -Intrastate Supply of Goods - Intrastate Inward Supply-Intrastate Outward Supply -Interstate Supply -Interstate Outward Supply - Interstate Inward Supply -Interstate Outward Supply of Services -Cancellation of Services -Cancellation of Inward Supplies -Cancellation of Outward Supply of Services -Defining Tax Rates at Master and Transaction Levels.

UNIT V: RECORDING ADVANCED ENTRIES AND MIGRATION TO ERP:

Introduction - Accounting Multiple Services in a Single Supply - Recording Partial Payment to Suppliers -Outward Supplies - Recording Outward Supply with Additional Expenses - Supply of services -Business to consumers - Time of Supply of Services - Place of Supply of Services - Determining place of supply of services - Exempt Supply of Services under GST -Export Supply of Services - Reverse Charge on Services under GST - Advance Receipts from Customers under GST - Advance Receipt and issuing Invoice on same month -Advance Receipt and issuing Invoice on different month - Reversal of GST on account of cancellation of advance receipt - Generating GSTR- Report in ERP - Input Tax Credit Set Off - Migration to ERP - Activate Goods and Services Tax (GST) in ERP - Set up GST rates - Update Masters - Update party GSTIN/UIN - Creation of GST Duty ledgers.

SUGGESTED READINGS:

1. Taxmann's Basics of GST
2. Taxmann's GST: A practical Approach
3. Theory & Practice of GST, Srivathsala, HPH
4. Theory & Practice of GST: Dr. Ravi M.N, PBP.

Paper DSE 602(b) : FINANCIAL DECISION MAKING - II

Objective: To make students to understand the Financial Decision Making.

UNIT I: DECISION ANALYSIS:

Cost/volume/profit analysis: Breakeven analysis - Profit performance and alternative operating levels - Analysis of multiple products - Marginal Analysis: Sunk costs, opportunity costs and other related concepts - Marginal costs and marginal revenue - Special orders and pricing - Make versus buy - Sell or process further - Add or drop a segment - Capacity considerations

UNIT II: PRICING:

Pricing decisions: Pricing methodologies - Target costing - Elasticity of demand - Product life cycle considerations - Market structure considerations

UNIT III: RISK MANAGEMENT:

Enterprise Risk: Types of risk - Risk identification and assessment - Risk mitigation strategies - Managing risk

UNIT IV: INVESTMENT DECISIONS:

Capital budgeting process: Stages of capital budgeting - Incremental cash flows - Income tax considerations - Evaluating uncertainty - Capital investment method analysis: Net present value - Internal rate of return - Payback - Comparison of investment analysis methods

UNIT V: PROFESSIONAL ETHICS:

Business ethics: Moral philosophies and values - Ethical decision making - Ethical considerations for management accounting and financial management professionals: IMA's Statement of Ethical Professional Practice - Fraud triangle - Evaluation and resolution of ethical issues - Ethical considerations for the organization: Organizational factors and ethical culture - IMA's Statement on Management Accounting, "Values and Ethics: From Inception to Practice" - Ethical leadership - Legal compliance - Responsibility for ethical conduct - Sustainability and social responsibility.

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 2: Strategic Financial Management
2. Cost Management: A Strategic Emphasis, 6th edition; Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary; McGraw Hill
3. Horngreen's Cost Accounting: A Managerial Emphasis, 16th edition; Charles T., Datar, Srikant, and Rajan, Madhav; Pearson
4. Principles of Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
5. Fundamentals of Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall
6. Enterprise Risk Management - Integrated Framework; COSO, The Committee of Sponsoring Organizations of the Treadway Commission, 2017

Paper DSE 602 (c) : INTERNATIONAL AUDITING

Objective: To make students to understand the International Auditing.

UNIT I: ETHICS, PROFESSIONAL RESPONSIBILITIES AND GENERAL AUDITING

PRINCIPLES:

Introduction to Auditing: Generally Accepted Auditing Standards (GAAS) - International Standards of Auditing (ISA) - Ethics, independence and professional conduct: AICPA Code of Professional Conduct - Sarbanes-Oxley Act (SOX), 2002 - Public Company Accounting Oversight Board (PCAOB) - Securities & Exchange Commission (SEC) - International Standards - Engagement Understanding and Acceptance: Pre-Engagement Acceptance Activities - Engagement Letter - Auditor's communication with those charged with governance

Quality Control: Statements on Quality Control Standards (SQCS) - Elements of a System of Quality control

UNIT II: ASSESSING AUDIT RISK AND DEVELOPING A PLANNED RESPONSE:

Audit Risk: Inherent Risk - Control Risk - Detection Risk - Fraud Risk: Fraudulent financial reporting - Misappropriation of assets - Fraud risk factors - Auditor's consideration of fraud

Planning the Audit: Audit Strategy - Audit Plan - Internal Controls: Auditor's Consideration of Internal Control - Operating Cycles - Internal Control Reports and Communications

UNIT III: PERFORMING FURTHER PROCEDURES AND OBTAINING AUDIT EVIDENCE:

Audit Evidence: Management's Assertions - Sufficient & Appropriate Audit Evidence - Audit Evidence determined by Risk of Material Misstatement (RMM) - Substantive Procedures: Revenue cycle - Expenditure cycle - Production cycle - Payroll cycle - Investing cycle - Financing cycle - Opening Balances - Illegal Acts - Related Parties - Contingencies - Estimates & Fair Value Measurements - Subsequent Events - Omitted Procedures & Subsequent Discovery of Facts - Using the Work of Others - Evaluating Audit Findings - Audit Documentation - Management Representation Letter - Audit Sampling: Sampling Risks - Attributes Sampling - Classical Variables Sampling - Probability Proportional to Size (PPS) Sampling

UNIT IV: AUDIT REPORTING:

Audit Reports: Unmodified opinion - Unmodified Opinion with Emphasis-of-matter and/or Other-matter paragraph - Qualified Opinion - Adverse Opinion - Disclaimer of Opinion - Audit Reporting Considerations: Audit of Comparative financial statements - Supplementary Information - Audit of Group financial statements - Audit of Single financial statements & Specific financial statement elements, accounts or items - Audit of Special Purpose financial statements - Audit of financial statements prepared using financial reporting framework of another country

UNIT V: OTHER ENGAGEMENTS:

Accounting & Review Services: Preparation of financial statements - Compilation engagement - Review engagement - Attestation Engagements: Examination - Review - Agreed-upon Procedures - Governmental Auditing: Governmental Auditing Standards - Single Audit Act

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Auditing and Attestation, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Auditing and Attestation, Wiley
3. Wiley Practitioner's Guide to GAAS: Covering all SAS, SSAE's , SSARS, PCAOB, Auditing Standards, and Interpretations, Joanne M. Flood, Wiley
4. Auditing: A Risk Based-Approach to Conducting a Quality Audit, Karla M Johnstone, Audrey A. Gramling and Larry E. Rittenberg, Cengage Learning
5. Principles of Auditing & Other Assurance Services, Ray Whittington and Kurt Pany, McGraw Hill
6. Auditing & Assurance Services: A Systematic Approach, William F Messier Jr, Steven M. Glover and Douglas F. Prawitt, McGraw Hill.

Paper DSE 603(a) :MULTIMEDIA SYSTEMS

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: To acquire the knowledge of multimedia systems.

UNIT-I: MEDIA AND DATA STREAMS:

Properties of multimedia systems, Data streams characteristics: Digital representation of audio, numeric instruments digital interface Bark concepts, Devices, Messages, Timing Standards Speech generation, analysis and transmission.

UNIT-II: DIGITAL IMAGE&ANIMATIONS:

Digital Image: Analysis, recognition, transmission, **Video:** Representation, Digitalization, transmission.

Animations: Basic concepts, animation languages, animations control transmission.

UNIT-III: DATA COMPRESSION STANDARDS&STORAGE:

Data Compression Standards: JPEG, H-261, MPEG DVI

Optical storage devices and Standards: WORHS, CDDA, CDROM, CDWO, CDMO.

Real Time Multimedia, Multimedia file System.

UNIT-IV: MULTIMEDIA COMMUNICATION SYSTEM, DATABASES&SYNCHRONIZATION:

Multimedia Communication System: Collaborative computing session management, transport subsystem, QOS, resource management.

Multimedia Databases: Characteristics, data structures, operation, integration in a database model.

Synchronization: Issues, presentation requirements, reference to multimedia synchronization, MHEG.

UNIT-V: MULTIMEDIA APPLICATION:

Media preparation, Composition, integration communication, consumption, entertainment.

SUGGESTED READINGS:

1. Ralf Steninmetz, KlaraHahrstedt, *Multimedia: Computing, Communication and Applications*, PHI PTR Innovative Technology Series.
2. John F.KoegelBufford, *Multimedia System*, Addison Wesley, 1994.
3. Mark Elsom – Cook, *Principles of Interactive Multimedia*, Tata Mc-Graw Hill, 2001.
4. Judith Jefcoate, *Multimedia in Practice: Technology and Application*, PHI 1998.

Paper DSE 603(b) :CYBER SECURITY

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: to understand the cyber security, detection, network security, the law and cyber forensic.

UNIT-I: INTRODUCTION TO CYBER SECURITY, CYBER SECURITY VULNERABILITIES AND CYBER SECURITY SAFEGUARDS:

Introduction to Cyber Security: Overview of Cyber Security, Internet Governance – Challenges and Constraints, Cyber Threats:- Cyber Warfare-Cyber Crime-Cyber terrorism-Cyber Espionage, Need for a Comprehensive Cyber Security Policy, Need for a Nodal Authority, Need for an International convention on Cyberspace.

Cyber Security Vulnerabilities: Overview, vulnerabilities in software, System administration, Complex Network Architectures, Open Access to Organizational Data, Weak Authentication, Unprotected Broadband communications, Poor Cyber Security Awareness.

Cyber Security Safeguards: Overview, Access control, Audit, Authentication, Biometrics, Cryptography, Deception, Denial of Service Filters, Ethical Hacking, Firewalls, Intrusion Detection Systems, Response, Scanning, Security policy, Threat Management.

UNIT-II: SECURING WEB APPLICATION, SERVICES AND SERVERS:

Introduction, Basic security for HTTP Applications and Services, Basic Security for SOAP Services, Identity Management and Web Services, Authorization Patterns, Security Considerations, Challenges.

UNIT-III: INTRUSION DETECTION AND PREVENTION:

Intrusion, Physical Theft, Abuse of Privileges, Unauthorized Access by Outsider, Malware infection, Intrusion detection and Prevention Techniques, Anti-Malware software, Network based Intrusion detection Systems, Network based Intrusion Prevention Systems, Host based Intrusion prevention Systems, Security Information Management, Network Session Analysis, System Integrity Validation.

UNIT-IV: CRYPTOGRAPHY AND NETWORK SECURITY:

Introduction to Cryptography, Symmetric key Cryptography, Asymmetric key Cryptography, Message Authentication, Digital Signatures, Applications of Cryptography. Overview of Firewalls- Types of Firewalls, User Management, VPN Security Security Protocols: - security at the Application Layer- PGP and S/MIME, Security at Transport Layer- SSL and TLS, Security at Network Layer-IPSec.

UNIT-V: CYBERSPACE AND THE LAW, CYBER FORENSICS:

Cyberspace and The Law: Introduction, Cyber Security Regulations, Roles of International Law, the state and Private Sector in Cyberspace, Cyber Security Standards. The INDIAN Cyberspace, National Cyber Security Policy 2013.

Cyber Forensics: Introduction to Cyber Forensics, Handling Preliminary Investigations, Controlling an Investigation, Conducting disk-based analysis, Investigating Information-hiding, Scrutinizing E-mail, Validating E-mail header information, Tracing Internet access, Tracing memory in real-time.

SUGGESTED READINGS:

1. Ramandeepkaurnagra, Cyber laws and Intellectual Property Rights, Kalyani Publishers, 7e,
2. Nina Godbole&SunitBelapureCyber Security, Wiley India Pvt Ltd, 2012.
3. Gerald. R. Ferrera, Reder and lichtenstein, Cyber laws – Text and Cases,3e, Cengage learning
4. FaiyazAhamed, Cyber Law and Information Security, DreamTech Press, 2013
5. PankajAgarwal, Information Security and Cyber Laws, Acme Learning, 2013
6. Manjotkaur, Essentials of E-Business and Cyber laws, Kalyani Publishers.

Paper DSE 603(c) :DATA ANALYTICS

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: To learn the different ways of data Analysis, data streams, mining and clustering and visualization.

UNIT-I: INTRODUCTION TO BIG DATA:

Introduction to Big Data Platform – Challenges of conventional systems – Web data – Evolution of Analytic scalability, analytic processes and tools, Analysis vs reporting – Modern data analytic tools, Stastical concepts: Sampling distributions, resampling, statistical inference, prediction error.

UNIT-II: DATA ANALYSIS:

Regression modeling, Multivariate analysis, Bayesian modeling, inference and Bayesian networks, Support vector and kernel methods, Analysis of time series: linear systems analysis, nonlinear dynamics – Rule induction – Neural networks: learning and generalization, competitive learning, principal component analysis and neural networks; Fuzzy logic: extracting fuzzy models from data, fuzzy decision trees, Stochastic search methods.

UNIT-III: MINING DATA STREAMS:

Introduction to Streams Concepts – Stream data model and architecture – Stream Computing, Sampling data in a stream – Filtering streams – Counting distinct elements in a stream – Estimating moments – Counting oneness in a window – Decaying window – Realtime Analytics Platform(RTAP) applications – case studies – real time sentiment analysis, stock market predictions.

UNIT-IV: FREQUENT ITEMSETS AND CLUSTERING:

Mining Frequent item sets – Market based model – Apriori Algorithm – Handling large data sets in Main memory – Limited Pass algorithm – Counting frequent itemsets in a stream – Clustering Techniques – Hierarchical – K- Means – Clustering high dimensional data – CLIQUE and PROCLUS – Frequent pattern based clustering methods – Clustering in non-euclidean space – Clustering for streams and Parallelism.

UNIT-V: FRAMEWORKS AND VISUALIZATION:

MapReduce – Hadoop, Hive, MapR – Sharding – NoSQL Databases – S3 – Hadoop Distributed file systems – Visualizations – Visual data analysis techniques, interaction techniques; Systems and applications:

SUGGESTED READINGS:

- 1) Michael Berthold, David J. Hand, Intelligent Data Analysis, Springer, 2007.
- 2) AnandRajaraman and Jeffrey David Ullman, Mining of Massive Datasets,Cambridge University Press, 2012.
- 3) Bill Franks, Taming the Big Data Tidal Wave: Finding Opportunities in Huge Data Streams with advanced analystics, John Wiley & sons, 2012.
- 4) Glenn J. Myatt, Making Sense of Data, John Wiley & Sons, 2007 Pete Warden, Big Data Glossary, O'Reilly, 2011.
- 5) Jiawei Han, MichelineKamber “Data Mining Concepts and Techniques”, Second Edition, Elsevier, Reprinted 2008.

B.Com.

Syllabus (CBCS)

(w.e.f. 2019–2020)



**FACULTY OF COMMERCE
SATAVAHANA UNIVERSITY
KARIMNAGAR - 505001 T.S.**

B.COM
CBCS COURSE STRUCTURE
w.e.f. 2019-'20

Sl.No.	Code	Course Title	HPW	Credits	Exam Hrs	Marks
(1)	(2)	(3)	(5)	(6)	(7)	(8)
SEMESTER – I						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AECC1	Environmental Science	2	2		
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Foreign Trade	5	5	3 hrs	80U+20I
		Total	25	25		
SEMESTER – II						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AECC2	Basic Computer Skills	2	2		
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Banking and Financial Services	5	5	3 hrs	80U+20I
		Total	25	25		
SEMESTER – III						
13.	ELS3	English (First Language)	3	3		
14.	SLS3	Second Language	3	3		
15.	SEC1	a)Principles of Insurance/ b)Foundation of Digital Marketing/ c)Fundamentals of Business Analytics	2	2	1 ½ hrs	40U+10I
16.	SEC2	a)Practice of Life Insurance/ b)Web Design & Analytics/ c)Application of Business Analytics	2	2	1 ½ hrs	40U+10I
17.	DSC301	Advanced Accounting	5	5	3 hrs	80U+20I
18.	DSC302	Business Statistics-I	5	5	3 hrs	80U+20I
19.	DSC303	Financial Institutions and Markets	5	5	3 hrs	80U+20I
		Total	25	25		
SEMESTER – IV						
20.	ELS4	English (First Language)	3	3		
21.	SLS4	Second Language	3	3		
22.	SEC3	a)Practice of General Insurance/ b)Social Media Marketing c)Business Intelligence	2	2	1 ½ hrs	40U+10I
23.	SEC4	a)Regulation of Insurance Business/ b)Search Engine Optimization & Online Advertising c)Data Visualisation & Storytelling	2	2	1 ½ hrs	40U+10I
24.	DSC401	Income Tax/Excel Foundation	5	5	3 hrs	80U+20I
25.	DSC402	Business Statistics-II	5	5	3 hrs	80U+20I
26.	DSC403	Corporate Accounting	5	5	3 hrs	80U+20I
		Total	25	25		

SEMESTER – V						
27.	ELS5	English (First Language)	3	3		
28.	SLS5	Second Language	3	3		
29.	GE	a) Business Economics/ b) Advanced Aspects of Income Tax	4	4	3 hrs	80U+20I
30.	DSE501	a) Cost Accounting/ b) Financial Planning & Performance/ c) International Financial Reporting-I	5	5	3 hrs	80U+20I
31.	DSE502	a) Computerized Accounting/ b) Financial Decision Making-I/ c) International Tax & Regulation	3T+4P/5	5	3 hrs	50T+35P + 15I/ 80U+20I
32.	DSE503	a) Auditing/ b) Advanced Corporate Accounting/ c) Financial Management	5	5	3 hrs	80U+20I
Total			27/25	25		
SEMESTER – VI						
33.	ELS6	English (First Language)	3	3		
34.	SLS6	Second Language	3	3		
35.	PR	Research Methodology and Project Report	2T+4R	4	1 ½ hrs	40U+10I 35R+15V V
36.	DSE601	a) Cost Control and Management Accounting/ b) Financial control/ c) International Financial Reporting-II	5	5	3 hrs	80U+20I
37.	DSE602	a) Theory and Practice of GST/ b) Financial Decision Making-II / c) International Auditing	3T+4P/5	5	3 hrs	50T+35P + 15I/ 80U+20I
38.	DSE603	a) Accounting Standards/ b) Corporate Governance/ c) Investment Management	5	5	3 hrs	80U+20I
Total			29/27	25		
GRAND TOTAL			156/152	150		

ELS: English Language Skill; **SLS:** Second Language Skill; **AEC:** Ability Enhancement Compulsory Course; **SEC:** Skill Enhancement Course; **DSC:** Discipline Specific Course; **DSE:** Discipline Specific Elective; **GE:** Generic Elective; **T:** Theory; **P:** Practical; **I:** Internal Exam **U:** University Exam; **PR:** Project Report; **VV:** Viva-Voce Examination.

Note: If a student should opt for “a” in SEC in III semester, the student has to opt for “a” only in IV semester and so is the case with “b” and “c”. In the case of DSE also the rule applies.

SUMMARY OF CREDITS

Sl. No.	Course Category	No. of Courses	Credits Per Course	Credits
1	English Language	6	4/3	20
2	Second Language	6	4/3	20
3	AECC	2	2	4
4	SEC	4	2	8
5	GE	1	4	4
6	Project Report	1	4	4
7	DSC	12	5	60
8	DSE	6	5	30
	TOTAL	38		150
	Commerce	24		106
CREDITS UNDER NON-CGPA		NSS/NCC/Sports/Extra Curricular	Up to 6 (2 in each year)	
		Summer Internship	Up to 4 (2 in each after I & II years)	

Paper DSC 101: FINANCIAL ACCOUNTING - I

Objective: To acquire conceptual knowledge of basics of Accounting and preparation of final accounts of sole trader.

UNIT-I: ACCOUNTING PROCESS:

Financial Accounting: Introduction – Definition – Evolution – Functions-Advantages and Limitations –Users of Accounting Information- Branches of Accounting – Accounting Principles: Concepts and Conventions- Accounting Standards– Meaning – Importance – List of Accounting Standards issued by ASB - Accounting System- Types of Accounts – Accounting Cycle – Journal- Ledger and Trial Balance (Including problems)

UNIT-II: SUBSIDIARY BOOKS:

Meaning –Types: Purchases Book - Purchases Returns Book - Sales Book - Sales Returns Book - Bills Receivable Book - Bills Payable Book – Cash Book: Single Column, Two Column, Three Column and Petty Cash Book - Journal Proper(Including problems)

UNIT-III: BANK RECONCILIATION STATEMENT:

Meaning - Need - Reasons for differences between cash book and pass book balances – Favourable and over draft balances – Ascertainment of correct cash book balance (Amended Cash Book) - Preparation of Bank Reconciliation Statement (Including problems)

UNIT-IV: RECTIFICATION OF ERRORS AND DEPRECIATION:

Capital and Revenue Expenditure – Capital and Revenue Receipts: Meaning and Differences - Differed Revenue Expenditure. Errors and their Rectification: Types of Errors - Suspense Account – Effect of Errors on Profit (Including problems)

Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortization and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method (Including problems)

UNIT-V: FINAL ACCOUNTS:

Final Accounts of Sole Trader: Meaning -Uses -Preparation of Manufacturing, Trading and Profit & Loss Account and Balance Sheet – Adjustments – Closing Entries (Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Company.
2. Principles & Practice of Accounting: R.L.Gupta&V.K.Gupta, Sultan Chand.
3. Accountancy-I: S.P. Jain & K.L Narang, Kalyani Publishers.
4. Accountancy–I: Tulasian, Tata McGraw Hill Co.
5. Introduction to Accountancy: T.S.Grewal, S.Chand and Co.
6. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheshwari, Vikas.
7. Fundamentals of Financial Accounting: Deepak Sehgil, Tax Mann Publication.
8. Financial Accounting: JawaharLal, Himalaya Publishing House.

Paper DSC 102: BUSINESS ORGANISATION AND MANAGEMENT

Objective: To acquaint the students with the basics of Commerce and Business concepts and functions, forms of Business Organization and functions of Management.

