

GOVERNMENT DEGREE COLLEGE, BHUPALPALLY

(RUSA NEW MODEL DEGREE COLLEGE)

JAYASHANKAR BHUPALPALLY DIST., T.S - 506169

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DEPARTMENT OF BOTANY

S.No	PAPER	COURSE OUTCOME
01	SEMESTER -I TITLE: Microbial Diversity Of Lower Plants	<ul style="list-style-type: none">➤ To gain knowledge about microbial diversity➤ To have the ability to utilize the concept of mushroom cultivation.➤ To understand the phylogeny of plants.➤ To know about various plant diseases and their control measures.➤ To understand life cycles of different algal species.➤ To explore economic importance of algae & fungi.➤ To know the evolution of sporophytes in bryophytes.➤ To understand the stellar evolution and seed formation habit in pteridophytes.
02	SEMESTER -II TITLE: GYMNOSPERMS, TAXONOMY OF ANGIOSPERMS AND ECOLOGY	<ul style="list-style-type: none">➤ To gain knowledge about life cycles of gymnosperm plants.➤ To explain about fossils and fossilization.➤ To understand about geological time scale.➤ To recognize the major groups of vascular plants and their phylogenetic relationships.➤ To gain proficiency in the use of keys and identification manuals to identify any unknown plants to species level.➤ To understand ecological relationships between organisms and their environment.

		<ul style="list-style-type: none"> ➤ To understand the role that biodiversity plays in conservation science. ➤ To gain knowledge about life cycles of gymnosperm plants.
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3	<p>SEMESTER -III TITLE:</p> <p>PLANT ANATOMY AND EMBRYOLOGY</p>	<ul style="list-style-type: none"> ➤ To gain knowledge of plant cells, tissues and their functions ➤ To make connections between plant anatomy and the other major disciplines of biology. ➤ To identify and compare structural differences among different taxa of vascular plants. ➤ To know the structure and development of monocot and dicot embryos. ➤ To compare the function and morphology of pollen grains. ➤ Describe and illustrate modern and fossil spores and pollen grains.
04	<p>SEMESTER -IV TITLE:</p> <p>CELL BIOLOGY, GENETICS & PLANT PHYSIOLOGY</p>	<ul style="list-style-type: none"> ➤ To explain the structure of Cell components and their functions. ➤ To describe cell division in plants. ➤ To have knowledge of the nature and function of genes, processes of inheritance. ➤ To describe linkage, crossing over and mutations. ➤ To understand plant physiological processes and metabolism. ➤ To explain the role of micro nutrients in plant growth and development. ➤ To relate photosynthesis with the formation of primary and secondary metabolites. ➤ To clarify the mechanism and breaking of dormancy.

05	SEMESTER -V TITLE: BIODIVERSITY & CONSERVATION	<ul style="list-style-type: none"> ➤ To have the knowledge of elements of environment. ➤ To understand the importance of Climatic factors like light, temperature, in related growth of plant ➤ To know how to conserve the threatened plants in environment.
06	SEMESTER –VI TITLE: TISSUE CULTURE AND BIOTECHNOLOGY.	<ul style="list-style-type: none"> ➤ To explain the main techniques of in vitro culture of plant cells & tissues. ➤ To know the methods used for the bio-production of plant secondary metabolites. ➤ To know the main techniques of genetic manipulation of plant organisms. ➤ To Know the Process of various metabolic activities in plant body ➤ To know about various methods in tissue culture ➤ To know the importance of tissue culture and biotechnology