UNIT-I: INTRODUCTION AND FORMS OF BUSINESS ORGANISATIONS:

Concepts of Business, Trade, Industry and Commerce - Objectives and Functions of Business- Social Responsibility of a Business - Forms of Business Organization - Meaning, Characteristics, Advantages and Disadvantages of Sole Proprietorship –Meaning, Characteristics, Advantages and Disadvantages of Partnership -Kinds of Partners - Partnership Deed -Concept of Limited Liability Partnership – Meaning, Characteristics, Advantages and Disadvantages of Hindu Undivided Family – Meaning, Advantages and Disadvantages of Co-Operative Organization

UNIT-II: JOINT STOCK COMPANY:

Joint Stock Company - Meaning - Definition - Characteristics - Advantages and Disadvantages - Kinds of Companies -Promotion - Stages of Promotion - Promoter - Characteristics - Kinds - Preparation of Important Documents - Memorandum of Association - Clauses - Articles of Association - Contents – Prospectus - Contents – Red herring Prospectus- Statement in lieu of Prospectus (As per Companies Act, 2013)

UNIT-III: INTRODUCTION TO FUNCTIONS OF MANAGEMENT:

Management - Meaning - Characteristics - Functions of Management - Levels of Management – Skills of Management- Scientific Management - Meaning - Definition - Objectives - Criticism – Fayol’s 14 Principles of Management

UNIT-IV:PLANNING AND ORGANISING: Meaning - Definition - Characteristics - Types of Plans - Advantages and Disadvantages – Approaches to Planning - Management by Objectives (MBO) - Steps in MBO - Benefits – Weaknesses - Definition of Organizing – Organization-Process of Organizing - Principles of Organization - Formal and Informal Organizations - Line, Staff Organizations - Line and Staff Conflicts - Functional Organization - Span of Management - Meaning - Determining Span - Factors influencing the Span of Supervision

UNIT-V: AUTHORITY, COORDINATION AND CONTROL:

Meaning of Authority, Power, responsibility and accountability - Delegation of Authority - Decentralization of Authority - Definition, importance, process, and principles of Coordination-techniques of Effective Coordination - Control - Meaning - Definition – Relationship between planning and control-Steps in Control - Types (post, current and pre-control) - Requirements for effective control

SUGGESTED READINGS:

1. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
2. Business Organisation& Management: Patrick Anthony, Himalaya Publishing House
3. Business Organization & Management: Dr. Manish Gupta, PBP.
4. Organization & Management: R. D. Agarwal, McGraw Hill.
5. Modern Business Organization: S.A. Sherlekar, V.S. Sherlekar, Himalaya Publishing House
6. Business Organization & Management: C.R. Basu, Tata McGraw Hill
7. Business Organization & Management: M.C. Shukla S. Chand,
8. Business Organisation and Management: D.S. Vittal, S. Chand
9. Organizational Behaviour Text & Cases: V.S.P. Rao, Himalaya Publishing House
10. Business Organization & Management: Uma Shekaram, Tata McGraw Hill
11. Business Organization & Management: Niranjan Reddy & Surya Prakash, Vaagdevi publishers
12. Business Organisation and Management, Dr.Neeru Vasihth, Tax Mann Publications.

Paper DSC 103: FOREIGN TRADE

Objective: To gain knowledge of India's foreign trade procedures policies, and international institutions.

UNIT-I: INTRODUCTION:

Foreign Trade: Meaning and Definition - Types - Documents used-Commercial Invoice - Bills of Lading / Airway Bill - Marine Insurance Policy and Certificate - Bills of Exchange - Consumer Invoice - Customs Invoice - Certificate of Origin - Inspection Certificate – Packing List

UNIT-II: BALANCE OF TRADE AND BALANCE OF PAYMENTS:

Introduction - Meaning - Components of BOT & BOP - Concept of Disequilibrium – Causes - Remedies for Correcting Balance of Payments in International Trade

UNIT-III: INDIAN TRADE POLICY:

Importance and its Implementation - Current Export Policy and Import Policy.

UNIT-IV: FOREIGN TRADE AND TRADE BLOCS:

Growth - Significance of Foreign Trade - Merits - Demerits - Trade Blocs: Types - Preferential Trade Area, Free Trade Area, Customs Unions, Common Markets, Economic Unions, Monetary Unions, Customs and Monetary Unions, and Economic and Monetary Unions

UNIT-V: INTERNATIONAL ECONOMIC INSTITUTIONS:

IMF: Objectives - Functions - World Bank: Objectives - Functions - Subsidiaries of World Bank - IMF Vs. IBRD; New Development Bank (NDB) - Objective Functions - Features - Membership - Shareholding, Criticism, Asian Infrastructure Investment Bank (AIIB) - Objective Functions - Features - Membership - Shareholding, Criticism; Trans-Pacific Partnership (TPP) - Objective Functions - Features - Membership - Shareholding, Criticism; UNCTAD: Aims - Features; WTO - Aims - Features - Agreements

SUGGESTED READINGS:

1. International Marketing: Rathore& Jain, Himalaya Publishers.
2. International Marketing: Kushpat S. Jain &RimiMitra, Himalaya Publishers
3. Foreign Trade –Dr SrinivasaNarayana, JyotiMehra– PBP
4. International Economics: SSMDesai&NirmalBhalerao, Himalaya Publishers.
5. International Business Environment & Foreign Exchange Economies: Singh & S. Srivastava,
6. Foreign Trade and Foreign Exchange: O.P.Agarwal&B.K.Chaudri, Himalaya Publishers
7. International Financial Markets & Foreign Exchange: ShashiK.Gupta&PraneetRangi, Kalyani
8. International Economics: Theory & Practice: Paul R. Krugman, Pearson Publishers.

Paper DSC 201: FINANCIAL ACCOUNTING-II

Objective: To acquire Accounting knowledge of bills of exchange and other business accounting methods.

UNIT-I: BILLS OF EXCHANGE:

Bills of Exchange – Definition- Distinction between Promissory note and Bills of exchange- Accounting treatment of Trade bills: Books of Drawer and Acceptor- Honour and Dishonour of Bills- Renewal of bills- Retiring of bills under rebate- Accommodation bills(Including problems)

UNIT-II: CONSIGNMENT ACCOUNTS:

Consignment - Meaning – Features -Proforma invoice - Account sales - Del credere commission- Accounting treatment in the books of the consignor and the consignee - Valuation of consignment stock -Treatment of Normal and abnormal Loss - Invoice of goods at a price higher than the cost price (Including problems)

UNIT-III: JOINT VENTURE ACCOUNTS:

Joint Venture - Meaning – Features-Difference between Joint Venture and Consignment- Accounting Procedure-Methods of Keeping Records for Joint Venture Accounts-Method of Recording in co-ventures books-Separate Set of Books Method- Joint Bank Account-Memorandum Joint Venture Account (Including problems)

UNIT-IV: ACCOUNTS FROM INCOMPLETE RECORDS:

Single Entry System -Meaning – Features - Difference between Single Entry and Double Entry systems - Defects in Single Entry System - Books and accounts maintained - Ascertainment of Profit - Statement of Affairs and Conversion method (Including problems)

UNIT-V: ACCOUNTING FOR NON-PROFIT ORGANIZATIONS:

Non- Profit Organization - Meaning - Features - Receipts and Payments Account - Income and Expenditure Account - Balance Sheet(Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Co.
2. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
3. Accountancy-I: Tulasian, Tata McGraw Hill Co.
4. Accountancy-I: S.P. Jain & K.L. Narang, Kalyani.
5. Advanced Accountancy-I: S.N. Maheshwari & V.L. Maheswari, Vikas.
6. Advanced Accountancy: M Shrinivas & K Sreelatha Reddy, Himalaya Publishers.
7. Financial Accounting: M.N Arora, Tax Mann Publications.

Paper DSC 202: BUSINESS LAWS

Objective: To understand basics of contract act, sales of goods act, IPRs and legal provisions applicable for establishment, management and winding up of companies in India.

UNIT-I: INDIAN CONTRACT ACT:

Agreement and Contract - Essentials of a valid contract - Types of contracts - Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance - Consideration - definition - Essentials of valid consideration - Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach- Significance of Information Technology Act

UNIT-II: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT:

Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell – Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act 1986: Definition of Consumer - Person - Goods - Service - Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Agencies - Appeals

UNIT-III: INTELLECTUAL PROPERTY RIGHTS:

Trade Marks: Definition - Registration of Trade Marks - Patents: Definition - Kinds of Patents - Transfer of the Patent Rights - Rights of the Patentee - Copy Rights: Definition - Rights of the Copyright Owner - Terms of Copy Right - Copy Rights Infringement - Other Intellectual Property Rights: Trade Secrets - Geographical Indications

UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS:

Director: Qualification - Disqualification - Position - Appointment - Removal - Duties and Liabilities - Loans - Remuneration - Managing Director - Corporate Social Responsibility - Corporate Governance. Meeting: Meaning - Requisites - Notice - Proxy - Agenda - Quorum - Resolutions - Minutes - Kinds - Shareholder Meetings - Statutory Meeting - Annual General Body Meeting - Extraordinary General Body Meeting - Board Meetings

UNIT-V: WINDING UP:

Meaning - Modes of Winding Up - Winding Up by tribunal - Voluntary Winding Up - Compulsory Winding Up - Consequences of Winding Up - Removal of name of the company from Registrar of Companies - Insolvency and Bankruptcy code - 2016.

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law: Rajashree. – HPH
- 3) Business Law - Kavitha Krishna, Himalaya Publishing House
- 4) Business Laws – Dr. B. K. Hussain, Nagalakshmi - PBP
- 5) Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
- 6) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 7) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 8) Corporate Law: PPS Gogna, S Chand.
- 9) Business Law: D.S. Vital, S Chand
- 10) Company Law: Bagrial AK, Vikas Publishing House.

Paper DSC 203: BANKING AND FINANCIAL SERVICES

Objective: To familiarize with Fund-based and Non-fund-based Financial Services.

UNIT-I: INTRODUCTION:

Functions of Commercial Banks - Emerging Trends in Commercial Banking in India: E-Banking - Mobile Banking - Core Banking - Bank Assurance - OMBUDSMAN. RBI Constitution - Organizational Structure - Management - Objectives - Functions - Monetary Policy - Brief description on various types of banks - District Co-Operative Central Banks - Contemporary Banks - Regional Rural Banks - National Bank for Agriculture and Rural Development (NABARD) - SIDBI - Development Banks

UNIT-II: BANKER AND CUSTOMER RELATIONSHIP:

Definition of Banker and Customer - Relationship Between Banker and Customer - KYC norms - General and Special Features of Relationship - Opening of Accounts - Special Types of Customers Like Minor, Married Women, Partnership Firms, Companies, Clubs and other Non-Trading Institutions.

UNIT-III: NEGOTIABLE INSTRUMENTS:

Descriptions and their Special Features - Duties and Responsibilities of Paying and Collecting Banker - Circumstances under which a Banker can refuse Payment of Cheques - Consequences of Wrongful Dishonors - Precautions to be taken while Advancing Loans Against Securities - Goods - Documents of Title to Goods - Loans against Real Estate - Insurance Policies - Against Collateral Securities - Banking Receipts

UNIT-IV: INTRODUCTION TO FINANCIAL SERVICES:

Financial Services: Meaning – Functions – Classification- Scope - Fund Based Activities - Non-fund Based Activities - Modern Activities - Causes for Financial Innovation - New Financial Products and Services - Innovative Financial Instruments - Challenges Facing the Financial Service Sector - Present Scenario

UNIT-V: FINANCIAL SERVICES:

Definition - Services of Merchant Banks - Problems and Scope of Merchant Banking in India - Venture Capital: Meaning, Features, Scope, Importance - Leasing - Definition and Steps - Types of Lease - Financial Lease - Operating Lease - Leverage Lease - Sale and Lease Back - Discounting: Concept - Advantages of Bill Discounting - Factoring - Meaning and Nature - Parties in Factoring - Merits and Demerits of Factoring - Forfeiting - Parties to Forfeiting - Costs of Forfeiting - Benefits of Forfeiting for Exporters and Importers

SUGGESTED READINGS:

1. Banking Theory & Practices: Dr. P. K. Srivatsava, Himalaya Publishers
2. Banking Theory & Practices: K.C. Shekar, Vikas Publications
3. Banking and Financial Services: Santhi Vedula & Kavitha Krishna Himalaya Publishing House
4. Banking and Financial Services: Dr. Jayanthi, PBP.
5. Banking Theory, Law & Practices: R. R Paul, Kalyani Publishers
6. Money Banking and Financial Markets: Averbach, Rabort. D, MacMillan. Landon
7. Financial Markets and Services: Gordon and Natarajan, Himalaya Publishing House.
8. Financial Services: T. Siddaiah, Pearson Education.

Paper SEC1 (a): PRINCIPLES OF INSURANCE

Objectives: To make Students to learn Principles of Insurance.

UNIT I: RISK MANAGEMENT AND INSURANCE & INSURANCE TERMINOLOGY:

Risk Management -Types of Risks - Actual and Consequential Losses - Management of Risks - Different Classes of Insurance - Importance of Insurance - Management of Risk by Individuals and Insurers - Fixing of Premiums – Reinsurance - Role of Insurance in Economic Development and Social Security - Constituents of Insurance Market - Operations of Insurance Companies - Operations of Intermediaries - Specialist Insurance Companies - Role of Regulators - Common and specific terms in Life and Non-Life Insurance - Understanding Insurance Customers - Customer Behavior at Purchase Point - Customer Behavior when Claim Occurs - Importance of Ethical Behavior

UNIT II: INSURANCE CONTRACT AND INSURANCE PRODUCTS:

Insurance Contract Terms - Principles of Insurance: Principle of Insurable Interest, Principle of Indemnity, Principle of Subrogation, Principle of Contribution, Relevant Information Disclosure, Principle of utmost Good Faith, Relevance of Proximate Cause - Life Insurance Products: Risk of Dying Early - Risk of Living too Long - Products offered - Term Plans - Pure Endowment Plans - Combinations of Plans - Traditional Products - Linked Policies - Features of Annuities and Group Policies - General Insurance Products: Risks faced by Owner of Assets - Exposure to Perils - Features of Products Covering Fire and Allied Perils - Products covering Marine and Transit Risks - Products covering Financial Losses due to Accidents - Products covering Financial Losses due to Hospitalization - Products Covering Miscellaneous Risks

SUGGESTED READINGS:

1. Principles of Insurance : A Publication of the Insurance Institute of India
2. Principles of Insurance : Telugu Academy, Hyderabad
3. Guide to Risk Management : SagarSanyal
4. Principles of Insurance : Dr V Padmavathi,Dr V Jayalakshmi - PBP
5. Insurance and Risk Management : P.K. Gupta
6. Insurance Theory and Practice : Tripathi PHI
7. Principles of Insurance Management: Neelam C Gulati, Excel Books
8. Life and Health Insurance : Black, JR KENNETH & Harold Skipper, Pearson
9. Principles of Risk Management and Insurance: George E Rejda (13th Edition)
10. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt . South Western College Publishing, Cincinnati, Ohio

Suggested Websites:

- 1) www.irda.gov.in2) www.policyholder.gov.in3) www.irdaindia.org.in

Paper SEC1 (b): FOUNDATION OF DIGITAL MARKETING

Objective: To make students to understand Foundation of digital marketing.

UNIT I: DIGITAL MARKETING FOUNDATIONS:

Digital Marketing Strategy - Exploring Digital Marketing - Starting with the Website - Foundations of Analytics - Search Engine Optimization - Search and Display Marketing - Social Media Marketing - Video Marketing.

UNIT II: OPTIMIZING MARKETING EMAILS, MOBILE MARKETING FOUNDATIONS AND CONTENT MARKETING FOUNDATIONS:

Email marketing tools and setup - Email marketing segmentation, personalization and mobile friendly design- Content marketing foundations - Blogs for content marketing - Content marketing for staying relevant - Newsletters for content marketing - Mobile marketing foundations

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Foundations of Digital Marketing: Dr. K.V. NAgaraj.KUsha Rani - PBP
4. Digital Marketing by VandanaAhuja, Oxford
5. Digital Marketing by Seema Gupta, McGraw Hill
6. Digital Marketing For Dummies by Ryan Deiss and Russ Henneberry

Paper SEC1 (c) FUNDAMENTALS OF BUSINESS ANALYTICS

Objective: To make students to learn Fundamentals of Business Analytics.

UNIT I: USING DATA TO DRIVE BUSINESS DECISIONS:

Need for data-driven decision making: Solving the business problem using Analytics - Overview of the Business Analytics cycle - Hierarchy of information user -The complete Business Analytics professional: Understanding Business Analyst roles and responsibilities - Identify the Popular Business Analytics Tools.

UNIT II: DATA ANALYTICS USING EXCEL:

Basics of Excel: Organizing data with Excel - Performing simple computations and aggregations using Excel - Working with Summing and other Reporting functions in Excel - Working with pivot tables and charts - Using Excel for Data Analytics: Power Query - Power Pivot - Power view - Power Map - Building tips - Display tips - Keyboard shortcuts - Mouse shortcuts - Standardized layouts - Understanding table based and spreadsheet-based layouts - Best practices - Setting data rules and Cleaning data - Format as table - Data cleansing techniques using External Data - Searching and Combining Data with Power Query: Getting started with Power Query - Know the Environment tabs and toolbars - Access new or existing reports - Importing and combining data from databases, web, files - Splitting and aggregating data - Query data from SQL - Working in the Select Part of an SQL Query - Managing SQL commands - Managing Tables - Discovering and Analyzing Data with Power Pivot: Database concepts - Loading Data into Power Pivot - Using Power Query and Power map add-ins - Designing Pivot Table reports - Filtering data - Creating Custom functions and formulas - Formatting Pivot Tables - Managing Power Pivot Data - Setting Connection properties - Managing Data sources - Configuring Pivot Table Options

SUGGESTED READINGS:

1. Fundamentals of Business Analytics, 2nd Edition; R N Prasad; Wiley
2. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
3. Monetizing Your Data: A Guide to Turning Data into Profit-Driving Strategies and Solutions; Andrew Roman Wells, Kathy Williams Chiang; Wiley
4. Excel Data Analysis: Your visual blueprint for creating and analyzing data, charts and PivotTables, 3rd Edition; Denise Etheridge; Wiley
5. Microsoft Excel 2019 Formulas and Functions (Business Skills), 1st Edition; Paul McFedries; Microsoft
6. Excel Statistics: A Quick Guide, 3rd edition; Neil J. Salkind; Sage Publications
7. Microsoft Excel 2019: For Beginners; J. Davidson
8. Microsoft Excel 2019: Learn Excel Basics with Quick Examples; James Jackson

Paper SEC2 (a): PRACTICE OF LIFE INSURANCE

Objective: To make students to learn Practice of Life Insurance.

UNIT-I: INTRODUCTION TO LIFE INSURANCE AND TYPES OF LIFE INSURANCE POLICIES AND PREMIUM CALCULATION: Meaning evolution, growth and principles of Life Insurance –Life Insurance Organizations in India – Competition and Regulation of Life Insurance - Types of Life Insurance Policies – Term, Whole Life, Endowment, Unit Linked and with or without Profit Policies – Customer Evaluation – Policy Evaluation – Group and Pension Insurance Policies – Special features of Group Insurance/Super Annuation Schemes – Group Gratuity Schemes. Computation of Premiums - Meaning of Premium, its calculation- Rebates – Mode of Rebates – Large sum assured Rebates – Premium Loading – Rider Premiums – Computation of Benefits – Surrender value – Paid up value.

UNIT-II: SETTLEMENT OF CLAIMS RISK & UNDERWRITINGS AND FINANCIAL PLANNING & TAX SAVING: Settlement of claims: Intimation Procedure, documents and settlement procedures - Underwriting: The need for underwriting – Guiding principles of Underwriting – Factors affecting Insurability – Methods of Life Classification – Laws affecting Underwriting - Financial Planning and taxation: Savings – Insurance vis-à-vis- Investment in the Units Mutual Funds, Capital Markets – Life Insurance in Individual Financial Planning – Implications in IT treatment.

SUGGESTED READINGS:

1. Practice of Life Insurance: Insurance Institute of India, Mumbai.
2. Insurance and Risk Management: P.K.Gupta, Himalaya Publishing House, Mumbai.
3. Fundamentals of Life Insurance Theories and Applications: Kanika Mishra, Prentice Hall
4. Principles of Life Insurance – Dr. V. Padmavathi, Dr. V. Jayalakshmi - PBP
5. Managing Life Insurance: Kutty, S.K., Prentice Hall of India: New Delhi
6. Life and Health Insurance: Black, Jr. Kenneth and Harold Skipper Jr., Prentice Hall, Inc., England.
7. Life Insurance: Principles and Practice: K.C. Mishra and C.S. Kumar, Cengage Learning, New Delhi.
8. Life Insurance in India: Sadhak, Respose Books, New Delhi.

Paper SEC2 (b): WEB DESIGN AND ANALYTICS

Objective: To make students to understand the Fundamentals of Web design and Analytics.

UNIT I: WEB DESIGN AND OPTIMIZING CONVERSION RATES:

Exploring and learning web design – Understanding Conversion rate optimization (CRO) – Setting CRO
– Understanding target audience – Optimization champion

UNIT II: GOOGLE ANALYTICS:

Getting started with Google Analytics – Core concepts – Additional interface features – Using reports – Audience reports – Acquisition reports – Social reports – Behavior reports – Track events – Conversion reports – Additional features

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Digital Marketing by Vandana Ahuja, Oxford
4. Digital Marketing by Seema Gupta, McGraw Hill
5. Digital Marketing For Dummies by Ryan Deiss and Russ Henneberry
6. Don't Make Me Think Revisited: A Common Sense Approach to Web Usability By Steve Krug
7. Web Analytics 2.0 – Avinash Kaushik
8. Successful Analytics by Brian Clifton
9. Math and Stats for Web Analytics and Conversion Optimization by Himanshu Sharma

Paper SEC2 (c): APPLICATION OF BUSINESS ANALYTICS

Objective: To make students to understand the Application of Business analytics.