DEPARTMENT OF CHEMISTRY

S.No	PAPER	COURSE OUTCOME
1	CHEMICAL BONDING	<ul style="list-style-type: none"> ➤ To know about the Ionic solids, Lattice energy and solubility of Ionic solids. ➤ To know about the Fajan's rule, polarity and polarizability of ions . ➤ To know about Hybridization, Shapes of molecules and Molecular Orbital Theory.
2	P-BLOCK ELEMENTS	<ul style="list-style-type: none"> ➤ To know about the Diborans, Boron Nitrogen Compounds ➤ To know about the Carbides and Silicones ➤ To gain the knowledge on Nitrides, Reactivity-hydrolysis, Reactions of hydrazine, hydroxyl amine and phosphazenes.
3	STRUCTURAL THEORY IN ORGANIC CHEMISTRY	<ul style="list-style-type: none"> ➤ To acquire the knowledge on Bond polarization, Applications of inductive effect ➤ To know about stability of Carbocations, Carbanions and free radicals. ➤ To gain knowledge on Hyper conjugation and its applications.
4	ATOMIC STRUCTURE AND ELEMENTARY QUANTUM MECHANICS	<ul style="list-style-type: none"> ➤ To know about Black body Radiation, Heat capacities of solids ➤ To gain knowledge about photoelectric effect, Compton effect , Debroglies Hypothesis
5	ISOMERISM	<ul style="list-style-type: none"> ➤ To know about classification of Isomers , Representation of Stereo isomers ➤ To gain knowledge on conformational and configurational Isomers
6	CHEMISTRY OF D-BLOCK ELEMENTS	<ul style="list-style-type: none"> ➤ To know about the characteristic Properties of d-block elements ➤ To gain knowledge about the comparison of Ti, Cr, Cu Triads

7	CARBONYL COMPOUNDS	<ul style="list-style-type: none"> ➤ To know the Physical and chemical properties of aldehydes and ketones ➤ To differentiate the aldehydes and ketones based on reaction with Tollens, Fehlings Reagents
8	ELECTROCHEMISTRY	<ul style="list-style-type: none"> ➤ To know the conduction in metals and electrolytic solutions, Types of Conductances ➤ To acquire knowledge on migration of ions & Kohlrausch law, Debye-Huckel Onsager equation, Transport number ➤ To gain knowledge on Electrolytic & Galvanic cells, EMF, Types of Reversible Electrodes
9	DILUTE SOLUTIONS & COLLEGIATIVE PROPERTIES	<ul style="list-style-type: none"> ➤ To know about Dilute solutions, Relative lowering of vapour pressure, Osmotic pressure ➤ To gain knowledge on Elevation in boiling point & Depression in freezing point
10	COORDINATION COMPOUNDS	<ul style="list-style-type: none"> ➤ To know the simple inorganic molecules & coordination complexes, Nomenclature-IUPAC Rules, Coordination no, Types of Ligands ➤ To gain knowledge on Werner theory, Valence bond theory, Crystal field Theory ➤ To know about isomerism in coordination compounds
11	AMINES, CYANIDES & ISOCYANIDES	<ul style="list-style-type: none"> ➤ To know the classification of Amines, Preparation methods of Amines ➤ Hinsberg separation method of Amines, Diazonium salts Preparation & Properties ➤ To gain knowledge on preparation and properties of cyanides and Isocyanides ➤

12	THERMODYNAMICS	➤ To know about First law of Thermodynamics, Thermodynamic quantities, sign convention problem on first Law
		➤ To gain knowledge on Heat capacities at constant pressure & volume
		➤ To know about Second law of

			Thermodynamics, Carnot theorem, Carnot cycle
		CO4	To know about Entropy, Enthalpy changes, Gibbs equations and Maxwell Relations
13	CHROMATOGRAPHY	C01	To know about solvent Extraction, Classification of Chromatographic methods
		C02	To gain knowledge briefly about Thin Layer, Column, Paper chromatographic Techniques
		C03	To acquire knowledge about Ion Exchange, Gas, High Performance Liquid Chromatography Techniques
14	MEDICINAL CHEMISTRY	C01	To know about Diseases, Terminology in medicinal Chemistry, Drugs, ADME
		CO2	To gain knowledge on Enzymes and Receptors
		CO3	To acquire Knowledge on Synthetic and Therapeutic Activity of Drugs

DEPARTMENT OF COMMERCE

S.No	Year / Semester	Subject/Course	Subject/Course Outcome
01	B.Com I Year / I Semester	Financial accounting I	To understand the importance of accounting and preparation of final accounts
02		Business Organisation and Management	To understand the importance and types of Business organisation and the principles of management.
03		Fundamentals of Information Technology	To understand the generations of computer technology and introduction to Microsoft Windows
04	B.Com I Year/II Semester	Business Law	To understand the concepts of Business Law, and the provisions relating to Companies Management
05		Financial accounting II	To understand the accounting procedure of different types of business organizations such as consignment and Joint Ventures etc.
06	B.Com II Year/III Semester	Advanced accounting	To understand the Accounting procedure in the companies and

			valuation of goodwill and shares
07		Business statistics	To understand the basic statistical concepts such as measures of central tendency and measures of dispersion and Correlation
08		Income Tax	To understand the Indian Income Tax act and Valuation of Income of an Assessee.
09		Entrepreneur Development and Business Ethics	To understand the characteristics of an entrepreneur, types of entrepreneurs and the various business ethics.
10	B.Com II Year/IV Semester	Business Statistics	To understand the statistical tools like regression, index numbers and probability
11		Corporate Accounting	To understand the accounting procedure of corporate entities.
12		Income Tax	To understand the valuation of income of an Assessee under five heads as per Income Tax Act, 1961.
13		Auditing	To understand the importance of auditing. Vouching, detecting and rectification of errors, valuation of assets and liabilities.
14	B.Com III Year/V Semester	Business Laws	To understand the development of Business Laws , Intellectual Property Rights
15		Banking Theory and Practice	To understand the development of Banking System in India and functions of commercial and central bank.
16		Computerised Accounting	To understand the maintenance of accounts in accounting software such as Tally.
17		Cost Accounting	To understand the importance of Cost Accounting in the industries and different types of cost determination.
18		Consumerism	To understand the rights of the consumer and protection

			mechanism for consumer rights.
19		Organizational Behaviour	To understand the groups and the behaviour of groups in an organisation. Group dynamics, group conflict management, personality and its traits.
20	B.Com III Year/VI Semester	Commerce Lab	To have a practical exposure to the various components and concepts of commerce.
21		Tax Planning and Management	To understand the importance of tax planning and tax management.
22		Company law	To understand the Company Law 2013. Formation and Management of Companies.
23		Financial Institutions and Markets	To understand the role of Financial Institution and Markets in the development of Indian Economy and structure of Indian Financial System.
24		Managerial Accounting	To understand the importance of usage of Accounts for the managerial decisions. Cash Flow, Funds Flow statements.
25		Preparation of Tax Returns	To understand the PAN Card, E Filing etc.
26		Advertisement	To understand the role of advertisement in the economy.. Preparation of Advertisement copy. Influence of Advertisement on sales of an organisation.
27		Human Resource Management	To understand the importance of human resource for the organisation development and training, recruitment

DEPARTMENT OF PHYSICS

Sl.NO	PAPER	Course outcome
1	MECHANICS	To understand the uses of vector calculus in the field of physics by studying Gauss's divergence theorem , Stoke's theorem & Green's theorem.
		To know about concepts of mechanics of particles & Rigid bodies.
		To gain knowledge on concepts of central forces
		To gain knowledge of relativity, Galilean & Lorentz transformations, concept of four vector formalism.
2	THERMAL PHYSICS	To understand the concepts of Kinetic Theory Gases, Transport phenomena, basic laws of thermodynamics.
		To acquire the knowledge of thermodynamic potentials and Maxwell's equations, concepts of low temperature physics.
		To acquire the knowledge of the Quantum theory of Radiation, pyroheliometers.
		To understand the concepts of Statistical Mechanics, Maxwell-Boltzmann, Bose-Einstein, Fermi-Dirac Statistics.
3	OPTICS	To understand the concepts of Interference of Light by studying Interference phenomena.
		To acquire the knowledge of concepts of Diffraction phenomena.
		To understand the concepts of Polarization of light.
		To gain the knowledge of the concepts of Aberrations.