UNIT I: STATISTICS USING EXCEL:

Descriptive statistics using Excel: Describe data using charts and basic statistical measures – Histograms - Pareto charts – Boxplots - Tree map and Sunburst charts - Inferential Statistics using Excel: Correlation and Regression - Probability distribution – Sampling techniques – Hypothesis testing

UNIT II: GETTING STARTED WITH R:

Introduction to R and R Studio components: Read datasets into R - Export data from R - Manipulate and Process Data in R - Use functions and packages in R - Demonstrate with a Case Study to perform basic analytics using R

SUGGESTED READINGS:

1. Microsoft Business Intelligence Tools for Excel Analysis; Michael Alexander, Jared Decker, Bernard Wehbe; Wiley
2. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
3. Excel Data Analysis: Your visual blueprint for creating and analyzing data, charts and PivotTables, 3rd Edition; Denise Etheridge; Wiley
4. Microsoft Excel 2019 Formulas and Functions (Business Skills), 1st Edition; Paul McFedries; Microsoft
5. Microsoft Excel Data Analysis for Dummies, 3rd edition; Stephen L. Nelson, E. C. Nelson; Wiley
6. Data Analytics with R; BhartiMotwani; Wiley

Paper DSC 301: ADVANCED ACCOUNTING

Objective: To acquire accounting knowledge of partnership firms and joint stock companies

UNIT-I: PARTNERSHIP ACCOUNTS-I:

Meaning - Partnership Deed - Capital Accounts (Fixed and Fluctuating) - Admission of a Partner - Retirement and Death of a Partner (Excluding Joint Life Policy)(Including problems)

UNIT-II: PARTNERSHIP ACCOUNTS-II:

Dissolution of Partnership - Insolvency of a Partner (excluding Insolvency of all partners) - Sale to a Company (Including problems)

UNIT-III: ISSUE OF SHARES, DEBENTURES, UNDERWRITING AND BONUS SHARES:

Issue of Shares at par, premium and discount - Pro-rata allotment - Forfeiture and Re-issue of Shares - Issue of Debentures with Conditions of Redemption - Underwriting: Meaning – Conditions- Bonus Shares: Meaning - SEBI Guidelines for Issue of Bonus Shares - Accounting of Bonus Shares(Including problems)

UNIT-IV: COMPANY FINAL ACCOUNTS AND PROFIT PRIOR TO INCORPORATION:

Companies Act, 2013: Structure - General Instructions for preparation of Balance Sheet and Statement of Profit and Loss - Part-I: Form of Balance Sheet - Part-II: Statement of Profit and Loss - Preparation of Final Accounts of Companies - Profits Prior to Incorporation- Accounting treatment (Including problems)

UNIT-V: VALUATION OF GOODWILL AND SHARES:

Valuation of Goodwill: Need - Methods: Average Profits, Super Profits and Capitalization Methods -Valuation of Shares: Need - Net Assets, Yield and Fair Value Methods. (Including problems)

SUGGESTED READINGS:

1. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
2. Advanced Accountancy: Shukla and Grewal, S.Chand & Co.
3. Advanced Accountancy: R.L.Gupta & Radhaswamy, Sultan Chand & Sons.
4. Advanced Accountancy (Vol-II): S.N.Maheshwari & V.L.Maheshwari, Vikas.
5. Advanced Accountancy: Dr. G. Yogeshwaran, Julia Allen - PBP
6. Accountancy–III: Tulasian, Tata McGraw Hill Co.
7. Advanced Accountancy: Arulanandam; Himalaya.
8. Accountancy–III: S.P. Jain & K.L Narang, Kalyani Publishers.
9. Guidance Note on the Revised Schedule VI to the Companies Act, 1956, The Institute of Chartered Accounts of India.
10. Advanced Accounting (IPCC): D. G. Sharma, Tax Mann Publications.

Paper DSC 302: BUSINESS STATISTICS -I

Objective: To inculcate analytical and computational ability among the students.

UNIT-I: INTRODUCTION:

Origin and Development of Statistics - Definition - Importance and Scope - Limitations of Statistics - Distrust of Statistics.

Statistical Investigation: Planning of statistical investigation - Census and Sampling methods - Collection of primary and secondary data - Statistical errors and approximation - classification and Tabulation of data - Frequency distribution

UNIT – II: DIAGRAMMATIC AND GRAPHIC PRESENTATION:

Diagrammatic presentation: One Dimensional and Two Dimensional Diagrams - Pictograms - Cartograms - Graphic presentation: Technique of Construction of Graphs - Graphs of Frequency Distribution - Graphs of Time Series or Histograms

UNIT-III: MEASURES OF CENTRAL TENDENCY:

Introduction -Significance -Arithmetic Mean- Geometric Mean - Harmonic Mean – Mode - Median - Quartiles and Percentiles - Simple and Weighted Averages - Uses and Limitations of different Averages

UNIT-IV: MEASURES OF DISPERSION, SKEWNESS AND KURTOSIS:

Measures of Dispersion: Significance - Characteristics - Absolute and Relative Measures - Range - Quartile Deviation - Mean Deviation- Standard Deviation - Coefficient of Variation

Measures of Skewness - Karl Pearson's Coefficient of Skewness - Bowley's Coefficient of Skewness - Kelly's Measure of Skewness- Kurtosis: Mesokurtosis, Platy kurtosis and Leptokurtosis

UNIT-V: CORRELATION:

Meaning -Types - Correlation and Causation - Methods: Scatter Diagram - Karl Person's Coefficient of Correlation - Probable Error and Interpretation of Coefficient of Correlation - Rank Correlation - Concurrent Deviation Method

SUGGESTED READINGS:

1. Statistics for Management: Levin & Rubin, Pearson
2. Fundamentals of Statistics: Gupta S.C, Himalaya
3. Statistics: E. Narayanan Nadar, PHI Learning
4. Business Statistics –I: Dr. Obul Reddy, Dr. D. Shridevi - PBP
5. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
6. Business Statistics: K. Alagar, Tata McGraw Hill
7. Fundamentals of Statistical: S. P Gupta, Sultan Chand
8. Business Statistics: J. K. Sharma, Vikas Publishers
9. Business Statistics: S. L Aggarwal, S. L. Bhardwaj, Kalyani Publications
10. Statistics-Problems and Solutions: Kapoor V.K, S. Chand
11. Statistics - Theory, Methods and Applications: Sancheti D.C. &Kapoor V.K
12. Business Statistics: S. K. Chakravarty, New Age International Publishers
13. Statistics: Andasn,Sweenly,Williams,Cingage.

Paper DSC 303: FINANCIAL INSTITUTIONS & MARKETS

Objective: To familiarize with various Financial Institutions and Markets.

UNIT-I: INDIAN FINANCIAL SYSTEM:

Components - Functions - Flow of Funds Matrix - Financial System and Economic Development - Recent Developments in Indian Financial System - Weaknesses of Indian Financial System

UNIT-II: FINANCIAL INSTITUTIONS:

Commercial Banking: Types - Functions - Lending by Commercial Banks - Recent Developments - Merchant Banking – functions - Venture Capital – objectives-Private Equity - role in start-ups - Hire purchase and leasing - Non-banking Finance Companies: Types - Functions

UNIT-III: MONEY MARKET:

Functions of Money Market - Organization of Money Market - Dealers - Money Market Instruments - RBI - Functions - Role of RBI in Money Market - LAF (Liquidity Adjustment Facility), MSF (Marginal Standing Facility), Repo, and Reverse Repo - MPC (Monetary Policy Committee) - Structure and Functions.

UNIT-IV: DEBT MARKET:

Evolution of Debt Markets in India - Money Market & Debt Market in India - Instruments and Players in Debt Market: Government Securities - PSU Bonds - Corporate Bonds - Securities Trading Corporation of India - Primary Dealers in Government Securities - Bonds: Features of Bonds - Types of Bonds - Bond Ratings.

UNIT-V: EQUITY MARKET:

Meaning - Development of Equity Culture in India - Primary Market: IPO and FPO - Methods of IPO - Role of Merchant Bankers in Fixing the Price - Red Herring Prospectus – Sweat Equity - ESOP - Rights Issue - Secondary Market: Meaning and Functions of Stock Exchanges - Evolution and Growth of Stock Exchanges - Stock Exchanges in India - Recent Developments in Indian Stock Exchanges - Stock Market Indices - SEBI: Objectives and Functions

SUGGESTED READINGS:

- 1) Bhole, L.M., Financial Markets and Institutions. Tata McGraw Hill Publishing Company, New Delhi, India.
- 2) Prof. Prashanta Athma, Financial Institutions and Markets: PBP
- 3) Bihar S.C., Indian Financial System. International Book House Pvt. Ltd., New Delhi, India.
- 4) Gordon & Natarajan, Financial Markets and Services. Himalaya Publishing House, New Delhi, India.
- 5) Khan and Jain, Financial Services, Tata McGraw Hill, New Delhi, India.
- 6) Khan, M.Y., Indian Financial System - Theory and Practice. Vikas Publishing House, New Delhi, India.
- 7) Shashi K. Gupta & Nisha Aggarwal, Financial Services. Kalyani Publishers, New Delhi, India.
- 8) Vinod Kumar, Atul Gupta & Manmeet Kaur, Financial Markets, Institutions & Financial Services, Taxmann's Publications, New Delhi, India.

Paper SEC3 (a): PRACTICE OF GENERAL INSURANCE

Objective: To make the student understand general policies and accounting.

UNIT I: GENERAL INSURANCE POLICIES:

Introduction to General Insurance-Origin of general insurance—Classification of General Insurance Companies—Indian and International Insurance Market—various roles in Insurance industry—Policy Documents and forms—insurance proposals and forms—General Insurance Products-Fire, Marine, Motor, Liability, Personal Accident and Specialty Insurance, Engineering and other insurance.

UNIT II: UNDERWRITING, PREMIUMS, CLAIMS AND INSURANCE RESERVES AND ACCOUNTING:

Concept of Underwriting—Underwriting Process—Risk sharing and its methods—risk management and steps involved in it—Rating and Premiums—concept of soft and hard markets—Concept of Claim-understanding the process of claim management—claims fraud and fraud prevention—Insurance reserves and accounting—different types of reserves of insurance companies—reserving process followed by insurance companies—Insurance accounting.

SUGGESTED READINGS:

1. Practice of General Insurance – Insurance Institute of India.
2. Practice of General Insurance – D.S. Vittal-HPH.
3. Principles & Practice of Insurance- Dr. P. Periasamy – HPH.
4. Risk Management: A Publication of the Insurance Institute of India.
5. Practice of General Insurance: Dr. V. Padmavathi, Dr. V. Jayalakshmi, PBP.
6. Insurance Theory and Practice: Tripathi PHI
7. Life and Health Insurance: Black, JR KENNETH & Harold Skipper, Pearson
8. Risk Management and Insurance : Trieschman,Gustavson and Hoyt
9. South Western College Publishing Cincinnati, Ohio.

Paper SEC3 (b): SOCIAL MEDIA MARKETING

Objective: To make students to understand the Social Media marketing.

UNIT I: SOCIAL MEDIA MARKETING:

Building an online community – Understanding Social Media Marketing – Marketing and building presence on Facebook – Marketing and building presence on Twitter – Employer branding on LinkedIn

UNIT II: ONLINE ADVERTISING ON SOCIAL MEDIA:

Facebook advertising overview – How Facebook ads work – How to create Facebook ads – Additional advertising options and best practices for Facebook advertising – Marketing and monetizing on YouTube – Customize your YouTube Channel – Video optimization on YouTube – YouTube Analytics

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Digital Marketing by Vandana Ahuja, Oxford
4. Tuten: Social Media Marketing, sage
5. Digital Marketing by Seema Gupta, McGraw Hill
6. Social Media Marketing All-In-One for Dummies By Jan Zimmerman and Deborah Ng
7. Facebook Growth Hacking: How to Correctly Set Up and Maintain Your Facebook Presence and Gain Massive Amounts of Fans (Social Media Marketing) by Jeff Abston
8. Youtube Influencer: How To Become a Youtube Influencer, Why Influencer Marketing Matters, and How To Monetize Your Channel by Jeff Abston

Paper SEC-3 (c): BUSINESS INTELLIGENCE

Objective: To make students to understand the Business Intelligence.

UNIT I: BUSINESS INTELLIGENCE USING POWER BI:

Getting data in Power BI: Overview of Power BI Desktop - Connect to data sources in Power BI Desktop - Clean and transform data with the Query Editor - advanced data import and cleaning techniques - Cleaning irregularly formatted data - Modeling the data: Manage data relationships – Create calculated columns – Optimizing data models – Create calculated measures – Create calculated tables – Explore time-based data - Exploring data: Introduction to the Power BI service - Turn business intelligence data into data insights

UNIT II: POWER BI AND EXCEL:

Using Excel data in Power BI: Uploading an Excel workbook with a simple table into Power BI - Upload workbooks created with Excel Power Pivot and Power View - Publishing and sharing: Publish Power BI Desktop reports - Print and export dashboards and reports - Manually republish and refresh data - Power BI Mobile - Create groups in Power BI – Publish to web

SUGGESTED READINGS:

1. Introducing Microsoft Power BI; Alberto Ferrari, Marco Russo; Microsoft Press
2. Introduction to Microsoft Power Bi: Bring Your Data to Life; M.O. Cuddley; Createspace Independent Pub
3. Applied Microsoft Power BI: Bring your data to life; TeoLachev; Prologika Press
4. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson

Paper SEC4 (a): REGULATION OF INSURANCE BUSINESS

Objective: To equip the students with the knowledge regarding Insurance Business Regulations.

UNIT I: INSURANCE LEGISLATION IN INDIA:

History of life and non-life insurance legislation—nationalization—insurance reforms—insurance business Act, 1972—IRDA and its functions including licensing functions—Web aggregators—regulation for intermediaries—CCS-SPV-PoS-insurance repositories-TPAs—Role and duties of surveyors—Origin and development of micro-insurance—regulation of ULIPs—pension schemes—money laundering—KYC—methods of receipt of premium—Exchange control regulations relating to General and Life Insurance—IRDA Health Insurance Regulations, 2016—Health plus life combo products.

UNIT II: POLICY HOLDERS RIGHTS OF ASSAINGMENT, NOMINATION AND TRANSFER:

Assignment and transfer of insurance policies—provisions related to nomination—repudiation—Fraud—protection of policyholder interest—stages in insurance policy-presale stage-post sale stage-free look period—grievance redressal—claim settlement—key feature document—dispute resolution mechanism—insurance ombudsman—solvency margin and investments—international trends in insurance regulation.

SUGGESTED READINGS:

1. Regulation of Insurance Business – Insurance Institute of India
2. Regulation of Insurance Business – D.S. Vittal, HPH
3. Regulation of Insurance Business: Dr. V. Padmavathi, PBP
4. Risk Management : A Publication of the Insurance Institute of India
5. Insurance Theory and Practice: Tripathi PHI
6. Life and Health Insurance: Black, JR KENNETH & Harold Skipper, Pearson
7. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt
8. South Western College Publishing Cincinnati, Ohio.
9. Insurance Management – S.C. Sahoo& S.C. Das-HPH.

Paper SEC4 (b): SEARCH ENGINE OPTIMIZATION AND ONLINE ADVERTISING

Objective: To make students to understand the Search engine optimization and online advertising.

UNIT I: SEO FOUNDATIONS AND SEO KEYWORD STRATEGY:

Understanding SEO – Keyword strategy – Content optimization – Long-term content planning – Link-building strategies – Measuring SEO effectiveness – SEO for Ecommerce – Local search – Mobile SEO

UNIT II: GOOGLE ADWORDS AND REMARKETING:

Pay-Per-Click Advertising – Getting started with Google Adwords – Advertising tracking – Key Google Adwords strategies – Remarketing with Google – Budget and ROI tips – B2B Remarketing Campaigns

SUGGESTED READINGS:

1. The Art of Digital Marketing: The Definitive Guide to Creating Strategic, Targeted, and Measurable Online Campaigns by Ian Dodson, Wiley
2. Fundamentals of Digital Marketing by Puneet Singh Bhatia, Pearson
3. Digital Marketing by Vandana Ahuja, Oxford
4. Digital Marketing by Seema Gupta, McGraw Hill
5. SEO for Dummies, 6th Edition, by John Kent
6. SEO Fitness Workbook: 2018 Edition: The Seven Steps to Search Engine Optimization Success on Google By Jason McDonald
7. The Art of SEO: Mastering Search Engine Optimization By Eric Enge, Stephan Spencer and Jessie Stricchiola
8. Google Adwords for Beginners: A Do-It-Yourself Guide to PPC Advertising By Cory Rabazinsky, 2015

Paper SEC-4 (c)DATA VISUALIZATION & STORYTELLING

Objective: To make students to understand the Data visualization & Storytelling.

UNIT I: DATA VISUALIZATION USING POWER BI:

Visuals in Power BI: Bar charts – Pie charts – Treemaps – Combination charts – Slicers – Map visualizations – Matrixes and Tables – Scatter charts – Waterfall and funnel charts - Gauges and single-number cards - Modifying visuals and reports: Modify colors in charts and visuals – Add shapes, text boxes, and images to reports - Page layout and formatting - Other Data Visualization features and options: Group interactions among multiple visualizations on the same report page - Summarization and category options – Z-order - Visual hierarchies and drill-down

UNIT II: TELLING STORIES WITH DATA:

Data Storytelling: Apply storytelling principles to business analytics - Improve business analytics presentations through storytelling - Creating high-impact reports and presentations: Guidelines and best practices

SUGGESTED READINGS:

1. Introducing Microsoft Power BI; Alberto Ferrari, Marco Russo; Microsoft Press
2. Introduction to Microsoft Power Bi: Bring Your Data to Life; M.O. Cuddley; Createspace Independent Pub
3. Applied Microsoft Power BI: Bring your data to life; TeoLachev; Prologika Press
4. Business Analysis with Microsoft Excel and Power BI, 5th edition; Conrad G. Carlberg; Pearson
5. Microsoft Power BI Dashboards Step by Step, Errin O'Connor, Microsoft Press
6. Storytelling with Data: A Data Visualization Guide for Business Professionals; Cole NussbaumerKnafllic; Wiley

Paper DSC 401: INCOME TAX

Objective: To acquire conceptual and legal knowledge about Income Tax provisions relating to computation of Income from different heads with reference to an Individual Assessee.

UNIT-I: INTRODUCTION:

Direct and Indirect Taxes – Canons of Taxation - Features and History of Income Tax in India – Definitions and Basic Concepts of Income Tax: Assessee – Deemed Assessee – Assessee-in-default – Assessment Year – Previous Year - Person – Agricultural Income – Heads of Income – Gross Total Income – Total Income — Incomes Exempt from Tax. Residential Status and Scope of Total Income: Meaning of Residential Status – Conditions applicable to an Individual Assessee – Incidence of Tax – Types of Incomes (Theory only)

UNIT-II: INCOME FROM SALARIES:

Definition of ‘Salary’ – Characteristics of Salary – Computation of Salary Income: Salary u/s 17(1) – Annual Accretion – Allowances – Perquisites – Profits in lieu of Salary – Deductions u/s. 16 – Problems on computation of Income from Salary

UNIT-III: INCOME FROM HOUSE PROPERTY:

Definition of ‘House Property’ – Exempted House Property incomes– Annual Value – Determination of Annual Value for Let-out House and Self-occupied House – Deductions u/s.24 – Problems on computation of Income from House Property

UNIT-IV: PROFITS AND GAINS OF BUSINESS OR PROFESSION:

Definition of ‘Business and Profession’ – Procedure for computation of Income from Business – Revenue and Capital nature of Incomes and Expenses – Allowable Expenses u/s. 30 to 37 – Expenses expressly disallowed – Deemed Profits – Miscellaneous provisions u/s 44. Depreciation: Meaning – Conditions for charge of depreciation – Problems on computation of Income from Business. Income from Profession: Rules– procedure – problems on computation of Income from Profession.

UNIT-V: CAPITAL GAINS AND INCOME FROM OTHER SOURCES:

Introduction - Meaning – Scope of charge – Basis of charge – Short term and Long term Capital Assets – Transfer of Capital Asset – Deemed Transfer –Determination of Cost of Acquisition – Procedure for computation of Long-term and Short-term Capital Gains/Losses – Exemptions in respect of certain Capital Gains u/s. 54 – Problems on computation of capital gains - General Incomes u/s. 56(1) – Specific Incomes u/s. 56(2) – Dividends u/s. 2(22) – Winnings from lotteries Puzzles, crown world puzzles, Races – Interest on Securities – Gifts received by an Individual – Casual Income – Family Pension – Rent received on let out of Furniture- Plant and Machinery with/without Building – Deductions u/s. 57. (Theory only)

SUGGESTED READINGS:

1. Income Tax Law and Practice: V.P. Gaur & D.B Narang, Kalyani Publishers.
2. Taxation: Dr. M.N. Ravi, PBP.
3. Direct Taxes Law & Practice: Dr.Vinod K. Singhanian&Dr.KapilSinghanian, Taxmann
4. Income Tax: B.B. Lal, Pearson Education.
5. Taxation: R.G. Saha, Himalaya Publishing House Pvt. Ltd.
6. Income Tax: Johar, McGrawHill Education.
7. Taxation Law and Practice: Balachandran&Thothadri, PHI Learning.
8. Direct Tax Law and Practice : AhujaGirish

Paper DSC 401: EXCEL FOUNDATION

Objective: Students will learn how to start working with M S Excel right from basics to Tables, Templates and Printing of their work.

UNIT-I: INTRODUCTION TO EXCEL:

Workbooks and Worksheets, Moving Around a Worksheet, Ribbon tabs, Types of commands on the Ribbon, Using Shortcut Menus, Working with Dialogue Boxes, Task Panes, Getting started on your worksheet, Creating a chart, Printing your worksheet, Saving your worksheet, Exploring Data Types, Modifying Cell Contents, Deleting, Replacing, Editing of a cell. Some handy data entry techniques, Number Formatting.

UNIT-II: WORKSHEET OPERATIONS:

Moving and resizing windows, Switching among windows, Activating a worksheet, Adding, Deleting a worksheet, Changing a sheet tab color, Rearranging your worksheets, Hiding, un-hiding a worksheet, Worksheet View, Comparing sheets side by side, Selecting ranges, complete rows and columns, noncontiguous ranges, multi-sheet ranges, special types of cells. Copying or Moving Ranges. Paste Special dialogue box, Adding comments to cells.

UNIT-III: TABLES AND FORMATTING:

Creating a Table, Changing the Look of a Table, Navigating in a Table, Selecting parts of a Table, Adding, Deleting new rows or columns, Moving a Table, Working with the Total Row, Removing duplicate rows from a table. Sorting and filtering a table, Converting Table into Range. Formatting tools on the Home tab, Mini Toolbar, Fonts, Text Alignment, Wrapping text to fit a cell, Colors and Shading, Borders and Lines. Naming Styles.

UNIT-IV: EXCEL FILES & TEMPLATES:

Creating a New Workbook, Filtering filenames, Saving and Auto Recovery, Password-Protecting a Workbook, Recovering unsaved work, Protect Workbook options, Checking Compatibility. Creating a Excel Templates, Modifying a template, Custom Excel Templates, Default Templates, Editing your Template, Resetting the default workbook, Saving your Custom Templates, Getting ideas for creating Templates.

UNIT-V: PRINTING YOUR WORK: Normal, Page Layout, Page Break View, Choosing your printer, Specifying what you want to print, Changing Page Orientation, Specifying paper size, Adjusting page margins, Inserting a page break, Removing manual page breaks, Printing Row and Column Titles, Scaling printed output, Header or Footer Options, Preventing certain cells, Objects from being printed, Creating Custom Views of your Worksheet. Creating PDF files. Introducing Excel:

SUGGESTED READINGS:

1. Excel 2013 Bible: John Walkenbach, Wiley.
2. Microsoft Excel 2013: Data Analysis and Business Modeling: Winston, PHI
3. Excel Data Analysis - Modeling and Simulation: Hector Guerrero, Springer.
4. Excel Functions and Formulas: Bernd Held, BPB Publications.
5. Financial Analysis and Modeling using Excel and VBA: Chandan Sengupta, Wiley

Paper DSC 402: BUSINESS STATISTICS - II

Objective: to inculcate analytical and computational ability among the students.

UNIT-I: REGRESSION:

Introduction - Linear and Non Linear Regression – Correlation Vs. Regression - Lines of Regression - Derivation of Line of Regression of Y on X - Line of Regression of X on Y - Using Regression Lines for Prediction.

UNIT-II: INDEX NUMBERS:

Introduction - Uses - Types - Problems in the Construction of Index Numbers - Methods of Constructing Index Numbers - Simple and Weighted Index Number (Laspeyre - Paasche, Marshall – Edgeworth) - Tests of Consistency of Index Number: Unit Test - Time Reversal Test - Factor Reversal Test - Circular Test - Base Shifting - Splicing and Deflating of Index Numbers.

UNIT-III: TIME SERIES:

Introduction - Components – Methods-Semi Averages - Moving Averages – Least Square Method - Deseasonalisation of Data – Uses and Limitations of Time Series.

UNIT-IV: PROBABILITY:

Probability – Meaning - Experiment – Event - Mutually Exclusive Events - Collectively Exhaustive Events - Independent Events - Simple and Compound Events - Basics of Set Theory – Permutation – Combination - Approaches to Probability: Classical – Empirical – Subjective - Axiomatic - Theorems of Probability: Addition – Multiplication - Baye’s Theorem.

UNIT-V: THEORITCAL DISTRIBUTIONS:

Binomial Distribution: Importance – Conditions – Constants - Fitting of Binomial Distribution.
Poisson Distribution: – Importance – Conditions – Constants - Fitting of Poisson Distribution.
Normal Distribution: – Importance - Central Limit Theorem - Characteristics – Fitting a Normal Distribution (Areas Method Only).

SUGGESTED READINGS:

1. Statistics for Management: Levin & Rubin, Pearson,
2. Fundamentals of Statistics: Gupta S.C, Himalaya
3. Business Statistics: Theory & Application, P. N. Jani, PHI Learning
4. Business Statics – II: Dr. OBul Reddy, Dr. D. Shridevi - PBP
5. Business Statistics: Dr. J. K. Thukral, Taxmann Publications
6. Business Statistics: K. Alagar, Tata McGraw Hill
7. Fundamentals of Statistical: S. P Gupta , Sultan Chand
8. Business Statistics: J. K. Sharma,Vikas Publishers
9. Business Statistics: Vora, Tata McGraw Hill
10. Statistics-Problems and Solutions: Kapoor V.K, S. Chand
11. Statistics-Teory, Methods and Applications: SanchetiD.C. &Kapoor V.K
12. Business Statistics: S. K. Chakravarty, New Age International Publishers
13. Business Statistics-G.Laxman, Vasudeva Reddy, K.Goud, TaxmannPublications,Hyderabad.

Paper DSC 403: CORPORATE ACCOUNTING

Objective: To acquire knowledge of AS-14 and preparation of accounts of banking and insurance companies.

UNIT-I: COMPANY LIQUIDATION:

Meaning – Modes - Contributory Preferential Payments – Statements of Affairs - Liquidator's Remuneration - Preparation of Liquidator's Final Statement of Account (Including problems)

UNIT-II: AMALGAMATION (AS-14):

Amalgamation: In the nature of merger and purchase – Calculation of Purchase Consideration – Accounting Treatment in the books of transferor and transferee companies. (Including problems)

UNIT-III: INTERNAL RECONSTRUCTION AND ACQUISITION OF BUSINESS:

Internal Reconstruction: Accounting treatment – Preparation of final statement after reconstruction- Acquisition of business when new set of books are opened- Debtors and Creditors taken over on behalf of vendors- When same set of books are continued(Including problems)

UNIT-IV: ACCOUNTS OF BANKING COMPANIES:

Books and Registers maintained – Slip system of posting – Rebate on Bills Discounted – Non-Performing Assets – Legal Provisions relating to final accounts - Final Accounts. (Including problems)

UNIT-V: ACCOUNTS OF INSURANCE COMPANIES AND INSURANCE CLAIMS:

Introduction – Formats-Revenue Account–Net Revenue Account - Balance Sheet - Valuation Balance Sheet – Net Surplus – General Insurance - Preparation of final accounts with special reference to Fire and Marine Insurance - Insurance claims- Meaning – Loss of Stock and Assets – Average Clause – Treatment of Abnormal Loss - Loss of Profit. (Including problems)

SUGGESTED READINGS:

1. Advanced Accountancy (Vol-II): S.N.Maheshwari&V.L.Maheswari, Vikas.
2. Accountancy–III: Tulasian, Tata McGraw Hill Co.
3. Advanced Accountancy: Arulanandam; Himalaya
4. Accountancy–III: S.P. Jain & K.L Narang, Kalyani Publishers
5. Advanced Accounting (Vol-II): Chandra Bose, PHI
6. Advanced Accountancy: Shukla and Grewal, S.Chand& Co
7. Advanced Accountancy: R.L.Gupta&Radhaswamy, Sultan Chand & Sons
8. Corporate Accounting: Sakshi Vasudeva, Himalaya.

Paper GE: a) BUSINESS ECONOMICS

Objective: To acquire knowledge for application of economic principles and tools in business practices.

UNIT-I: INTRODUCTION:

Business Economics: Meaning - Nature – Characteristics - Importance and Role - Micro & Macro Economics - Scope - Objectives - Law of Diminishing marginal utility - Law of Equi-marginal utility.

UNIT- II: DEMAND ANALYSIS:

Meaning – Function - Factors influencing Demand -Types of Demand -Demand Curve - Law of Demand –Exceptions to the law of demand-Elasticity of Demand: Concept - Types of elasticity of demand-price, income and cross Elasticity of Demand –measurement of elasticity—arc and point methods—Importance of various Elasticity of Demand

UNIT-III: SUPPLY ANALYSIS:

Law of Supply - Factors influencing Supply - Market Equilibrium- Consumer Surplus - Theory of Consumer behavior - Utility and indifference curve analysis.

UNIT-IV: PRODUCTION ANALYSIS:

Concept of Production –production function-Total Production - Marginal Production - Average Production –returns to a factor- Law of Variable Proportions - Law of Returns to Scale –Isocost–Isoquants - Economies and Dis-economies of Scale.

UNIT-V: COST AND REVENUE ANALYSIS:

Theory of Cost - Concepts of Cost - Short run and Long run cost curves - Traditional and Modern Approaches -Revenue Curves–relationship between total marginal and average revenues- --Break Even Analysis—Meaning – Assumptions – Uses and Limitations.

SUGGESTED READINGS:

1. Business Economics: V. G. Mankar, Himalaya Publishing House
2. Managerial Economics: VanithAgrawal, Pearson Education
3. Business Economics: H. L. Ahuja, S. Chand & Co. Ltd.
4. Business Economics : R. K. Lekhi, Kalyani Publishers
5. Business Economics: D. M. Mithani, Himalaya Publishing House
6. Business Economics: P. N. Chopra, Kalyani Publishers
7. Essential of Business Economics: D. N. Dwivedi, Vikas Publishers
8. Managerial Economics: Varshney and Maheswari, Sultan Chand
9. Business Economics: P. K. Mehta, Tax Mann Publication.

Paper GE: b) ADVANCED ASPECTS OF INCOME TAX

Objective: To acquire conceptual and legal knowledge about Income Tax provisions relating to computation of Income from certain heads and other provisions relating to clubbing, aggregation of income and assessment procedure.

UNIT-I: PROFITS AND GAINS OF BUSINESS OR PROFESSION:

Valuation of Stock Depreciation: Meaning – Assets used for Business – Block of Assets – Rates of Depreciation – Miscellaneous Provisions about depreciation – Computation of Depreciation.

UNIT-II: INCOME FROM OTHER SOURCES:

Winnings from lotteries Puzzles, crown world puzzles, Races Problems on computation on Income from Other Sources. Treatment of Agricultural Income. Heads of income: Gross Total Income – Taxable Income – Income Tax Rates. Problems on computation of Total Income of an Individual based on Residential Status.

UNIT-III: CLUBBING AND AGGREGATION OF INCOME:

Income of other persons included in the total income of Assesse – Income from Firm and AOP – Clubbing Provisions – Deemed Incomes – Provisions of set-off and Carry forward of losses – computation of Gross Total Income – Deductions from GTI u/s 80C to 80U – Problems on Computation of Taxable Income.

UNIT-IV: ASSESSMENT OF INDIVIDUALS:

Computation of Tax Liability – Applicability of Alternate Minimum Tax on Individual u/s 115JC – Problems on Computation of tax liability.

UNIT-V: ASSESSMENT PROCEDURE:

Income tax returns – Types of returns – Filing of e-return – Assessment – Types of assessment: Self-assessment – Provisional assessment – Regular assessment – Best judgement assessment – Reassessment – Rectification of mistakes – Notice on demand.

SUGGESTED READINGS:

1. Income Tax Law and Practice: V.P. Gaur & D.B Narang, Kalyani Publishers.
2. Direct Taxes Law & Practice: Dr. Vinod K. Singhania & Dr. KapilSinghania, Taxmann
3. Income Tax: M. Jeevarathinam & C. Vijay Vishnu Kumar, SCITECH Publications.
4. Taxation: R.G. Saha, Himalaya Publishing House Pvt. Ltd.
5. Income Tax: B. Lal, Pearson Education.
6. Income Tax: Johar, McGrawHill Education.
7. Taxation Law and Practice: Balachandran & Thothadri, PHI Learnin

Paper DSE 501 (a) : COST ACCOUNTING

Objective: To make the students acquire the knowledge of cost accounting methods.

UNIT-I: INTRODUCTION:

Cost Accounting: Definition – Features – Objectives – Functions – Scope – Advantages and Limitations - Essentials of a good cost accounting system- Difference between Cost Accounting and Financial Accounting – Cost concepts – Cost Classification.

UNIT-II: MATERIAL:

Direct and Indirect Material cost – Inventory Control Techniques – Stock Levels – EOQ – ABC Analysis – JIT - VED - FSND - Issue of Materials to Production – Pricing methods: FIFO - LIFO with Base Stock and Simple and Weighted Average methods.

UNIT-III: LABOUR AND OVERHEADS:

Labour: Direct and Indirect Labour Cost – Methods of Payment of Wages (only Incentive Plans): Halsey, Rowan, Taylor Piece Rate and Merrick Multiple Piece Rate Methods.
Overheads: Classification - Methods of Allocation - Apportionment and Absorption of overheads.

UNIT-IV: UNIT AND JOB COSTING:

Unit Costing: Features - Cost Sheet – Tender and Estimated Cost Sheet.
Job Costing: Features - Objectives – Procedure - Preparation of Job Cost Sheet.

UNIT-V: CONTRACT AND PROCESS COSTING:

Contract Costing: Features – Advantages - Procedure of Contract Costing – Guidelines to Assess profit on incomplete Contracts.
Process Costing: Meaning – Features – Preparation of Process Account – Normal and Abnormal Losses.

SUGGESTED READINGS:

1. Cost Accounting: Jain and Narang, Kalyani
2. Cost Accounting: Srihari Krishna Rao, Himalaya
3. Cost and Management Accounting: PrashantaAthma, Himalaya
4. Cost Accounting: Dr. G. Yogeshweran, PBP.
4. Cost Accounting: Jawaharlal, Tata Mcgraw Hill
5. Cost Accounting: Theory and Practice: Banerjee, PHI
6. Introduction to Cost Accounting: Tulsian, S.Chand
7. Cost Accounting: Horngren, Pearson
8. Cost Accounting: Ravi M. Kishore, Tax Mann Publications.

Paper DSE 501 (b) : FINANCIAL PLANNING & PERFORMANCE

Objective: To make students to understand the Financial Planning & Performance.

UNIT I: STRATEGIC PLANNING:

Strategic planning: Analysis of external and internal factors affecting strategy - Long-term mission and goals - Alignment of tactics with long-term strategic goals - Strategic planning models and analytical techniques - Characteristics of successful strategic planning process - Annual profit plan and supporting schedules: Operational budgets - Financial budgets - Capital budgets - Top-level planning and analysis: Pro forma income - Financial statement projections - Cash flow projections.

UNIT II: BUDGETING AND FORECASTING:

Budgeting Concepts: Operations and performance goals - Characteristics of a successful budget process - Resource allocation - Forecasting techniques: Regression analysis - Learning curve analysis - Expected value - Budgeting Methodologies: Annual business plans (master budgets) - Project budgeting - Activity-based budgeting - Zero-based budgeting - Continuous (rolling) budgets - Flexible budgeting

UNIT III: COST AND VARIANCE ANALYSIS:

Cost and Variance Analysis: Comparison of actual to planned results - Use of flexible budgets to analyze performance - Management by exception - Standard Cost System: Use of standard cost systems - Analysis of variation from standard cost expectations

UNIT IV: PERFORMANCE MEASURES:

Performance Measures: Product profitability analysis - Business unit profitability analysis - Customer profitability analysis - Return on investment - Residual income - Investment base issues - Key performance indicators (KPIs) - Balanced scorecard - Responsibility Centers and Reporting Segments: Types of responsibility centers - Transfer pricing - Reporting of organizational segments

UNIT V: TECHNOLOGY AND ANALYTICS:

Information Systems: Accounting information systems - Enterprise resource planning systems - Enterprise performance management systems - Data Governance: Data policies and procedures - Life cycle of data - Controls against security breaches - Technology-enabled finance transformation: System Development Life Cycle - Process automation - Innovative applications
Data analytics: Business intelligence - Data mining - Analytic tools - Data visualization

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 1: Planning, Performance & Analytics
2. Strategic Management and Business Policy: Globalization, Innovation and Sustainability, 15th edition; Wheelen, Thomas L., et. al.; Prentice Hall
3. Cost Management: A Strategic Emphasis, 6th edition; Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary; McGraw Hill
4. Horngreen's Cost Accounting: A Managerial Emphasis, 16th edition; Charles T., Datar, Srikant, and Rajan, Madhav; Pearson
5. Quantitative Methods for Business, 13th Edition; Anderson, David, R., Sweeney, Dennis J., Williams, Thomas A., Camm, Jeff, and Martin, R. Kipp; Cengage Learning
6. Management Accounting: An Integrative Approach; McNair-Connolly, C.J., Merchant, Kenneth A.; IMA.

Paper DSE 501 (c) :INTERNATIONAL FINANCIAL REPORTING -I

Objective: To make students to understand the International Financial Reporting.

UNIT I: GENERAL PURPOSE OF FINANCIAL ACCOUNTING AND REPORTING AS PER US GAAP AND IFRS:

Conceptual framework: Standard Setting Bodies & Hierarchy - Elements of F/S - Primary objectives of financial reporting - Qualitative Characteristics of F/S - Fundamental Assumptions & Principles - Accounting Cycle & Preparation of F/S - General-purpose financial statements: Balance sheet - Income statement - Statement of comprehensive income - Statement of changes in equity - Statement of changes cash flows - Public company reporting requirements: SEC Reporting Requirements - Interim Financial Reporting - Segment Reporting - Revenue recognition: 5-Step approach to Revenue Recognition - Certain Customer's Rights & Obligations - Specific Arrangements - Long Term Construction Contracts

UNIT II: CURRENT ASSETS AND CURRENT LIABILITIES (AS PER US GAAP AND IFRS):

Monetary Current Assets & Current Liabilities: Cash & Cash Equivalents - Accounts Receivable - Notes Receivable - Transfers & Servicing of Financial Assets - Accounts Payable - Employee-related Expenses Payable - Inventory: Determining Inventory & Cost of Goods Sold - Inventory Valuation - Inventory Estimation Methods

UNIT III: FINANCIAL INVESTMENTS AND FIXED ASSETS (AS PER US GAAP AND IFRS):

Financial Investments: Investments in Equity Securities - Investment in Debt Securities - Financial Instruments - Tangible Fixed Assets: Acquisition of Fixed Assets - Capitalization of Interest - Costs Incurred After Acquisition - Depreciation - Impairment - Asset Retirement Obligation - Disposal & Involuntary Conversions - Intangible Assets: Knowledge-based intangibles (R&D, software) - Legal rights based intangibles (patent, copyright, trademark, franchise, license, leasehold improvements) - Goodwill

UNIT IV: FINANCIAL LIABILITIES (AS PER US GAAP AND IFRS):

Bonds Payable: Types of Bonds - Convertible bonds vs. Bonds with detachable warrants - Bond Retirement - Fair Value Option & Fair Value Election - Debt Restructuring: Settlement - Modification of terms

UNIT V: SELECT TRANSACTIONS (AS PER US GAAP AND IFRS):

Fair value measurements: Valuation techniques - Fair value hierarchy - Fair value concepts - Accounting changes and error correction: Changes in accounting estimate - Changes in accounting principle - Changes in reporting entity - Correction of an error - Contingencies: Possibility of occurrence (remote, reasonably possible or probable) - Disclosure vs. Recognition
Derivatives and Hedge Accounting: Speculation (non-hedge) - Fair value hedge - Cash flow hedge - Non-monetary exchanges: Exchanges with commercial substance - Exchanges without commercial substance - Leases: Operating lease - Finance lease - Sale leaseback

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Financial Accounting & Reporting, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Financial Accounting and Reporting, Wiley
3. IFRS & US GAAP Best Practices in Accounting World: GAAP Analysis, Rajesh Dhawan
4. Transparency in Financial Reporting: A concise comparison of IFRS and US GAAP 1st Edition, Ruth Ann McEwen, Harriman House Ltd.
5. IFRS and US GAAP: A Comprehensive Comparison, Steven E. Shamrock, Wiley
6. Wiley GAAP: Interpretation and Application of Generally Accepted Principles, Barry J. Epstein and Ralph Nach, Wiley
7. IFRS Simplified with Practical Illustration Part 1 & 2, Mr RammohanBhave and Dr Mrs Anjali RammohanBhave, CNBC TV 18.

Paper DSE 502 (a) : COMPUTERIZED ACCOUNTING

Objective: To make the students to acquire the knowledge of computer software

UNIT I: MAINTAINING CHART OF ACCOUNTS IN ERP:

Introduction-Getting Started with ERP - Mouse/Keyboard Conventions-Company Creation-Shut a Company-Select a Company-Alter Company Details-Company Features and Configurations-F11: Company Features-F12: Configuration-Chart of Accounts-Ledger-Group-Ledger Creation-Single Ledger Creation-Multi Ledger Creation-Altering and Displaying Ledgers-Group Creation-Single Group Creation-Multiple Group Creation-Displaying Groups and Ledgers-Displaying Groups-Display of Ledgers-Deletion of Groups and Ledgers – P2P procure to page.

UNIT II: MAINTAINING STOCK KEEPING UNITS (SKU):

Introduction-Inventory Masters in ERP - Creating Inventory Masters-Creation of Stock Group-Creation of Units of Measure-Creation of Stock Item-Creation of Godown-Defining of Stock Opening Balance in ERP Stock Category-Reports.

UNIT III: RECORDING DAY-TO-DAY TRANSACTIONS IN ERP:

Introduction-Business Transactions-Source Document for Voucher-Recording Transactions in ERP - Accounting Vouchers-Receipt Voucher (F6)-Contra Voucher (F4)-Payment Voucher (F5)-Purchase Voucher (F9)-Sales Voucher (F8)-Debit Note Voucher-Credit Note (Ctrl+F8)-Journal Voucher (F7).

UNIT IV: ACCOUNTS RECEIVABLE AND PAYABLE MANAGEMENT:

Introduction-Accounts Payables and Receivables-Maintaining Bill-wise Details-Activation of Maintain Bill-wise Details Feature-New Reference-Against Reference-Advance-On Account-Stock Category Report-Changing the Financial Year in ERP.

UNIT V: MIS REPORTS:

Introduction-Advantages of Management Information Systems-MIS Reports in ERP - Trial Balance - Balance Sheet-Profit and Loss Account-Cash Flow Statement-Ratio Analysis-Books and Reports - Day Book-Receipts and Payments-Purchase Register-Sales Register-Bills Receivable and Bills Payable.

SUGGESTED READINGS:

1. Computerised Accounting: GarimaAgarwal, Himalaya
2. Computerised Accounting: A. Murali Krishna, Vaagdevi publications
3. Computerised Accounting: Dr. G. Yogeshweran, PBP.
4. Aakash Business Tools: Spoken Tutorial Project IIT Bombay
5. Mastering Tally: Dinesh Maidasani, Firewal Media
6. Implementing Tally ERP 9: A.K Nadhani and K.K Nadhani, BPB Publications
7. Computerised Accounting and Business Systems: Kalyani Publications
8. Manuals of Respective Accounting Packages
9. Tally ERP 9: J.S. Arora, Kalyani Publications.