5	ELECTROMAGNETISM	To have the knowledge of concepts of electric field ,electric flux, Gauss's law and it's applications, concept of electric potential etc.
		The know the concepts of magnetic field and magnetic flux, Biot-Savart's law and it's applications, Ampere's law and applications etc.
		To have the knowledge of Faraday's laws of electromagnetic Induction, Lenz's law, concepts of self induction and mutual induction.
		To understand the Maxwell's electromagnetic wave equations in free spce & dielectric medium, Transverse nature of Electromagnetic waves. Polarization of Electromagnetic waves etc.
6	SOLID STATE PHYSICS	To gain the knowledge on crystal structures and crystal systems, Lattice vibrations, theories of specific heat of solids.
		To know about concepts of magnetic properties of matter and dielectric properties of solids.
		To understand the concept of band theory of solids, classification of solids , Hall effect and it's uses.
		To gain the knowledge on Lasers, construction, working principle and uses, concepts of Superconductivity and uses of superconductors.
7	MODERN PHYSICS	To acquire knowledge regarding the concept of black body radiation, photoelectric effect, atomic spectra, Bohr's model and Somerfield's model.
		To know the concepts of dual nature of matter, matter waves, Heisenberg uncertainty principle and applications.
		To Acquire the knowledge about concept of nucleus, nature of nuclear forces and nuclear models.
		To Know the concept of radioactive materials, half life , mean life, types of decay, nuclear reactions and elementary particles.
8	BASIC ELECTRONICS	To understand the concepts of Network elements and network theorems.
		To acquire the knowledge on Band theory of P-N junction diodes and uses of junction diode.
		To understand the concepts of bipolar junction transistor,

		uses of BJTs.
		To Understand the concept of Binary number system, Decimal, Hexadecimal Number system, Boolean algebra, Logic gates , De-Morgan's theorems.
9	WAVES & OPTICS	To gain the knowledge of vibrations on strings, overtones, energy transport, transverse impedance. The concepts of vibrations of bars.
		To understand the concepts of Interference of Light by studying Interference phenomena.
		To acquire the knowledge of concepts of Diffraction phenomena.
		To understand the concepts of Polarization of light.
10	ELECTROMAGNETIC THEORY	To have the knowledge of concepts of electric field ,electric flux, Gauss's law and it's applications, concept of electric potential etc.
		The know the concepts of magnetic field and magnetic flux, Biot-Savart's law and it's applications, Ampere's law and applications etc.
		To have the knowledge of Faraday's laws of electromagnetic Induction, Lenz's law, concepts of self induction and mutual induction. To understand the Maxwell's electromagnetic wave equations in free space & dielectric medium, Transverse nature of Electromagnetic waves. Polarization of Electromagnetic waves etc.
		To understand the concepts of varying currents, To understand the concepts of Network elements and network theorems.

DEPARTMENT OF TELUGU

Sl.No	PAPER	Course outcome
1	DHARMJUNIVAKCHA TURYAM.	Mahabharata visheshalu
		Tikkana natakeyata,
		Parichina Telugu padabandalu
		Parichina kavivvam
2	GUNANIDHIKATHA.	Sreenadhuni kavivvam
		Puruni prdhanyata
		Vidya radhanyata
		Chatuvulu
3	NARASIHASATAKAM	Satakam viseshaalu
		Dhariansalu
		Neeti visheshalu
		Bhakthi visheshalu
4	ARDHARATRI ARUNODAYA	Vachana kavivvam visheshalu
		Telagana samajikamsalu
		Naijam palana
		Rajakarla duscharyalu
5	NIVURUTOLAGINANI PPU	Katha sahityam visheshalu
		Patrowchityam
		Atmavisvasam, pattudala

		Jrutagyatabhavam
6	CHALICHEEMALU	Natakavisheshalu
		Gramarajikeeyalu
		Devalayam aastulu
		Gramasarpanch adhikara durviniyogam.
7	ALANKARALU CHANDASSU	Sabdalkaravisheshalu
		Sabdalkararadhanyata
		Parichina chadovisheshalu
		Aadhunika geyachandassu , mutyala saarlu.