Paper DSE 502 (b): FINANCIAL DECISION MAKING - I

Objective: To make students to understand the Financial Decision Making.

UNIT I: FINANCIAL STATEMENT ANALYSIS

Basic Financial Statement Analysis: Common size financial statements - Common base year financial statements - Financial Ratios: Liquidity - Leverage - Activity - Profitability - Market Profitability analysis: Income measurement analysis - Revenue analysis - Cost of sales analysis - Expense analysis - Variation analysis - Special issues: Impact of foreign operations - Effects of changing prices and inflation - Off-balance sheet financing - Impact of changes in accounting treatment - Accounting and economic concepts of value and income - Earnings quality

UNIT II: FINANCIAL MANAGEMENT

Risk & Return: Calculating return - Types of risk - Relationship between risk and return
Long-term Financial Management: Term structure of interest rates - Types of financial instruments - Cost of capital - Valuation of financial instruments

UNIT III: RAISING CAPITAL

Raising Capital: Financial markets and regulation - Market efficiency - Financial institutions - Initial and secondary public offerings - Dividend policy and share repurchases - Lease financing

UNIT IV: WORKING CAPITAL MANAGEMENT

Managing working capital: Cash management - Marketable securities management - Accounts receivable management - Inventory management - Short-term Credit: Types of short-term credit - Short-term credit management

UNIT V: CORPORATE RESTRUCTURING AND INTERNATIONAL FINANCE

Corporate Restructuring: Mergers and acquisitions - Bankruptcy - Other forms of restructuring
International Finance: Fixed, flexible, and floating exchange rates - Managing transaction exposure - Financing international trade - Tax implications of transfer pricing

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 2: Strategic Financial Management
2. Interpretation and Application of International Financial Reporting Standards; Mackenzie, Bruce, Coetsee, Danie, Njikizana, Tapiwa, Chamboko, Raymond, Colyvas, Blaise, and Hanekom, Brandon; Wiley
3. Financial Reporting & Analysis, 13th edition; Gibson, Charles H.; South-Western Cengage Learning
4. Financial Statement Analysis, 10th edition; Subramanyam, K.R., and Wild, John L.; McGraw Hill
5. Principles of Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
6. Fundamentals of Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall

Paper DSE 502 (c) : INTERNATIONAL TAX & REGULATION

Objective: To make students to understand the International Tax & Regulation..

UNIT I: TAXATION OF INDIVIDUALS:

Individual Income Tax Return: Filing Status - Cash basis and Accrual basis

Gross Income: Wages, Salaries, Bonus, Commission, Fees & Tips - Interest & Dividend Income - Business Income - Capital Gains & Losses - Passive Income - Farming Income - Deductions: Adjustments - Deductions from AGI - Calculating Tax: Tax Credits - Alternative Minimum Taxes - Other Taxes - Estimated Tax penalty

UNIT II: PROPERTY TRANSACTIONS & DEPRECIATION:

Capital Gains & Losses - Gains & Losses from Sale of Long-term Business Property - Depreciation & Amortization

UNIT III: TAXATION OF CORPORATIONS:

C-Corporations: Formation - Income Tax Return - Income - Deductions - Reconciliation of Taxable Income with books - Calculating Tax - Corporate Earnings & Distributions - Corporate Liquidation & Reorganizations - S-Corporations: Eligibility criteria - Income Tax Return - Shareholder basis - Earnings and Distribution - Termination of Election

UNIT IV: TAXATION OF OTHER ENTITIES:

Partnerships: Formation - Income Tax Return - Partner basis - Partnership Distributions - Sale of Partnership Interest by a Partner - Termination of Partnership - Estate, Trust & Gift Taxation: Estate and Trust Fiduciary Income Tax Return - Estate Tax Return - Gift Tax Return - Generation-skipping transfer Tax - Tax Exempt Organizations: Formation - Income Tax Return

UNIT V: STATUTORY REGULATIONS, ACCOUNTANT RESPONSIBILITIES, BUSINESS STRUCTURES:

Federal Security Regulations: Securities Act of 1933 - Securities Exchange Act of 1934 - Other federal security regulations - Professional & Legal Responsibilities: Accountant Common Law Liabilities - Accountant Statutory Liabilities - Accountant Liabilities for Privileged Information - Accountant Criminal Liabilities - Employment Regulations - Environmental Regulations - Antitrust Regulations - Business Structures: Sole Proprietorships - Partnerships - Corporations

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Regulation, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Regulation, Wiley
3. Internal Revenue Code: Income, Estate, Gift, Employment and Excise Taxes, CCH Tax Law Editors
4. Federal Income Tax: Code and Regulations--Selected Sections, Martin B. Dickinson, Wolters Kluwer
5. Federal Income Taxation by Katherine Pratt and Thomas D. Griffith, Wolters Kluwer
6. Federal Income Taxation (Concepts and Insights), Marvin Chirelstein and Lawrence Zelenak, Foundation Press

Paper DSE 503 (a) : AUDITING

Objective: to understand meaning and elements of auditing and gain knowledge for execution of audit.

UNIT-I: INTRODUCTION:

Auditing: Meaning – Definition – Evolution – Objectives – Importance - Types of Audit – Standards of Auditing – Procedure for issue of standards by AASB.

UNIT-II: AUDITOR AND EXECUTION OF AUDIT:

Appointment – Qualification and Disqualification – Qualities – Remuneration – Removal – Rights – Duties – Civil and Criminal Liabilities of Auditors – Commencement of Audit – Engagement Letter – Audit Program – Audit Note Book – Audit Workbook – Audit Markings.

UNIT-III: INTERNAL CONTROL, INTERNAL CHECK AND INTERNAL AUDIT:

Meaning and Objectives of Internal Control – Internal Check and Internal Audit – Internal Check Vs. Internal Audit – Internal Control vs. Internal Audit.

UNIT-IV: VOUCHING:

Meaning – Objectives – Types of Vouchers – Vouching of Trading Transactions – Vouching Cash Transaction – Auditing in an EDP Environment.

UNIT-V: VERIFICATION AND VALUATION OF ASSETS:

Meaning and Definition – Distinction – Verification and Valuation of various Assets and Liabilities – Audit Committee – Role of Audit Committee – Audit Reports.

SUGGESTED READINGS:

1. Principles and Practice of Auditing: RG Saxena, Himalaya Publishing House.
2. Auditing and Assurance for CA Integrated Professional Competence: SK Basu, Pearson.
3. Auditing : Mahitha HPH
4. Auditing: Dr.Nazia Sultana, PBP.
5. Auditing: ArunaJha, Taxmann Publications.
6. Auditing Principles, Practices & Problems: JagdishPrakash, Kalyani Publishers.
7. Auditing and Assurance: Ainapure&Ainapure, PHI Learning.
8. Principles and Practice of Auditing: DinkarPagare, Sultan Chand & Sons.
9. Fundamentals of Auditing: Kamal Gupta and Ashok Arora, Tata McGraw-Hill
10. A Hand Book of Practical Auditing: B.N. Tandonetal., S. Chand.

Paper DSE 503 (b) : ADVANCED CORPORATE ACCOUNTING

Objective: To gain knowledge of AS-19 & 21 and format accounts.

UNIT-I: HOLDING COMPANIES (AS-21):

Nature – Legal requirements – Capital and Revenue Profit/Reserves/Losses – Minority Interest – Cost of Control or Goodwill – Capital Reserve – Inter Company Transactions – Un-realized Profit on Unsold stock - Revaluation of Assets – Interim Dividend by Subsidiary Companies - Debentures in Subsidiary Companies – Consolidated Balance Sheet.

UNIT-II: ELECTRICITY COMPANIES (DOUBLE ACCOUNTING SYSTEM):

Meaning of Double Account System – Final Accounts - Calculation of Reasonable Return and Disposal of Surplus – Replacement of an Asset.

UNIT-III: ACCOUNTING FOR PRICE LEVEL CHANGES:

Introduction – History – Limitations – Profit measurement under different systems of accounting – Methods of Accounting for Price Level Changes: Current Purchasing Power (CPP) – Current Cost Accounting (CCA).

UNIT-IV: LEASE ACCOUNTS (AS-19):

Meaning – Terminology – Advantages and Disadvantages – Types: Financial and Operating Lease – Accounting Treatment in the books of both the parties.

UNIT-V: HUMAN RESOURCE ACCOUNTING & SOCIAL RESPONSIBILITY ACCOUNTING:

Human Resource Accounting: Definition – Objectives – Assumptions – Advantages and Limitations – Approaches - Human resource accounting in India (Theory only).

Social Responsibility Accounting: Meaning – Nature – Need – Objectives – Accounting Concepts – Indicators of Social Performance (Theory only).

SUGGESTED READINGS:

1. Corporate Accounting: R.L.Gupta, M.RadhaSwamy, Sultan Chand
2. Advanced Corporate Accounting: Srilatha Reddy, Himalaya
3. Advanced Corporate Accounting: Dr. Thangapandi, PBP
3. Advanced Accounting: Tulsania, TataMcGraw-hill Publishing Company
4. Corporate Accounting: Jain &Narang, Kalyani Publications
5. Advanced Accounting: S.M.Shukla, SahityaBhavan
6. Corporate Accounting: PrashantaAthma, Himalaya Publishers.
7. Advanced Accounting (Vol. II): Chandra Bose, PHI

Paper DSE 503 (c) : FINANCIAL MANAGEMENT

Objective: To understand basics in Financial Management.

UNIT-I: INTRODUCTION:

Financial Management: Meaning - Nature and Scope – Importance - Objectives - Profit Maximization vs Wealth Maximization – Traditional Functions of Finance Manager – Changing Role of Finance Manager – Relationship between Financial Management and Other Management Areas (Theory).

UNIT-II: FINANCIAL PLANNING:

Sources of Finance - Financial Planning: Meaning and Definition – Objectives – Characteristics – Process – Factors - Limitations (Theory).

UNIT-III: CAPITALIZATION:

Meaning of Capital and Capitalization – Sources of Capital - Theories of Capitalization – Over Capitalization: Meaning - Causes – Consequences - Remedies - Under Capitalization: Meaning – Causes – Consequences - Remedies - Comparison of Under and Over Capitalization – Watered Stock (Theory).

UNIT-IV: COST OF CAPITAL:

Meaning and Definition – Significance – Classification of Costs – Problems in Determination of Cost of Capital – Cost of Debt - Cost of Perpetual and Redeemable Debt - Cost of Preference Capital - Cost of Equity Capital – Cost of retained earnings - Weighted Average Cost of Capital (Simple Problems).

UNIT-V: CAPITAL STRUCTURE:

Meaning – Importance – Factors – Types – Optimal Capital Structure – Theories of Capital Structure: Net Income Approach - Net Operating Income Approach - Traditional Approach - Modigliani and Miller Approach (Simple Problems).

SUGGESTED READINGS:

1. Financial Management: I MPandey, Vikas Publishing House Pvt Ltd.
2. Financial Management: M.Y. Khan & P.K. Jain, Tata McGraw-Hill
3. Financial Management: Shashi K. Gupta & R.K. Sharma, Kalyani Publishers,
4. Financial Management: R.M. Srivastava, Himalaya Publishing House, Hyderabad.
5. Financial Management: Prasanna Chandra, McGraw Hill
6. Financial Management: Kothari, sage
7. Financial Management: Rustagi, Taxman Publications.
8. Fundamentals of Financial Management: Sharan, Pearson.
9. Financial Management: Tulsian, S. Chand.
10. Financial Management: Satish B Mathur, Trinity Press.
11. Fundamentals of Financial Management: D. Chandra Bose, PHI.

Paper PR : RESEARCH METHODOLOGY & PROJECT REPORT

Objective: To introduce the basics of conducting research in social sciences.

UNIT-I: INTRODUCTION, MEASUREMENT AND HYPOTHESIS TESTING:

Meaning of Research-Steps involved- Identification of Problem- Steps involved in the selection of problem-Research Design-Meaning and Types- Measurement Levels/Scales - Scaling Techniques-Hypothesis-Meaning - Types – Testing Procedure.

UNIT-II:PARAMETRIC AND NON-PARAMETRIC TESTS AND RESEARCH REPORT:

Introduction - t-Test - F-Test - Chi Square Test - Anova (One-Way Anova, Two-Way Anova).Concepts onlyContents of a Research Report.

SUGGESTED READINGS:

1. Research Methodology: Himalaya Publications.
2. Methodology of Research in Social Sciences: Krishna Swamy,
3. Research Methodology: Kothari &Garg, New Age Publication
4. Research Methodology: Paneerselvam R, PHI
5. Research Methodology: Dr Vijay Upagade& Dr ArvindShende, S. Chand Publications
6. Research Methodology: Ranjit Kumar, Pearson Publication
7. Reading in Research Methodology in Commerce & Business Management: Achalpathi KV,
8. Research Methodology: Sashi.K Gupta, PraneethRangi, Kalyani Publishers.

GUIDELINES FOR PROJECT WORK

- 1) Project work is a part of the prescribed curriculum to B. Com students.
- 2) Project work is allotted to a group of 4 students.
- 3) During the IV semester, students are expected to undergo internship at a business firm/ Government Department /Software organization/Voluntary organization as per the guidance of teacher concerned.
- 4) Students should get a certificate from the organization.
- 5) At the end of Semester-VI, the project reports would be evaluated by the external examiner designated by the Controller of Examinations, from the panel submitted by the Board of Studies in Commerce. The Examiner would evaluate the project reports for a maximum of 35 marks and conduct Viva-Voce examination for 15 marks. The award lists duly signed would be sent the Controller of Examinations.
- 6) Examiners will examine the following in the project report: i) Survey/Analysis on the topic chosen; ii) Method of data collection; iii) Presentation: Style, Comprehensiveness, graphs, charts etc.; iv) Analysis and inference and implications of the study; v) Bibliography.
- 7) Students must ensure that they maintain **regular contact with their supervisor** and also that they provide the supervisor with drafts of their work at regular intervals.
- 8) Students are required to submit a project report on a topic related/connected with trade, industry & commerce. Project can be done by taking the information from the select organization focusing on areas like marketing, finance, human resource, operations, general management etc.

- 9) Project should be a practical, in-depth study of a problem, issue, opportunity, technique or procedure or some combination of these aspects of business. The Students are required to define an area of investigation, assemble relevant data, analyse the data, draw conclusions and make recommendations.

ORGANISATION OF PROJECT REPORT

1) Project report should be presented in the following sequence:

i) Title page; ii) Student's declaration; iii) Supervisor's certificate; iv) Internship certificate; v) Abstract; vi) Acknowledgements; vii) Table of contents; viii) List of tables; ix) List of figures; x) List of appendices.

2) Chapter Design should be as follows:

Chapter-I: Introduction: this chapter includes the research problem, need for study/significance of the project, objectives, methodology (hypotheses, statistical tools, data source, scope, sample, chapter design).

Chapter-II: Company Profile: this chapter should contain a brief historical retrospect about the entity of your study.

Chapter-III: Data Analysis and interpretation: this chapter should present the data analysis and inferences.

Chapter-IV: Summary and Conclusions: This Chapter should give an overview of the project, conclusions, implications, recommendations and scope for further research.

Bibliography: lists the books, articles, and websites that are referred and used for research on the topic of the specific project. Follow Harvard style of referencing.

Appendices: the data, used to prepare the tables for analysis, may not be feasible to incorporate as part of chapters, may given as appendices.

TECHNICAL SPECIFICATIONS OF THE PROJECT

1) Project should be typed on **A4 white paper**, and be **1.5 spaced**.

2) All pages should be **numbered**, and numbers should be placed at the centre of the bottom of the page.

3) **All tables, figures and appendices** should be consecutively numbered or lettered, and suitably labeled.

4) **3 bound copies&a soft-copy** should be handed in to the **principal/director of your college/institute** at the time of submission.

5) **bibliography and referencing:** **Referencing** is necessary to avoid plagiarism, to verify quotations and to enable readers to follow-up and read more fully the cited author's arguments. Reference is given within the text of the project as well as at the end of the project. The basic difference between citation and a reference list (bibliography) is that the latter contains full details of all the in-text citations.

- **Citation** provides brief details of the author and date of publication for referencing the work in the body of the text.
- **Reference list** is given at the end of the text and is a list of all references used with additional details provided to help identify each source.

Proper referencing is as crucial aspect of your project. You are therefore strongly advised to talk to your supervisor about this, in order to make sure that your project report follows the appropriate referencing system.

Paper DSE 601 (a) : COST CONTROL AND MANAGEMENT ACCOUNTING

Objective: To be acquaint with Cost Control techniques, Managerial Accounting decision-making techniques and reporting methods.

UNIT-I: INTRODUCTION TO MANAGEMENT ACCOUNTING & MARGINAL COSTING:

Meaning and Importance of Management Accounting – Marginal Cost Equation – Difference between Marginal Costing and Absorption Costing – Application of Marginal Costing – CVP Analysis – Break Even Analysis: Meaning – Assumptions – Importance - Limitations. Marginal Costing for Decision Making-Make or Buy – Add or Drop Products – Sell or Process Further – Operate or Shut-down – Special Order Pricing – Replace or Retain.

UNIT-II: BUDGETARY CONTROL AND STANDARD COSTING:

Budget: Meaning – Objectives – Advantages and Limitations – Essentials of Budgets - Budgetary Control - Classification of Budgets - Preparation of Fixed and Flexible Budgets. Standard Costing: Meaning – Importance – Standard Costing and Historical Costing - Steps involved in Standard Costing. Variance Analysis: Material variance - Labour variance - Overhead variance.

UNIT-III: TECHNIQUES OF FINANCIAL STATEMENT ANALYSIS:

Meaning – Objectives - Techniques: Comparative Statement, Common Size Statement, Trend Analysis. Ratios- Meaning, Objectives and Classification—Computation of Activity, Liquidity, Solvency and Profitability Ratios.

UNIT-IV: FUNDS FLOW ANALYSIS:

Concept of Funds – Meaning and Importance – Limitations – Statement of Changes in Working Capital – Statement of Sources and Application of Funds.

UNIT-V: CASH FLOW ANALYSIS (AS-3):

Meaning – Importance – Differences between Funds Flow and Cash Flow Statements – Procedure for preparation of Cash Flow Statement.

SUGGESTED READINGS:

1. Management Accounting- Principles & Practice: Sharma RK & Shashi K. Gupta, Kalyani
2. Advanced Managerial Accounting: Srihari Krishna Rao, Himalaya
3. Advanced Managerial Accounting: Dr. Sundaram, PBP
3. Advanced Management Accounting: Robert S. Kaplan & Anthony A. Atkinson, Prentice-Hall
4. Management Accounting: Rustagi R.P, Galgotia
5. Managerial Accounting: Ronald W. Hilton, TMH

Paper DSE 601 (b) : FINANCIAL CONTROL

Objective: To make students to understand the Financial Control.

UNIT I: EXTERNAL FINANCIAL REPORTING DECISIONS (AS PER US GAAP & IFRS):

Financial Statements: Balance sheet - Income statement - Statement of Comprehensive Income - Statement of changes in equity - Statement of cash flows - Integrated reporting

UNIT II: RECOGNITION, MEASUREMENT, VALUATION, AND DISCLOSURE (AS PER US GAAP & IFRS) :

Assets, Liabilities & Equity: Asset valuation - Valuation of liabilities - Equity transactions - Income: Revenue recognition - Income measurement - Major differences between U.S. GAAP and IFRS

UNIT III: COST MANAGEMENT:

Measurement concepts: Cost behavior and cost objects - Actual and normal costs - Standard costs - Absorption (full) costing - Variable (direct) costing - Joint and by-product costing - Costing Systems: Joint and by-product costing - Job order costing - Process costing - Activity-based costing - Life-cycle costing -Overhead costs: Fixed and variable overhead expenses - Plant-wide versus departmental overhead -Determination of allocation base - Allocation of service department costs

UNIT IV: SUPPLY CHAIN MANAGEMENT AND BUSINESS PROCESS IMPROVEMENT:

Supply chain management: Lean resource management techniques - Enterprise resource planning (ERP) - Theory of constraints - Capacity management and analysis - Business Process Improvement: Value chain analysis - Value-added concepts - Process analysis, redesign, and standardization - Activity-based management - Continuous improvement concepts - Best practice analysis - Cost of quality analysis - Efficient accounting processes

UNIT V: INTERNAL CONTROLS:

Governance, Risk & Compliance: Internal control structure and management philosophy - Internal control policies for safeguarding and assurance - Internal control risk - Corporate governance - External audit requirements - System Controls & Security Measures: General accounting system controls - Application and transaction controls - Network controls - Backup controls - Business continuity planning

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 1: Planning, Performance & Analytics
2. Intermediate Accounting, 17th edition; Kieso, Donald E., Weygandt, Jerry J., and Warfield, Terry D.; Wiley
3. Intermediate Accounting, 11th edition; Nikolai, Loren A., Bazley John D., and Jones, Jefferson P., South-Western Cengage Learning
4. Cost Management: A Strategic Emphasis, 6th edition; Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary; McGraw Hill
5. Horngreen's Cost Accounting: A Managerial Emphasis, 16th edition; Charles T., Datar, Srikant, and Rajan, Madhav; Pearson
6. Management Accounting: An Integrative Approach; McNair-Connolly, C.J., Merchant, Kenneth A.; IMA

Paper DSE 601(c) :INTERNATIONAL FINANCIAL REPORTING - II

Objective: To make students to understand the International Financial Reporting.

UNIT I: PENSIONS & POST-EMPLOYMENT BENEFITS (AS PER US GAAP & IFRS):

Defined contribution pension plans - Defined benefit pension plans: Pension obligations - Pension plan assets - Net pension expense - Other Post-retirement benefits

UNIT II: INCOME TAXES (AS PER US GAAP & IFRS):

Income tax expense: Current income tax expense - Deferred income tax expense - Deferred taxes on balance sheet: Deferred tax assets - Deferred tax liabilities - Specific accounting - considerations: Net Operating Losses (NOL) - Investee's undistributed dividends

UNIT III: EQUITY (AS PER US GAAP & IFRS):

Equity accounts: Common Stock - Preferred Stock - Additional Paid-In Capital - Retained Earnings - Accumulated Other Comprehensive Income - Treasury Stock - Specific accounting considerations: Share-based Payments to Employees - Equity Securities Classified as Debt Presentation of Equity: On Balance sheet - On Statement of Changes in Equity - Earnings per Share (EPS): Basic EPS - Diluted EPS

UNIT IV: SELECT TRANSACTIONS (AS PER US GAAP & IFRS):

Business Combinations and Consolidations: Acquisitions - Non-controlling Interest - Intercompany Transactions - Variable Interest Entities (VIE) - Foreign currency: Remeasurement- Translation

UNIT V: NOT-FOR-PROFIT AND GOVERNMENTAL ACCOUNTING AND REPORTING (AS PER US GAAP):

Not-for-Profit (NFP) Entities: NFP Financial Statements - Contribution Revenue - Specific Accounting Considerations - Colleges and Universities - Voluntary Health and Welfare Organizations - Health Care Organizations - Governmental Entities: Fund types (Governmental funds, Proprietary funds, Fiduciary funds) - Modified Accrual Accounting - Inter-fund transactions - Government Financial Reporting

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Financial Accounting & Reporting, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Financial Accounting and Reporting, Wiley
3. IFRS & US GAAP Best Practices in Accounting World: GAAP Analysis, Rajesh Dhawan
4. Transparency in Financial Reporting: A concise comparison of IFRS and US GAAP 1st Edition, Ruth Ann McEwen, Harriman House Ltd.
5. IFRS and US GAAP: A Comprehensive Comparison, Steven E. Shamrock, Wiley
6. Wiley GAAP: Interpretation and Application of Generally Accepted Principles, Barry J. Epstein and Ralph Nach, Wiley
7. IFRS Simplified with Practical Illustration Part 1 & 2, Mr RammohanBhave and Dr Mrs Anjali RammohanBhave, CNBC TV 18

Paper DSE 602(a) : THEORY AND PRACTICE OF GST

Objective: to equip the students with the knowledge regarding Theory and Practice of GST.

UNIT I: INTRODUCTION TO GST:

Introduction – GST - Taxes Subsumed under GST -Determination of Tax - Registration -Process of Registration - Cancellation and renovation of registration - Supply of Goods and Services - Transition to GST - Registered Business -Availed Input Tax Credit -Unavailed CENVAT credit and Input VAT on capital goods-Availing the input credit held in closing stock -Invoicing -Tax Invoice -Bill of Supply - Credit Note, Debit Note and Supplementary Invoice-Transportation of goods without issue of Invoice - Input Credit Mechanism - Input Tax - GST Returns - Payment of Tax.

UNIT II: GETTING STARTED WITH GST:

Introduction - Enabling GST and Defining Tax Details-Transferring Input Tax credit to GST -Intrastate Supply of Goods-Intrastate Inward Supply -Intrastate Outward Supply -Interstate -Interstate Outward Supply - Return of Goods -Purchase Returns -Sales Returns -Supplies Inclusive of Tax -Defining Tax Rates at Master and Transaction Levels - Defining GST Rates at Stock Group Level-Defining GST Rate at Transaction Level -Hierarchy of Applying Tax Rate Details –Reports.

UNIT III: RECORDING ADVANCED ENTRIES, GST ADJUSTMENT AND RETURN FILING:

Introduction -Accounting of GST Transactions -Purchases from Composition Dealer -Purchases from Unregistered Dealers-Exports -Imports -Exempted Goods -SEZ Sales -Advance Receipts and payments - Mixed Supply and Composite Supply under GST -Mixed Supply of Goods -Composite Supply of Goods -GST Reports - Generating GSTR- Report in ERP -Input Tax Credit Set Off -GST Tax Payment -Time line for payment of GST tax -Modes of Payment -Challan Reconciliation -Exporting GSTR- return and uploading in GST portal.

UNIT IV: GETTING STARTED WITH GST (SERVICES):

Introduction -Determination of supply of services -Determining the Place of Supply of Services -Enabling GST and Defining Tax Details-Transferring Input Tax credit to GST -Intrastate Supply of Goods - Intrastate Inward Supply-Intrastate Outward Supply -Interstate Supply -Interstate Outward Supply - Interstate Inward Supply -Interstate Outward Supply of Services -Cancellation of Services -Cancellation of Inward Supplies -Cancellation of Outward Supply of Services -Defining Tax Rates at Master and Transaction Levels.

UNIT V: RECORDING ADVANCED ENTRIES AND MIGRATION TO ERP:

Introduction - Accounting Multiple Services in a Single Supply - Recording Partial Payment to Suppliers -Outward Supplies - Recording Outward Supply with Additional Expenses - Supply of services -Business to consumers - Time of Supply of Services - Place of Supply of Services - Determining place of supply of services - Exempt Supply of Services under GST -Export Supply of Services - Reverse Charge on Services under GST - Advance Receipts from Customers under GST - Advance Receipt and issuing Invoice on same month -Advance Receipt and issuing Invoice on different month - Reversal of GST on account of cancellation of advance receipt - Generating GSTR- Report in ERP - Input Tax Credit Set Off - Migration to ERP - Activate Goods and Services Tax (GST) in ERP - Set up GST rates - Update Masters - Update party GSTIN/UIN - Creation of GST Duty ledgers.

SUGGESTED READINGS:

1. Taxmann's Basics of GST
2. Taxmann's GST: A practical Approach
3. Theory & Practice of GST, Srivathsala, HPH
4. Theory & Practice of GST: Dr. Ravi M.N, PBP.

Paper DSE 602(b) : FINANCIAL DECISION MAKING - II

Objective: To make students to understand the Financial Decision making.

UNIT I: DECISION ANALYSIS:

Cost/volume/profit analysis: Breakeven analysis - Profit performance and alternative operating levels - Analysis of multiple products - Marginal Analysis: Sunk costs, opportunity costs and other related concepts - Marginal costs and marginal revenue - Special orders and pricing - Make versus buy - Sell or process further - Add or drop a segment - Capacity considerations

UNIT II: PRICING:

Pricing decisions: Pricing methodologies - Target costing - Elasticity of demand - Product life cycle considerations - Marketstructure considerations

UNIT III: RISK MANAGEMENT:

Enterprise Risk: Types of risk - Risk identification and assessment - Risk mitigation strategies - Managing risk

UNIT IV: INVESTMENT DECISIONS:

Capital budgeting process: Stages of capital budgeting - Incremental cash flows - Income tax considerations - Evaluating uncertainty - Capital investment method analysis: Net present value - Internal rate of return - Payback - Comparison of investment analysis methods

UNIT V: PROFESSIONAL ETHICS:

Business ethics: Moral philosophies and values - Ethical decision making - Ethical considerations for management accounting and financial management professionals: IMA's Statement of Ethical Professional Practice - Fraud triangle - Evaluation and resolution of ethical issues - Ethical considerations for the organization: Organizational factors and ethical culture - IMA's Statement on Management Accounting, "Values and Ethics: From Inception to Practice" - Ethical leadership - Legal compliance - Responsibility for ethical conduct - Sustainability and social responsibility.

SUGGESTED READINGS:

1. Wiley CMAexcel Learning System, Part 2: Strategic Financial Management
2. Cost Management: A Strategic Emphasis, 6th edition; Blocher, Edward, J., Stout, David E., Juras, Paul E., and Cokins, Gary; McGraw Hill
3. Horngreen's Cost Accounting: A Managerial Emphasis, 16th edition; Charles T., Datar, Srikant, and Rajan, Madhav; Pearson
4. Principles of Corporate Finance, 11th edition; Brealey, Richard, A., Myers, Stewart C., and Allen, Franklin; McGraw Hill
5. Fundamentals of Financial Management, 13th edition; Van Horn, James, C., and Wachowicz, John M. Jr.; FT / Prentice Hall
6. Enterprise Risk Management - Integrated Framework; COSO, The Committee of Sponsoring Organizations of the Treadway Commission, 2017

Paper DSE 602 (c): INTERNATIONAL AUDITING

Objective: To make students to understand the International Auditing.

UNIT I: ETHICS, PROFESSIONAL RESPONSIBILITIES AND GENERAL AUDITING

PRINCIPLES:

Introduction to Auditing: Generally Accepted Auditing Standards (GAAS) - International Standards of Auditing (ISA) - Ethics, independence and professional conduct: AICPA Code of Professional Conduct - Sarbanes-Oxley Act (SOX), 2002 - Public Company Accounting Oversight Board (PCAOB) - Securities & Exchange Commission (SEC) - International Standards - Engagement Understanding and Acceptance: Pre-Engagement Acceptance Activities - Engagement Letter - Auditor's communication with those charged with governance

Quality Control: Statements on Quality Control Standards (SQCS) - Elements of a System of Quality control

UNIT II: ASSESSING AUDIT RISK AND DEVELOPING A PLANNED RESPONSE:

Audit Risk: Inherent Risk - Control Risk - Detection Risk - Fraud Risk: Fraudulent financial reporting - Misappropriation of assets - Fraud risk factors - Auditor's consideration of fraud

Planning the Audit: Audit Strategy - Audit Plan - Internal Controls: Auditor's Consideration of Internal Control - Operating Cycles - Internal Control Reports and Communications

UNIT III: PERFORMING FURTHER PROCEDURES AND OBTAINING AUDIT EVIDENCE:

Audit Evidence: Management's Assertions - Sufficient & Appropriate Audit Evidence - Audit Evidence determined by Risk of Material Misstatement (RMM) - Substantive Procedures: Revenue cycle - Expenditure cycle - Production cycle - Payroll cycle - Investing cycle - Financing cycle - Opening Balances - Illegal Acts - Related Parties - Contingencies - Estimates & Fair Value Measurements - Subsequent Events - Omitted Procedures & Subsequent Discovery of Facts - Using the Work of Others - Evaluating Audit Findings - Audit Documentation - Management Representation Letter - Audit Sampling: Sampling Risks - Attributes Sampling - Classical Variables Sampling - Probability Proportional to Size (PPS) Sampling

UNIT IV: AUDIT REPORTING:

Audit Reports: Unmodified opinion - Unmodified Opinion with Emphasis-of-matter and/or Other-matter paragraph - Qualified Opinion - Adverse Opinion - Disclaimer of Opinion - Audit Reporting Considerations: Audit of Comparative financial statements - Supplementary Information - Audit of Group financial statements - Audit of Single financial statements & Specific financial statement elements, accounts or items - Audit of Special Purpose financial statements - Audit of financial statements prepared using financial reporting framework of another country

UNIT V: OTHER ENGAGEMENTS:

Accounting & Review Services: Preparation of financial statements - Compilation engagement - Review engagement - Attestation Engagements: Examination - Review - Agreed-upon Procedures - Governmental Auditing: Governmental Auditing Standards - Single Audit Act

SUGGESTED READINGS:

1. Miles CPA Review Concept Book: Auditing and Attestation, Miles Education
2. Wiley CPA Excel Exam Review Course Study Guide: Auditing and Attestation, Wiley
3. Wiley Practitioner's Guide to GAAS: Covering all SAS, SSAE's , SSARS, PCAOB, Auditing Standards, and Interpretations, Joanne M. Flood, Wiley
4. Auditing: A Risk Based-Approach to Conducting a Quality Audit, Karla M Johnstone, Audrey A. Gramling and Larry E. Rittenberg, Cengage Learning
5. Principles of Auditing & Other Assurance Services, Ray Whittington and Kurt Pany, McGraw Hill
6. Auditing & Assurance Services: A Systematic Approach, William F Messier Jr, Steven M. Glover and Douglas F. Prawitt, McGraw Hill.

Paper DSE 603(a): ACCOUNTING STANDARDS

Objectives: To make the students acquire the knowledge and application of Indian Accounting Standards.

UNIT-I: INTRODUCTON:

Introduction to Accounting – Concept of Accounting Theory – Role of accounting theory - Classification of Accounting Theory – Deductive and inductive approach in theory formulation – - Accounting Principles: Concepts and Conventions - Accounting standard: Concept – Evolution. (Theory only)

UNIT-II: STANDARDS RELATING TO FINANCIAL REPORTING & DISCLOSURE:

Ind AS-101: First time adoption of Indian Accounting Standards – Ind AS-1: Presentation of Financial Statements - Ind AS-7: Cash Flow Statements (Including problems) – Ind AS-8: Accounting Policies, Changes in Accounting Estimates and Errors – Ind AS-10: Events after the Balance Sheet Date -- Ind AS-24: Related Party Disclosures – Ind AS- 34: Interim Financial Reporting - Ind AS-105: Non-current assets held for sale and discontinued operations – Ind AS-108: Operating Segments.

UNIT-III: STANDARDS PROVIDING GUIDANCE ON FINANCIAL STATEMENT ITEMS:

Ind AS-2: Inventories (Including simple problems) -- Ind AS-11: Construction contracts (Including simple problems) - Ind AS-12: Income taxes – Ind AS-16: Property, Plant and Equipment – Ind AS-17: Leases (Including simple problems) - Ind AS-18: Revenue – Ind AS-20: Accounting for Government Grants and Disclosure of Government Assistance – Ind AS-23: Borrowing Costs – Ind AS-38: Intangible Assets.

UNIT-IV: STANDARDS RELATING TO BUSINESS ACQUISITIONS AND CONSOLIDATIONS:

Ind AS-28: Investments in Associate and Joint Ventures - Ind AS-103: Business Combinations – Ind AS-110: Consolidated Financial Statements – Ind AS-111: Joint Arrangements – Ind AS-112: Disclosure of interest in other entities

UNIT-V: FINANCIAL REPORTING:

Financial reporting – Concept — Development in Financial reporting objectives: True blood Report (USA) – The Corporate Report (UK) – Stamp Report (Canada) - Objectives of Financial Reporting – Qualities of Financial Reporting - Recent trends in Corporate Reporting in India. (Theory only)

SUGGESTED READINGS:

1. Rawat D.S. “Ind ASs Converged IFRS” Taxmann Allied Services Private Limited.
2. Accounting Theory and Practice: Jawaharlal, Himalaya Publishing Company
3. Accounting Standards: Rawat D.S, Taxmann Allied Services Private Limited
4. IFRS Concepts and Applications: Kamal Garg, Bharat Law House Pvt. Limited
5. Accounting Theory: Porwal L.S, TataMcGraw-Hill Publishing Company
6. Accounting Theory & Management Accounting: Jain S.P. & Narang K.L, Kalyani
7. Accounting Standards and Corporate Accounting Practices: Ghosh T.P, Taxman

Paper DSE 603(b) : CORPORATE GOVERNANCE

Objective: To acquaint the student with the finer nuances of Corporate Governance.

UNIT-1:CORPORATE GOVERNANCE: Evolution and Significance: Corporate Governance: Meaning – Definition - Evolution – Historical Perspective of Corporate Governance – Nature and Scope of Corporate Governance – Need for Corporate Governance – Essentials of Corporate Governance – Objectives of Corporate Governance - Benefits and Limitations of Corporate Governance - Structure – Theories.

UNIT – II: CORPORATE GOVERNANCE COMMITTEES AND MODELS:

CG Committees: Cadbury Committee, Greenbury Committee, Hampel Committee, Sarbanes-Oxley Act, 2002, Blue Ribbon Committee, King Committee, Kumara Mangalam Birla Committee, Narayana Murthy Committee, CII Task Force Committee – CG Models : Anglo-American, German, Japanese and Indian Model.

UNIT - III: CORPORATE GOVERNANCE AND SOCIAL RESPONSIBILITY:

Corporate Social Reporting – Meaning – Types of CSR - Role of CSR towards Society – Employees, Government, Stakeholders and Consumers – Nature of CSR – CSR Principles and Strategies - Models – Best Practices of CSR - CSR: Indian Perspective – Sachar Committee Report.

UNIT - IV: ACCOUNTABILITY IN CORPORATE GOVERNANCE:

Definition – Importance - Accounts and Financial Reporting - Stakeholders Influence - Social Responsibility and Accountability - Reflection of Stakeholder’s Accountability in Legislation, Guidance on Stakeholders and Shareholders Interest. Role of Top Management in Corporate Governance. Role of Auditors in Corporate. Role of Shareholders & Other Stakeholders in Corporate Governance.

UNIT – V: ISSUES IN CORPORATE GOVERNANCE :

Role of Promoters - Nominee Directors - Mismanagement –Corporate Frauds - Negligent Role of Auditors – Banks- Supervision and Control of Stock Exchanges – Whistle Blowing Policy - RBI – Ministry of Corporate Affairs – Towards Building Ethical and Sustainable Organization.

SUGGESTED READINGS:

1. Business Ethics and Corporate Governance, (2017) Prof. K. ViyyannaRao, Dr. G. Nagaraju I.K., International Publishing House Pvt. Ltd,
2. Corporate Governance,(2014), BholanathDutta and S.K. Podder - Vision Book house,
3. Business Ethics,(2005)2ND Edition, R.V. Badi N.V. Badi,Vrinda Publication pvt Ltd
4. Business Ethics An Indian Perspective, 2015, A. C. Fernando - Pearson
5. Business Ethics and Corporate Governance, Reprint 2013, C.S.V. Murthy – Himalaya Publication
6. Corporate Governance,(2004) H.R. Machiraju, Himalaya Publication House
7. Business Ethics -Text & Cases 2010, C.S.V. Murthy – Himalaya Publication
8. Business Ethics – Dr. Muninarayanappa, Prof. Manjula, Prof. V. Tamil Selvan, Prof. Raghavendra K.S.- Takur Publishers,2015, Bangalore
9. A Study in Business Ethics, Reprint (2008) RituParna Raj, Himalaya Publishing house
10. Ethics in Business and Management Concepts (Western and Indian) & Cases (National & International), R. P. Banerjee, Himalaya Publishing House.
11. Corporate Governance (with Case Studies), DayanandAchrekar, Surendra Publications, New Delhi.

Paper DSE 603(C) : INVESTMENT MANAGEMENT

Objective: To familiarize with concepts of risk and return relating to Investment.

UNIT-I: INTRODUCTION:

Investment Management: Meaning and Definition – Objectives - Scope – Investment Vs Speculation – Investment Vs Gambling - Factors affecting Investment Decisions – Investment Alternatives - Types of Investors (Theory).

UNIT-II: RISK AND RETURN:

Meaning of Risk – Risk Vs Uncertainty – Causes of Risk – Types of Risks – Risk and Return of a Single Asset – Ex-Ante and Ex-Post – Risk-Return Relationship – Risk-Return Trade off (Simple Problems).

UNIT-III: MARKET INDICES:

Concept of Index – Methods of computing stock indices – Leading Stock Price Indices in India – Sensex and Nifty – Uses of Market Index (Simple Problems).

UNIT-IV: TIME VALUE OF MONEY:

Concept - Techniques - Compounding Techniques - Doubling Period - Multiple Compounding Period - Present Value Techniques (Simple Problems).

UNIT-V: PORTFOLIO ANALYSIS:

Traditional Vs Modern - Rationale of Diversification - Markowitz portfolio theory - Effect of combining the securities - Measurement of expected return and risk of portfolio (Simple Problems).

SUGGESTED READINGS:

1. Investment Management (Text and Cases): V.K. Bhalla, S. Chand & Company.
2. Security Analysis and Portfolio Management: Shashi K. Gupta & Rosy Joshi, Kalyani Publishers.
3. Investment Management: Dr. V.A. Avadhani, Himalaya Publishing House.
4. Fundamentals of Investment Management: Preeti Singh, Himalaya Publishing House
5. Security Analysis and Portfolio Management: Kevin, PHI.
6. Investment Analysis and Portfolio Management: Prasanna Chandra, Tata McGraw-Hills
7. Investment Management, Prashanta Athma: Kalyani Publications.
8. Security Analysis and Portfolio Management: Madhumati Ranganathan, Pearson.
9. Investment Management: Masheswari, PHI.
10. Security Analysis and Portfolio Management: Dhanesh Khatri, Trinity Press.



B.COM (Computer Applications)
CBCS COURSE STRUCTURE
w.e.f. 2019-20

<i>Sl.No.</i>	<i>Code</i>	<i>Course Title</i>	<i>HPW</i>	<i>Credits</i>	<i>Exam Hrs</i>	<i>Marks</i>
(1)	(2)	(3)	(5)	(6)	(7)	(8)
SEMESTER - I						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AEC1	Environmental Science/ Basic Computer Skills	2	2		
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Fundamentals of Information Technology	3T+4P	5	1 ½ hrs	60T+20 P+ 20I
Total			27	25		
SEMESTER - II						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AEC2	Basic Computer Skills/ Environmental Science	2	2		
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Programming with C & C++	3T+4P	5	1 ½ hrs	60T+20 P+ 20I
Total			27	25		



Paper 101: FINANCIAL ACCOUNTING-I

Objective: to acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader.

UNIT-I: ACCOUNTING PROCESS: Financial Accounting: Introduction – Definition – Evolution – Functions-Advantages and Limitations –Users of Accounting Information-Branches of Accounting – Accounting Principles: Concepts and Conventions- Accounting Standards– Meaning – Importance –Types of Accounts – Accounting Cycle – Journal-Ledger and Trial Balance (Including problems).

UNIT-II: SUBSIDIARY BOOKS: Meaning –Types - Purchases Book - Purchases Returns Book - Sales Book - Sales Returns Book - Bills Receivable Book - Bills Payable Book – Cash Book: Single Column, Two Column, Three Column and Petty Cash Book - Journal Proper(Including problems).

UNIT-III: BANK RECONCILIATION STATEMENT: Meaning – Need - Reasons for differences between cash book and pass book balances –Favourable and over draft balances – Ascertainment of correct cash book balance (Amended Cash Book) - Preparation of Bank Reconciliation Statement (Including problems).

UNIT-IV: RECTIFICATION OF ERRORS AND DEPRECIATION: Capital and Revenue Expenditure – Capital and Revenue Receipts: Meaning and Differences - Differed Revenue Expenditure - Errors and their Rectification: Types of Errors - Suspense Account – Effect of Errors on Profit (Including problems).

Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortization and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method (Including problems).

UNIT-V: FINAL ACCOUNTS: Final Accounts of Sole Trader: Meaning -Uses -Preparation of Manufacturing, Trading and Profit & Loss Account and Balance Sheet – Adjustments – Closing Entries(Including problems).