DEPARTMENT OF POLITICAL SCIENCE

Sl.No	PAPER	Course Outcomes
1	UNDERSTANDING POLITICAL THEORY	To know how to origin of political theories and its importance
		To know debates on political theory
		To know what is Political
		To know Political values and theoretical perspective
2	WESTERN POLITICAL THOUGHT	To know Greek political thought
		To know Medieval and early modern thought
		To know Utilitarian Political thought
		To know Philosophy of Dialectics
		To acquire the knowledge of Indian constitution

		To know about Indian National Movement
		To know Fundamental Rights
4	INDIAN POLITICAL THOUGHT	To Know the Process of various metabolic activities in plant body
		To Know ancient political thinkers ideas
5	INTERNATIONAL RELATIONS	To gain knowledge regarding the world nations politics
		To know 1 st and 2 nd world wars

DEPARTMENT OF ZOOLOGY

Sl.No	PAPER	COURSE OUTCOME
1	ANIMAL DIVERSITY- INVERTEBRATES (PROTOZOA,PORIFERA)	To acquire the knowledge of microscopic living organisms General characters & classification of the animals, and the comparison, origin and evolution of cell and acellular
		To the knowledge acquire about the invertebrates Diseases (viral, bacterial fungal helmenths protozoal)
		To the know cells and spicules coral, and coralreef formation bio-indicators vectors regeneration and symmetry
		To acquire the knowledge of Economic importance of invertebrates
2	ANIMALPHYSIOLOGY AND ANIMAL BEHAVIOUR	To know the Homeostasis and Osmoregulation Hormone regulation of blood glucose levels in human being
		To gain knowledge about Digestive, Respiratory, Circulaory Nervous & Reproductive ..system of vertebrates
		To know the Endocrine system, glands-Structure Secretions and functions
		To know the Animal behavior Learning & memory biological rhythms
3	PHYSIOLOGY AND	To know the Homeostasis and Osmoregulation Hormone regulation of blood glucose levels in

	BIOCHEMISTRY	human being marine and fresh water Animals
		To gain knowledge about Digestive,Respiratory,Circulaory Nervous& Reproductive ..system of vertebrates
		To know about Recombinant DNA technology,stem cells types and their applications
		To know the Endocrine system,glands-Structure Secretions and functions
4	APPLIED ZOOLOGY	To know the types of fisheries,culture. Induced breeding .transportation of fish &prawn
		To know the life cycle of Bombyx mori, Structure of gland & secretion of silk
		To know the Apiculture bee keeping equipment. Methods of extraction ofHoney
		To know the classification of fowls based on their use-Broilers and Commercial layers.
5	ANIMAL DIVERSITY- VERTEBRATES (HEMICHORDATA, PROTOCHORDATA & CEPHALOCHORDA TE)	To acquire the knowledge of General characters & classification of the animals, and the comparision origin and evolution vertebrates
		To know the General characters &classification of vertebrates
		To gain knowledge about Digestive, Respiratory, Circulatory Nervous& Reproductive system of vertebrates
		To acquire the knowledge of Economic importance of vertebrates
6	CELL BIOLOGY, GENETICS AND DEVELOPMENTAL BIOLOGY	To gain knowledge regarding of the unit of life that is cell, cell structure types, cell functions, various organelles of the cell and their function's structure
		To gain knowledge about DNA, RNA –types structure &functions which is very useful at molecular level of genes in various aspects of life quality of genetical characters and forensic method of the living organisms
		To Acquire the knowledge about Genetical aspects

		To acquire the knowledge of the development of male and female (oogenesis and spermatogenesis) reproductive organs and the fertilization method to develop with new genetically combinations leading to new varieties
7	IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY	To know about immune system-types structure ,function & Antigen-antibody reactions.
		To know about Cloning,cloning methods,vectors
		To know the Vaccines-types and their reactions
		To know about Recombinant DNA technology,stem cells types and their applications
8	AQUATIC BIOLOGY	To acquire the knowledge of fresh water & marine water
		To acquire the knowledge of Origin and classification of lakes. Lake as an Ecosystem & Lake morphometry
		To know the oceanic pelagic zone, marine benthic zone.
		To know the Aquatic pollution salinity and density of sea water,

DEPARTMENT OF COMPUTERS

Sl.No.	Course Name	Course Outcomes
1	COMPUTER FUNDAMENTALS AND PHOTOSHOP	<ul style="list-style-type: none"> ➤ The student is able to explore the basic knowledge of computer hardware and software. ➤ The student is able to learn and work on adobe Photoshop applications. ➤ The student is able to create and edit photo albums. ➤ The student is able to design and edit Banners and visiting cards etc..