SUGGESTED READINGS:

1. Introduction to Accountancy: T.S.Grewal, S.Chand and Co.
2. Financial Accounting-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
3. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Company.
4. Principles & Practice of Accounting: R.L.Gupta&V.K.Gupta, Sultan Chand.
5. Accountancy-I: S.P. Jain & K.L Narang, Kalyani Publishers.
6. Financial Accounting-I: Dr. Yogeshweran, PBP
7. Financial Accounting-I:Srihari Krishna Rao, Himalaya Publishing House
8. Financial Accounting: B.Vishwanadham, S.Chand.
9. Accountancy–I: Tulasian, Tata McGraw Hill Co.
10. Financial Accounting:N.Padmalatha,L.V Kamala Devi,RachanaSharma,PBP
11. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
12. Fundamentals of Financial Accounting: Deepak Sehgil, Tax Mann Publication.
13. Financial Accounting: JawaharLal, Himalaya Publishing House.
14. Financial Accounting-I: PrasanthaAthma, Himalaya Publishing House.



Paper 102: BUSINESS ORGANISATION AND MANAGEMENT

Objective: To acquaint the students with the basics of Commerce and Business concepts and functions, forms of Business Organization and functions of Management.

UNIT-I: INTRODUCTION AND FORMS OF BUSINESS ORGANISATIONS: Concepts of Business, Trade, Industry and Commerce - Objectives and functions of Business –Social Responsibility of a business - Forms of Business Organization - Meaning, Characteristics, Advantages and Disadvantages of Sole Proprietorship – Meaning, Characteristics, Advantages and Disadvantages of Partnership - Kinds of Partners - Partnership Deed -Concept of Limited liability partnership – Meaning, Characteristics, Advantages and Disadvantages of Hindu Undivided Family – Meaning, Advantages and Disadvantages of Co-Operative Organization.

UNIT-II: JOINT STOCK COMPANY: Joint Stock Company - Meaning - Definition - Characteristics - Advantages and Disadvantages - Kinds of Companies - Promotion - Stages of Promotion - Promoter - Characteristics - Kinds - Preparation of Important Documents - Memorandum of Association - Clauses - Articles of Association - Contents – Prospectus - Contents – Red herring Prospectus-Statement in lieu of Prospectus (As per Companies Act. 2013).

UNIT-III: INTRODUCTION TO FUNCTIONS OF MANAGEMENT: Management - Meaning - Characteristics - Functions of Management - Levels of Management – Skills of Management-Scientific Management - Meaning - Definition - Objectives - Criticism – Fayol’s 14 Principles of Management .

UNIT-IV: PLANNING AND ORGANISING: Meaning - Definition - Characteristics - Types of Plans - Advantages and Disadvantages – Approaches to Planning - Management by Objectives (MBO) - Steps in MBO - Benefits –Weaknesses—Definition of Organizing-Organization-Process of Organizing - Principles of Organization - Formal and Informal Organizations - Line, Staff Organizations - Line and Staff Conflicts - Functional Organization - Span of Management - Meaning - Determining Span - Factors influencing the Span of Supervision.

UNIT-V: AUTHORITY, COORDINATION AND CONTROL: Meaning of Authority, Power, responsibility and accountability - Delegation of Authority - Decentralization of Authority - Definition, importance, process, and principles of Coordination- techniques of Effective Coordination - Control - Meaning - Definition – Relationship between planning and control -Steps in Control – Types (post, current and pre-control) - Requirements for effective control.

SUGGESTED READINGS:

1. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
2. Business Organisation& Management: Patrick Anthony, Himalaya Publishing House
3. Business Organization & Management: Dr. Manish Gupta, PBP.
4. Organization & Management: R. D. Agarwal, McGraw Hill.
5. Modern Business Organization: S.A. Sherlekar, V.S. Sherlekar, Himalaya Publishing House
6. Business Organization & Management: C.R. Basu, Tata McGraw Hill
7. Business Organization & Management: M.C. Shukla S. Chand,
8. Business Organisation and Management: D.S. Vittal, S. Chand
9. Organizational Behaviour Text & Cases: V.S.P. Rao, Himalaya Publishing House
10. Business Organization & Management: Uma Shekaram, Tata McGraw Hill
11. Business Organization & Management: Niranjana Reddy & Surya Prakash, Vaagdevi publishers
12. Business Organisation and Management, Dr.NeeruVasith, Tax Mann Publications.



Paper 103: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Objective: to acquire basic knowledge in Information Technology and its applications in the areas of business.

UNIT-I: INTRODUCTION:

Introduction to computers - Generations of computers – An overview of computer system - Types of computers - Input & Output Devices.

Hardware: Basic components of a computer system - Control unit – ALU - Input/output functions - Memory – RAM – ROM – EPROM - PROM and Other types of memory.

UNIT-II: OPERATING SYSTEM (OS):

Meaning - Definition & Functions - Types of OS - Booting process - DOS – Commands (internal & external) - Wild card characters – Virus & Hackers – Cryptography & cryptology

Windows: Using the Start Menu –Control Panel – Using multiple windows – Customizing the Desktop – Windows accessories (Preferably latest version of windows or Linux Ubuntu).

UNIT-III: WORD PROCESSING:

Application of word processing - Menus & Tool Bars - Word processor – Creating – Entering - Saving & printing the document - Editing & Formatting Text - Mail Merge and Macros (Preferably latest version of MS Word or Libre Office Writer).

UNIT-IV: SPREAD SHEET:

Application of work sheet/spread sheet - Menus & Tool bars - Creating a worksheet - Entering and editing of numbers - Cell referencing - Worksheet to analyze data with graphs & Charts.

Advanced tools: Functions – Formulae – Formatting numbers - Macros – Sorting- Filtering - Validation & Consolidation of Data (Preferably latest version of MS Excel or Libre Office Calc)

UNIT-V: POWER POINT PRESENTATION:

Application of Power Point Presentation – Menus & Tool bars – Creating presentations – Adding - Editing and deleting slides - Templates and manually creating presentation– Slide show – Saving - Opening and closing a Presentation –Types of slides - Slide Views - Formatting – Insertion of Objects and Charts in slides - Custom Animation and Transition (Preferably latest version of MS Power Point presentation - Libre Office Impress).

Internet & Browsing: Services available on internet – WWW – ISP – Browsers.

Multimedia: Application of multimedia – Images – Graphics-Audio and Video – IT security.



SUGGESTED READINGS:

1. Introduction to Computers: Peter Norton, McGraw Hill.
2. Fundamentals of Information Technology: Dr. NVN Chary, Kalyani Publishers.
3. Computer Fundamental: AnithaGoel, Pearson.
4. Information Technology Applications for Business: Dr. S. Sudalaimuthu, Himalaya
5. Introduction to Information Technology: ITL ESL, Pearson.
6. Introduction to Information Technology: V. Rajaraman, PHI.
7. Fundamental of Computers: Balaguruswamy, McGraw Hill.
8. PC Software under Windows: Puneet Kumar, Kalyani Publishers.
9. Information Technology and C language: Rajiv Khanna, New Age International.
10. Fundamentals of Information Technology: Alexis Leon, Vikas Publishing House.
11. Informational Technology: P. Mohan, Himalaya Publishing House.
12. Information Technology: R. Renuka, Vaagdevi Publishers.
13. OS-Linux Spoken Tutorials & Libre Office Spoken Tutorials by IIT Bombay.
14. Fundamentals of Information Technology: Rajiv Midha, Tax Mann Publications



Paper 201: FINANCIAL ACCOUNTING-II

Objective: To acquire Accounting knowledge of bills of exchange and other business accounting methods.

UNIT-I: BILLS OF EXCHANGE:

Bills of Exchange – Definition - Distinction between Promissory note and Bills of exchange - Accounting treatment of Trade bills: Books of Drawer and Acceptor- Honour and Dishonour of Bills - Renewal of bills - Retiring of bills under rebate - Accommodation bills (Including problems)

UNIT-II: CONSIGNMENT ACCOUNTS:

Consignment - Meaning – Features - Proforma invoice - Account sales - Del credere commission-Accounting treatment in the books of the consignor and the consignee - Valuation of consignment stock -Treatment of Normal and abnormal Loss - Invoice of goods at a price higher than the cost price (Including problems)

UNIT-III: JOINT VENTURE ACCOUNTS:

Joint Venture - Meaning – Features - Difference between Joint Venture and Consignment - Accounting Procedure - Methods of Keeping Records for Joint Venture Accounts - Method of Recording in co-ventures books - Separate Set of Books Method - Joint Bank Account - Memorandum Joint Venture Account (Including problems)

UNIT-IV: ACCOUNTS FROM INCOMPLETE RECORDS:

Single Entry System - Meaning – Features - Difference between Single Entry and Double Entry systems - Defects in Single Entry System - Books and accounts maintained - Ascertainment of Profit - Statement of Affairs and Conversion method (Including problems)

UNIT-V: ACCOUNTING FOR NON-PROFIT ORGANIZATIONS:

Non- Profit Organization - Meaning - Features - Receipts and Payments Account - Income and Expenditure Account - Balance Sheet (Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Co.
2. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
3. Accountancy–I: Tulasian, Tata McGraw Hill Co.
4. Accountancy–I: S.P. Jain & K.L Narang, Kalyani.
5. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
6. Advanced Accountancy: M Shrinivas& K Sreelatha Reddy, Himalaya Publishers.
7. Financial Accounting: M.N Arora, Tax Mann Publications.



Paper 202: BUSINESS LAWS

Objective: to understand basics of contract act, sales of goods act, IPRs and legal provisions applicable for establishment, management and winding up of companies in India.

UNIT-I: INDIAN CONTRACT ACT: Agreement and contract - Essentials of a valid contract - Types of contracts - Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance - Consideration definition - Essentials of valid consideration - Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach.

UNIT-II: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT: Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell - Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act 1986: Definitions of Consumer - Person - Goods - Service - Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Agencies - Appeals.

UNIT-III: INTELLECTUAL PROPERTY RIGHTS: Trade Marks: Definition - Registration of Trade Marks - Patents: Definition - Kinds of Patents - Transfer of the Patent Rights - Rights of the Patentee - Copy Rights: Definition - Rights of the Copyright Owner - Terms of Copy Right - Copy Rights Infringement - Other Intellectual Property Rights: Trade Secrets - Geographical Indications.

UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS: Director: Qualification - Disqualification - Position - Appointment - Removal - Duties and Liabilities - Loans - Remuneration - Managing Director - Corporate Social Responsibility - Corporate Governance. Meeting: Meaning - Requisites - Notice - Proxy - Agenda - Quorum - Resolutions - Minutes - Kinds - Shareholder Meetings - Statutory Meeting - Annual General Body Meeting - Extraordinary General Body Meeting - Board Meetings.

UNIT-V: WINDING UP: Meaning - Modes of Winding Up - Winding Up by tribunal - Voluntary Winding Up - Compulsory Winding Up - Consequences of Winding Up - Removal of name of the company from Registrar of Companies - Insolvency and Bankruptcy code - 2016.

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law: Rajashree. - HPH
- 3) Business Law - Kavitha Krishna, Himalaya Publishing House
- 4) Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
- 5) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 6) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 7) Corporate Law: PPS Gogna, S Chand.
- 8) Business Law: D.S. Vital, S Chand
- 9) Company Law: Bagriyal AK, Vikas Publishing House.



Objective: To understand the fundamental concepts of programming in C and Object Oriented Programming using C++.

UNIT-I: INTRODUCTION TO C LANGUAGE, VARIABLES, DATA TYPES AND OPERATORS

Introduction: Types of Languages- History of C language – Basic Structure –Programming Rules – Flow charts-algorithms–Commonly used library functions - Executing the C Program - Pre-processors in “C” - Keywords & Identifiers – Constants – Variables: Rules for defining variables - Scope and Life of a Variable-- **Data types** - Type Conversion - Formatted Input and Output operations. Operators: Introduction – Arithmetic – Relational – Logical – Assignment - Conditional - Special - Bitwise - Increment / Decrement operator.

UNIT-II: WORKING WITH CONTROL STATEMENTS, LOOPS

Conditional statements: Introduction - If statements - If-else statements – nested if-else – break statement- continue statement-go to statement-Switch statements. **Looping statements:** Introduction- While statements – Do-while statements - For Statements-nested loop statements.

UNIT-III: FUNCTIONS, ARRAYS AND STRINGS

Functions: Definition and declaration of functions- Function proto type-return statement-types of functions-formatted and unformatted functions. **Built in functions:** Mathematical functions – String functions - Character functions - Date functions. **User defined functions:** Introduction - Need for user defined functions - Elements of functions – Function call – call by value and call by reference – Recursive functions. **Arrays:** Introduction - Defining an array - Initializing an array –characteristics of an array- One dimensional array – Two dimensional array – Multi dimensional array. **Strings:** Introduction – Declaring and initializing string - Reading and Writing strings - String standard functions.

UNIT-IV: POINTERS, STRUCTURES AND UNIONS

Pointers: Features of pointers- Declaration of Pointers-arithmetic operations with pointers **Structures:** Features of Structures - Declaring and initialization of Structures –Structure within Structure- Array of Structures- Enumerated data type-**Unions**-Definition and advantages of Unions comparison between Structure & Unions.

UNIT-V: OBJECT ORIENTED CONCEPTS USING C++

Object Oriented Programming: Introduction to Object Oriented Programming - Structure of C++ – Simple program of C++– Storage Classes-Similarities and Differences between C & C++ - Data Members-Member Functions - Object Oriented Concepts-Class-Object-Inheritance-Polymorphism- Encapsulation-Abstraction.

SUGGESTED READINGS:

1. Programming with C& C++ :IndrakantiSekhar, V.V.R.Raman&V.N.Battu, Himalaya Publishers.
2. Programming in ANSI C: Balagurusamy, McGraw Hill.
3. Mastering C: K.R. Venugopal, McGraw Hill.
4. C: The Complete Reference: H.Schildt, McGraw Hill.
5. Let Us C: Y.Kanetkar, BPB.
6. Objected Oriented Programming with C++: E. Balagurusamy, McGraw Hill.
7. Mastering C++: KR.Venugopal&R.Buyya, McGraw Hill.
8. Schaum s Outlines: Programming with C++: by John R Hubbard.
9. Let Us C++: Y.Kanetkar, BPB.



B.COM
CBCS COURSE STRUCTURE
w.e.f. 2019-'20

<i>Sl.No.</i>	<i>Code</i>	<i>Course Title</i>	<i>HPW</i>	<i>Credits</i>	<i>Exam Hrs</i>	<i>Marks</i>
(1)	(2)	(3)	(5)	(6)	(7)	(8)
		SEMESTER - I				
1.	ELS1	Communication Skills	4	4		
2.	SLS1	Modern Indian Language	4	4		
3.	AEC1	Environmental Science/ Basic Computer Skills	2	2		
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Foreign Trade	5	5	3 hrs	80U+20I
		Total	25	25		
		SEMESTER - II				
7.	ELS2	Advanced Communication Skills	3	3		
8.	SLS2	Modern Indian Language	3	3		
9.	AEC2	Basic Computer Skills/ Environmental Science	2	2		
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Banking and Financial Services	5	5	3 hrs	80U+20I
		Total	25	25		



Paper SEC1: PRINCIPLES OF INSURANCE

Objectives: 1) to provide a basic understanding of the Insurance Mechanism; 2) to identify the relationship between Insurers and their Customers and the importance of Insurance Contracts; 3) to give an overview of major Life Insurance and General Insurance Products.

UNIT I: RISK MANAGEMENT AND INSURANCE AND INSURANCE TERMINOLOGY: Risk Management–Types of Risks – Actual and Consequential Losses – Management of Risks – Different Classes of Insurance – Importance of Insurance –Management of Risk by Individuals and Insurers – Fixing of Premiums – Reinsurance– Role of Insurance in Economic Development and Social Security –Constituents of Insurance Market – Operations of Insurance Companies – Operations of Intermediaries – Specialist Insurance Companies –Role of Regulators –Common and specific terms in Life and Non Life Insurance –Understanding Insurance Customers –Customer Behavior at Purchase Point – Customer Behavior when Claim Occurs – Importance of Ethical Behavior.

UNIT II: INSURANCE CONTRACT AND INSURANCE PRODUCTS: Insurance Contract Terms–Principles of Insurance: Principle of Insurable Interest, Principle of Indemnity, Principle of Subrogation, Principle of Contribution, Relevant Information Disclosure, Principle of utmost Good Faith, Relevance of Proximate Cause–Life Insurance Products: Risk of Dying Early–Risk of Living too Long –Products offered – Term Plans – Pure Endowment Plans – Combinations of Plans –Traditional Products – Linked Policies – Features of Annuities and Group Policies - General Insurance Products: Risks faced by Owner of Assets – Exposure to Perils – Features of Products Covering Fire and Allied Perils – Products covering Marine and Transit Risks – Products covering Financial Losses due to Accidents – Products covering Financial Losses due to Hospitalization – Products Covering Miscellaneous Risks.

SUGGESTED READINGS

1. Principles of Insurance : A Publication of the Insurance Institute of India
2. Principles of Insurance : Telugu Academy, Hyderabad
3. Role of Insurance in Financial inclusion : Brinda Publishing House, Hyderabad
3. Guide to Risk Management : SagarSanyal
4. Insurance and Risk Management : P.K. Gupta
5. Insurance Theory and Practice : Tripathi PHI
6. Principles of Insurance Management : Neelam C Gulati, Excel Books
7. Life and Health Insurance : Black, JR KENNETH & Harold Skipper, Pearson
8. Principles of Risk Management and Insurance : George E Rejda(13th Edition)
9. Risk Management and Insurance : Trieschman ,Gustavson and Hoyt . South Western College Publishing,Cincinnati, Ohio

Suggested Websites:

- 1) www.irda.gov.in2) www.policyholder.gov.in3) www.irdaindia.org.in



Paper 101: FINANCIAL ACCOUNTING-I

Objective: to acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader.

UNIT-I: ACCOUNTING PROCESS: Financial Accounting: Introduction – Definition – Evolution – Functions-Advantages and Limitations –Users of Accounting Information-Branches of Accounting – Accounting Principles: Concepts and Conventions- Accounting Standards– Meaning – Importance –Types of Accounts – Accounting Cycle – Journal-Ledger and Trial Balance (Including problems).

UNIT-II: SUBSIDIARY BOOKS: Meaning –Types - Purchases Book - Purchases Returns Book - Sales Book - Sales Returns Book - Bills Receivable Book - Bills Payable Book – Cash Book: Single Column, Two Column, Three Column and Petty Cash Book - Journal Proper(Including problems).

UNIT-III: BANK RECONCILIATION STATEMENT: Meaning – Need - Reasons for differences between cash book and pass book balances –Favourable and over draft balances – Ascertainment of correct cash book balance (Amended Cash Book) - Preparation of Bank Reconciliation Statement (Including problems).

UNIT-IV: RECTIFICATION OF ERRORS AND DEPRECIATION: Capital and Revenue Expenditure – Capital and Revenue Receipts: Meaning and Differences - Differed Revenue Expenditure - Errors and their Rectification: Types of Errors - Suspense Account – Effect of Errors on Profit (Including problems).

Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortization and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method (Including problems).

UNIT-V: FINAL ACCOUNTS:Final Accounts of Sole Trader: Meaning -Uses -Preparation of Manufacturing, Trading and Profit & Loss Account and Balance Sheet – Adjustments – Closing Entries(Including problems).

SUGGESTED READINGS:

1. Introduction to Accountancy: T.S.Grewal, S.Chand and Co.
2. Financial Accounting-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
3. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Company.
4. Principles & Practice of Accounting: R.L.Gupta&V.K.Gupta, Sultan Chand.
5. Accountancy-I: S.P. Jain & K.L Narang, Kalyani Publishers.
6. Financial Accounting-I: Dr. Yogeshweran, PBP
7. Financial Accounting-I:Srihari Krishna Rao, Himalaya Publishing House
8. Financial Accounting: B.Vishwanadham, S.Chand.
9. Accountancy–I: Tulasian, Tata McGraw Hill Co.
10. Financial Accounting:N.Padmalatha,L.V Kamala Devi,RachanaSharma,PBP
11. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
12. Fundamentals of Financial Accounting: Deepak Sehgil, Tax Mann Publication.
13. Financial Accounting: JawaharLal, Himalaya Publishing House.
14. Financial Accounting-I: PrasanthaAthma, Himalaya Publishing House.



Paper 102: BUSINESS ORGANISATION AND MANAGEMENT

Objective: To acquaint the students with the basics of Commerce and Business concepts and functions, forms of Business Organization and functions of Management.

UNIT-I: INTRODUCTION AND FORMS OF BUSINESS ORGANISATIONS: Concepts of Business, Trade, Industry and Commerce - Objectives and functions of Business –Social Responsibility of a business - Forms of Business Organization - Meaning, Characteristics, Advantages and Disadvantages of Sole Proprietorship –Meaning, Characteristics, Advantages and Disadvantages of Partnership -Kinds of Partners - Partnership Deed -Concept of Limited liability partnership – Meaning, Characteristics, Advantages and Disadvantages of Hindu Undivided Family – Meaning, Advantages and Disadvantages of Co-Operative Organization.

UNIT-II: JOINT STOCK COMPANY: Joint Stock Company - Meaning - Definition - Characteristics - Advantages and Disadvantages - Kinds of Companies -Promotion - Stages of Promotion - Promoter - Characteristics - Kinds - Preparation of Important Documents - Memorandum of Association - Clauses - Articles of Association - Contents – Prospectus - Contents – Red herring Prospectus- Statement in lieu of Prospectus (As per Companies Act. 2013).

UNIT-III:INTRODUCTION TO FUNCTIONS OF MANAGEMENT: Management - Meaning - Characteristics - Functions of Management - Levels of Management – Skills of Management- Scientific Management - Meaning - Definition - Objectives - Criticism – Fayol’s 14 Principles of Management .

UNIT-IV:PLANNING AND ORGANISING: Meaning - Definition - Characteristics - Types of Plans - Advantages and Disadvantages – Approaches to Planning - Management by Objectives (MBO) - Steps in MBO - Benefits –Weaknesses—Definition of Organizing-Organization-Process of Organizing - Principles of Organization - Formal and Informal Organizations - Line, Staff Organizations - Line and Staff Conflicts - Functional Organization - Span of Management - Meaning - Determining Span - Factors influencing the Span of Supervision.

UNIT-V: AUTHORITY, COORDINATION AND CONTROL: Meaning of Authority, Power, responsibility and accountability - Delegation of Authority - Decentralization of Authority - Definition, importance, process, and principles of Coordination- techniques of Effective Coordination - Control - Meaning - Definition – Relationship between planning and control-Steps in Control – Types (post, current and pre-control) - Requirements for effective control.

SUGGESTED READINGS:

1. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
2. Business Organisation & Management: Patrick Anthony, Himalaya Publishing House
3. Business Organization & Management: Dr. Manish Gupta, PBP.
4. Organization & Management: R. D. Agarwal, McGraw Hill.
5. Modern Business Organization: S.A. Sherlekar, V.S. Sherlekar, Himalaya Publishing House
6. Business Organization & Management: C.R. Basu, Tata McGraw Hill
7. Business Organization & Management: M.C. Shukla S. Chand,
8. Business Organisation and Management: D.S. Vittal, S. Chand
9. Organizational Behaviour Text & Cases: V.S.P. Rao, Himalaya Publishing House
10. Business Organization & Management: Uma Shekaram, Tata McGraw Hill
11. Business Organization & Management: Niranjana Reddy & Surya Prakash, Vaagdevi publishers
12. Business Organisation and Management, Dr. Neeru Vasihth, Tax Mann Publications.



Paper 103: FOREIGN TRADE

Objective: to gain knowledge of India's foreign trade procedures policies, and international institutions.

UNIT-I: INTRODUCTION: Foreign Trade: Meaning and Definition - Types - Documents used-Commercial Invoice - Bills of Lading / Airway Bill - Marine Insurance Policy and Certificate - Bills of Exchange - Consumer Invoice - Customs Invoice - Certificate of Origin - Inspection Certificate - Packing List.

UNIT-II: BALANCE OF TRADE AND BALANCE OF PAYMENTS: Introduction - Meaning - Components of BOT & BOP - Concept of Disequilibrium - Causes -Remedies for Correcting Balance of Payments in International Trade.

UNIT-III: INDIAN TRADE POLICY: Importance and its Implementation - Current Export Policy and Import Policy.

UNIT-IV: FOREIGN TRADE AND TRADE BLOCS: Growth - Significance of Foreign Trade - Merits - Demerits - Trade Blocs: Types - Preferential Trade Area, Free Trade Area, Customs Unions, Common Markets, Economic Unions, Monetary Unions, Customs and Monetary Unions, and Economic and Monetary Unions.

UNIT-V: INTERNATIONAL ECONOMIC INSTITUTIONS: IMF: Objectives - Functions - World Bank: Objectives - Functions - Subsidiaries of World Bank - IMF Vs. IBRD; New Development Bank (NDB) - Objective Functions - Features - Membership - Shareholding, Criticism, Asian Infrastructure Investment Bank (AIIB) - Objective Functions - Features - Membership - Shareholding, Criticism; Trans-Pacific Partnership (TPP) -Objective Functions - Features - Membership - Shareholding, Criticism; UNCTAD: Aims - Features; WTO - Aims - Features - Agreements.

SUGGESTED READINGS:

1. International Marketing: Rathore& Jain, Himalaya Publishers.
2. International Marketing: Kushpat S. Jain &RimiMitra, Himalaya Publishers
3. International Economics: SSMDesai&NirmalBhalerao, Himalaya Publishers.
4. International Business Environment & Foreign Exchange Economies: Singh & S. Srivastava,
5. Foreign Trade and Foreign Exchange: O.PAgarwal&B.K.Chaudri, Himalaya Publishers
6. International Financial Markets & Foreign Exchange: ShashiK.Gupta&PraneetRangi, Kalyani
7. International Economics: Theory & Practice: Paul R. Krugman, Pearson Publishers.



Paper SEC2: PRACTICE OF LIFE INSURANCE

Objectives: 1) to make the student understand Life Insurance Market in India, 2) to discuss the issues related to risk management in view of life insurance.

UNIT-I: INTRODUCTION TO LIFE INSURANCE AND TYPES OF LIFE INSURANCE POLICIES AND PREMIUM CALCULATION: Meaning evolution, growth and principles of Life Insurance – Life Insurance Organizations in India – Competition and Regulation of Life Insurance - Types of Life Insurance Policies – Term, Whole Life, Endowment, Unit Linked and with or without Profit Policies – Customer Evaluation – Policy Evaluation – Group and Pension Insurance Policies – Special features of Group Insurance/Super Annuation Schemes – Group Gratuity Schemes. Computation of Premiums - Meaning of Premium, its calculation-Rebates – Mode of Rebates – Large sum assured Rebates – Premium Loading – Rider Premiums – Computation of Benefits – Surrender value – Paid up value.

UNIT-II: SETTLEMENT OF CLAIMS RISK & UNDERWRITINGS AND FINANCIAL PLANNING & TAX SAVING: Settlement of claims: Intimation Procedure, documents and settlement procedures - Underwriting: The need for underwriting – Guiding principles of Underwriting – Factors affecting Insurability – Methods of Life Classification – Laws affecting Underwriting - Financial Planning and taxation: Savings – Insurance vis-à-vis Investment in the Units Mutual Funds, Capital Markets – Life Insurance in Individual Financial Planning – Implications in IT treatment.

SUGGESTED READINGS:

1. Practice of Life Insurance: Insurance Institute of India, Mumbai.
2. Insurance and Risk Management: P.K.Gupta, Himalaya Publishing House, Mumbai.
3. Fundamentals of Life Insurance Theories and Applications: Kanika Mishra, Prentice Hall
4. Managing Life Insurance: Kutty, S.K., Prentice Hall of India: New Delhi
5. Life and Health Insurance: Black, Jr. Kenneth and Harold Skipper Jr., Prentice Hall, Inc., England.
6. Life Insurance: Principles and Practice: K.C. Mishra and C.S. Kumar, Cengage Learning, New Delhi.
7. Life Insurance in India: Sadhak, Respose Books, New Delhi



Paper 201: FINANCIAL ACCOUNTING-II

Objective: To acquire Accounting knowledge of bills of exchange and other business accounting methods.

UNIT-I: BILLS OF EXCHANGE:

Bills of Exchange – Definition - Distinction between Promissory note and Bills of exchange - Accounting treatment of Trade bills: Books of Drawer and Acceptor- Honour and Dishonour of Bills - Renewal of bills - Retiring of bills under rebate - Accommodation bills (Including problems)

UNIT-II: CONSIGNMENT ACCOUNTS:

Consignment - Meaning – Features - Proforma invoice - Account sales - Del credere commission-Accounting treatment in the books of the consignor and the consignee - Valuation of consignment stock -Treatment of Normal and abnormal Loss - Invoice of goods at a price higher than the cost price (Including problems)

UNIT-III: JOINT VENTURE ACCOUNTS:

Joint Venture - Meaning – Features - Difference between Joint Venture and Consignment - Accounting Procedure - Methods of Keeping Records for Joint Venture Accounts - Method of Recording in co-ventures books - Separate Set of Books Method - Joint Bank Account - Memorandum Joint Venture Account (Including problems)

UNIT-IV: ACCOUNTS FROM INCOMPLETE RECORDS:

Single Entry System - Meaning – Features - Difference between Single Entry and Double Entry systems - Defects in Single Entry System - Books and accounts maintained - Ascertainment of Profit - Statement of Affairs and Conversion method (Including problems)

UNIT-V: ACCOUNTING FOR NON-PROFIT ORGANIZATIONS:

Non- Profit Organization - Meaning - Features - Receipts and Payments Account - Income and Expenditure Account - Balance Sheet (Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Co.
2. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
3. Accountancy–I: Tulasian, Tata McGraw Hill Co.
4. Accountancy–I: S.P. Jain & K.L Narang, Kalyani.
5. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
6. Advanced Accountancy: M Shrinivas& K Sreelatha Reddy, Himalaya Publishers.
7. Financial Accounting: M.N Arora, Tax Mann Publications.



Paper 202: BUSINESS LAWS

Objective: to understand basics of contract act, sales of goods act, IPRs and legal provisions applicable for establishment, management and winding up of companies in India.

UNIT-I: INDIAN CONTRACT ACT: Agreement and contract - Essentials of a valid contract - Types of contracts - Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance - Consideration definition - Essentials of valid consideration - Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach.

UNIT-II: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT: Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell - Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act 1986: Definitions of Consumer - Person - Goods - Service - Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Agencies - Appeals.

UNIT-III: INTELLECTUAL PROPERTY RIGHTS: Trade Marks: Definition - Registration of Trade Marks - Patents: Definition - Kinds of Patents - Transfer of the Patent Rights - Rights of the Patentee - Copy Rights: Definition - Rights of the Copyright Owner - Terms of Copy Right - Copy Rights Infringement - Other Intellectual Property Rights: Trade Secrets - Geographical Indications.

UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS: Director: Qualification - Disqualification - Position - Appointment - Removal - Duties and Liabilities - Loans - Remuneration - Managing Director - Corporate Social Responsibility - Corporate Governance. Meeting: Meaning - Requisites - Notice - Proxy - Agenda - Quorum - Resolutions - Minutes - Kinds - Shareholder Meetings - Statutory Meeting - Annual General Body Meeting - Extraordinary General Body Meeting - Board Meetings.

UNIT-V: WINDING UP: Meaning - Modes of Winding Up - Winding Up by tribunal - Voluntary Winding Up - Compulsory Winding Up - Consequences of Winding Up - Removal of name of the company from Registrar of Companies - Insolvency and Bankruptcy code - 2016.

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law: Rajashree. - HPH
- 3) Business Law - Kavitha Krishna, Himalaya Publishing House
- 4) Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
- 5) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 6) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 7) Corporate Law: PPS Gogna, S Chand.
- 8) Business Law: D.S. Vital, S Chand
- 9) Company Law: Bagriyal AK, Vikas Publishing House.



Paper 203: BANKING AND FINANCIAL SERVICES

Objectives: to familiarize with Fund-based and Non-fund-based Financial Services.

UNIT-I:INTRODUCTION:Functions of Commercial Banks - Emerging Trends in Commercial Banking in India: E-Banking – Mobile Banking - Core Banking – Bank Assurance – OMBUDSMAN.RBI Constitution - Organizational Structure – Management - Objectives – Functions – Monetary Policy - Brief description on various types of banks--District Co-Operative Central Banks – Contemporary Banks - Regional Rural Banks -National Bank for Agriculture and Rural Development (NABARD) – SIDBI – Development Banks.

UNIT-II: BANKER AND CUSTOMER RELATIONSHIP: Definition of Banker and Customer - Relationship Between Banker and Customer - KYC norms- General and Special Features of Relationship - Opening of Accounts - Special Types of Customers Like Minor, Married Women, Partnership Firms, Companies, Clubs and other Non-Trading Institutions.

UNIT-III:NEGOTIABLE INSTRUMENTS: Descriptions and their Special Features - Duties and Responsibilities of Paying and Collecting Banker - Circumstances under which a Banker can refuse Payment of Cheques - Consequences of Wrongful Dishonors - Precautions to be taken while Advancing Loans Against Securities – Goods - Documents of Title to Goods - Loans against Real Estate -Insurance Policies - Against Collateral Securities – Banking Receipts.

UNIT-IV: INTRODUCTION TO FINANCIL SERVICES: Financial Services: Meaning-Functions-Classification- Scope – Fund Based Activities - Non-fund Based Activities – Modern Activities - Causes for Financial Innovation – New Financial Products and Services – Innovative Financial Instruments – Challenges Facing the Financial Service Sector – Present Scenario.

UNIT-V: MERCHANT BANKING, VENTURE CAPITAL, LEASING, DISCOUNTING, FACTORING AND FORFEITING: Definition –Services of Merchant Banks –Problems and Scope of Merchant Banking in India-Venture Capital: Meaning, Features, Scope, Importance - Leasing-Definition and Steps- Types of Lease – Financial Lease – Operating Lease – Leverage Lease – Sale and Lease Back –Discounting: Concept – Advantages of Bill Discounting –Factoring-Meaning and Nature– Parties in Factoring – Merits and Demerits of Factoring –Forfeiting-Parties to Forfeiting – Costs of Forfeiting – Benefits of Forfeiting for Exporters and Importers .

SUGGESTED READINGS:

1. Banking Theory & Practices: Dr. P. K. Srivatsava, Himalaya Publishers
2. Banking Theory & Practices: K.C. Shekar, Vikas Publications
3. Banking and Financial Services: SanthiVedula&Kavitha Krishna Himalaya Publishing House
4. Banking and Financial Services: Dr.Jayanthi, PBP.
5. Banking Theory, Law & Practices: R. R Paul, Kalyani Publishers
6. Money Banking and Financial Markets: Averbach, Rabort. D, MacMillan. Landon
7. Financial Markets and Services: Gordon and Natarajan, Himalaya Publishing House.
8. Financial Services: T. Siddaiah, Pearson Education

**Syllabus for Computer Science
For B.Sc Programme under Choice Based Credit System
B.Sc (Computer Science) – III Year (VI SEMESTER)**

SOFTWARE ENGINEERING (Core Subject)

Theory: 4 credits (4 Hours/Week)

Practical: 1 Credit (2 Hours/week)

UNIT-I

SOFTWARE ENGINEERING: The Nature of Software, Changing Nature of Software, Defining the Discipline, Software Process, Software Engineering Practice.

THE SOFTWARE PROCESS: A Generic Process Model, Defining a Framework Activity, Process Assessment and Improvement, Prescriptive Process Models, Specialized Process Models, Unified Process, Defining Agility, Agile Process, Extreme Programming,

UNIT – II

MODELLING: Principles that guide Practice - Core Principles - Principles that guide each framework activity.-Communication principles, Planning principles, Modelling principles, Construction principles, Deployment principles.

REQUIREMENTS: Requirements Engineering, Establishing the Groundwork, Eliciting Requirements, Building the Requirements model, Negotiating requirements, validating requirements.

UNIT-III:

DESIGN CONCEPTS: Design within the Context of SE, Design Process, Design Concepts. ARCHITECTURAL DESIGN: Software Architecture, Architectural Styles, Architectural Design. COMPONENT DESIGN: Designing Class-Based Components, Conducting Component-Level Design.

UNIT-IV

UNIFIED MODELLING LANGUAGE: UML introduction, Use case diagrams, Activity diagrams, ,class diagrams, sequence diagrams, component diagrams, interaction diagrams, composite structure diagrams, state machine diagrams, timing diagrams, object diagrams, package diagrams, deployment diagrams.

TEXT BOOK

1. ROGER S PRESSMAN, B R MAXIM, SOFTWARE ENGINEERING–A PRACTITIONER’S APPROACH (8E)
2. GRADY BOOCH, JAMES RUMBAUGH, IVAR JACOBSON : THE UNIFIED MODELING LANGUAGE USER GUIDE, PEARSON EDUCATION

REFERENCE BOOKS

1. SOFTWARE ENGINEERING BY GHEZZI (PHI)
2. SOFTWARE ENGINEERING FUNDAMENTALS BY BEHFOROZ AND HUDSON OXFORD UNIVERSITY PRESS
3. GRADY BOOCH, OBJECT-ORIENTED ANALYSIS AND DESIGN WITH APPLICATIONS

SOFTWARE ENGINEERING LAB PROGRAMS

Case Studies:

Draw all UML diagrams using CASE tools (like star UML etc) for the following

1. Banking System
2. Railway Reservation System
3. Hotel management system
4. Inventory Control System
5. Library management system

Note: The teacher should define the boundaries for the above case study problems and make the practice of problems mentioned.

ELECTIVE – A - VISUAL BASIC .NET PROGRAMMING

Theory: 4 credits (4 Hours/Week)

Practical: 1 Credit (2 Hours/week)

UNIT – I:

INTRODUCTION: origin of VB.NET, Need of VB.NET, Upgrading from visual Basic 6.0 Frame work, The .NET framework and common language runtime environment, Visual Basic Integrated Development Environment

BASIC PROGRAMMING: Data types, keywords, constants and variables, using dim and import, operators in VB.NET, understanding scope and accessibility of variable, comments.

CONTROL STRUCTURES: conditional statements, if-then, if-then-else, Nested if-else, select case, looping with Do loop, for loop, for –each next loop, while loop.

UNIT – II:

OBJECT ORIENTED PROGRAMMING IN VB.NET: classes and objects, members, Events, constructors, destructors, Abstraction, Encapsulation, polymorphism, shadowing, Modules, Access modifiers, interfaces, Binding.

WORKING WITH ELEMENTS: Forms , Buttons, Labels ,Text Box , List Box, combo box , Radio button , check box , progress bar ,Date time picker , calendar , picture box , horizontal and vertical scroll bar , timer , group boxes, tool tip.

UNIT – III:

WORKING WITH WINDOWS FORMS: keyboard and mouse events, menus, built in dialog boxes and printing in depth, image list, toll bars, status and progress bar, and tab.

GRAPHICS AND FILE HANDLING: using Graphics class, File stream, file and Directory classes.

UNIT – IV:

DATA ACCESS WITH ADO.NET: Databases, Accessing Data with Server Explorer, Data Adapters and Data sets, Binding Data to controls, Navigating in Data Sets, Using SQL parameters, Handling Data bases in code, Building Applications.

TEXT BOOKS: VISUAL BASIC .NET PROGRAMMING BLACK BOOK, STEVEN HOLZNER, DREAMTECH

VISUAL BASIC .NET PROGRAMMING LAB PROGRAMS

1. Write a program to allow the user to input two integer values and then the program print the results of adding, subtracting, multiplying, and dividing among the two values.
2. Using windows form application collect the user details like first name, middle name, last name, address, gender, course name with submit and clear button. Display the user details in another form.
3. Write a program to construct calculator.
4. Write a program to work with various dialogue boxes.
5. Write a program to use MDI form and also use menu with options cut, copy and paste.
6. Write a program to simulate Traffic Signals.
7. Write a program to sort an integer array of 10 elements in ascending.
8. Write a program that determines a student's grade.
9. Write a program that simulates online examination using Database connections.
10. Write a program that demonstrates Exception Handling.
11. Write a program to generate student application form based on chosen course, subjects, student information.
12. Write a program that demonstrates files.
13. Write a program to display, add, delete and navigate the records of students in your class.(use student Data Base)
14. Write a program that constructs a class Employee, and displays Employee Data and calculates DA, HRA , Tax and Gross Salary (use constructor and destructor)
15. Write a program to add, remove and search elements in the list.
16. Write a program for each that demonstrate the following controls
17. Date time picker
18. Calendar
19. group Box
20. Write a program to demonstrate keyboard and mouse events.
21. Write a program to add or remove images with the help of image list control.
22. Write a program to demonstrate the status and progress bar.
23. Write a program to demonstrate the steps used in tool bar.

ELECTIVE – B – WEB TECHNOLOGIES

Theory: 4 credits (4 Hours/Week)

Practical: 1 Credit (2 Hours/week)

UNIT – I : HTML: Introduction to Markup Languages, common tags, headers, text styles, Linking, Text Formatting, types of Lists, Tables, Frames , Images and anchors.

Layouts: Backgrounds, colors and text, Layout with table, Advanced Layouts: Frames and Layers.

DYNAMIC HTML: Cascading Style Sheets: Inline styles,CSS with STYLE element, Conflicting Styles, Linking External Sylte sheets, Positioning elements, Text flow and box model.

UNIT – II: DYNAMIC HTML: Object Model and Collections: Object referencing, Collections *all* and *children*, Dynamic styles and positioning, Using the frame collection.

Event Model: onclick, onload, onerror, onmousemove, onmouseover, onmouseout

Filters and Transitions: flipv, fliph,chroma,image masks, image filters, adding shadows to text, creating gradients with alpa, making text glow, motion with blur, wave filter, drop shadow and light

Data binding with Tabular Data control: Introduction, simple data binding, moving a record set, binding to an image and table, sorting table data.

UNIT – III: JavaScript- Introduction, simple programming, Obtaining User Input with prompt Dialogs, Operators(arithmetic, Decision making, assignment, logical, increment and decrement) Control Structures - if... else selection statement, while, do... while repetitions statement, for statement, switch statement, break and continue statements. Functions – program modules in JavaScript, programmer defined functions, function definition, Random-number generator, scope rules, global functions, recursion, JavaScript: Arrays.

UNIT – IV: JavaScript: Objects – Math Object, String Object, Date Object, Boolean & Number Object, document and window Objects. Event Model – onclick, onload, onerror, onmouseover, onmouseout, onfocus, onblur, onsubmit, onreset, more DHTML events. Filter and Transitions – flipv, fliph, chroma, masks, invert, gray, xray, shadow to text, alpha, glow, wave, dropshadow, light, blendTrans, revealTrans.

TEXT BOOK: INTERNET AND WORLD WIDE WEB: H.M.Deitel & P.J.Deitel , 5th EDITION

WEB TECHNOLOGIES LAB PROGRAMS

Programs of all the Concepts from Text Book including exercises must be practice and execute. Faculty must take care about UG Standard Programs. In the external lab examination student has to execute two programs with compilation and deployment steps are necessary.

- 1.a. Write a HTML program using basic text formatting tags, <p>,
, <pre>.
- b. Write a HTML page for Example Cafe using above text formatting tags.
- 2.a. Write a HTML program using presentational element tags , <i>, <strike>, <sup>, <sub>, <big>, <small>, <hr>
- b. Write a HTML program using phrase element tags <blockquote>, <cite>, <abbr>, <acronym>, <kbd>, <address>
- 3.a. Write a HTML program using different list types.
- b. Write a HTML page that displays ingredients and instructions to prepare a recipe.
- 4.a. Write a HTML program using grouping elements <div> and .
- b. Write a HTML Menu page for Example cafe site.
- 5.a. Write a HTML program using images, audios, videos.
- b. Write a HTML program to create your time table.
6. Write a HTML program to create a form using text inputs, password inputs, multiple line text input, buttons, check boxes, radio buttons, select boxes, file select boxes.
7. Write a HTML program to create frames and links between frames.
8. Write a HTML program to create different types of style sheets.
9. Write a HTML program to create CSS on links, lists, tables and generated content.
10. Write a HTML program to create your college web site using multi column layouts.
11. Write a HTML program to create login form and verify username and password.
13. a. Write a JavaScript program to calculate area of rectangle using function.
- b. Write a JavaScript program to wish good morning, good afternoon, good evening depending on the current time.
14. a. Write a JavaScript program using switch case?
- b. Write a JavaScript program to print multiplication table of given number using loop.
15. a. Write a JavaScript programs using any 5 events.
- b. Write a JavaScript program using JavaScript built in objects.
16. Write a JavaScript program to create registration Form with Validations.