2	PROGRAMMING IN C	<ul style="list-style-type: none"> ➤ Appreciate and understand the working of a digital computer ➤ Analyse a given problem and develop an algorithm to solve the problem ➤ Use the 'C' language constructs in the right way ➤ Design, develop and test programs written in 'C'
3	OBJECT ORIENTED PROGRAMMING USING JAVA	<ul style="list-style-type: none"> ➤ Understand the concept and underlying principles of Object-Oriented Programming ➤ Understand how object-oriented concepts are incorporated into the Java programming language ➤ Develop problem-solving and programming skills using OOP concept ➤ Become familiar with the fundamentals and acquire programming skills in the Java language.
4	DATA STRUCTURES	<p>student knows how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and its applications</p> <p>Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs</p> <p>Compare and contrast the benefits of dynamic and static data structures implementations</p> <p>Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.</p>

		<ul style="list-style-type: none"> ➤ Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.
5	DATABASE MANAGEMENT SYSTEMS	<ul style="list-style-type: none"> ➤ Student knows database structure and its design ➤ .Students are able to understand Different data models used for database design ➤ Students are able to understand database transactions and data recovery ➤ Students can use DML, DDL, DCL commands to manipulate data in the database
6	SOFTWARE ENGINEERING	<ul style="list-style-type: none"> ➤ Ability to gather and specify requirements of the software projects. ➤ Ability to analyse software requirements with existing tools ➤ Able to differentiate different testing methodologies and apply the basic project management practices in real life projects ➤ .Ability to work in a team as well as independently on software projects

7	OPERATING SYSTEMS	<ol style="list-style-type: none"> 1. Analyse the concepts of processes in operating system and illustration of the scheduling of processor for a given problem instance. 2. Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained. 3. Analyse memory management techniques, concepts of virtual memory and disk scheduling. 4. Understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.
8	COMPUTER NETWORKS	<ol style="list-style-type: none"> 1. Identify the different components in a Communication System and their respective roles. 2. Describe the technical issues related to the local Area Networks 3. Knows about different topologies and network types 4. Identify the common technologies available in establishing LAN infrastructure.

9	GUI PROGRAMMING	<p>1.Design and develop Windows application using different Windows technologies that use a variety of GUI controls and classes to fulfill specific user requirements.</p> <p>2.Explain how event driven applications use threading to perform time-consuming operations.</p> <p>3.Demonstrate how to use specific features of the GUI programming language to write object oriented programs and handle run-time errors.</p> <p>4.Explain in a public setting how user interfaces should be designed to accommodate human physiology and limitations.</p>
10	WEB TECHNOLOGIES	<p>1. To understand the web architecture and web services.</p> <p>2. To practice latest web technologies and tools by conducting experiments.</p> <p>3. To design interactive web pages using HTML and Style sheets.</p> <p>4. To study the framework and building blocks of .NET Integrated Development Environment.</p> <p>5. To provide solutions by identifying and formulating IT related problems.</p>
11	FOUNDATION OF DATA SCIENCE	<p>1. Able to apply fundamental algorithmic ideas to process data.</p> <p>2. Learn to apply hypotheses and data into actionable predictions.</p> <p>3. Document and transfer the results and effectively communicate the findings using visualization techniques.</p>

12	BIG DATA	<p>1. Learn tips and tricks for Big Data use cases and solutions.</p> <p>2. Learn to build and maintain reliable, scalable, distributed systems with Apache Hadoop.</p> <p>3. Able to apply Hadoop ecosystem components.</p>
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DEPARTMENT OF HISTORY

S.No	PAPER	Course outcome
1	HISTORY OF INDIA (FROM EARLIEST TIMES TO C.700 CE)	<p>To know about the History and Its Relationship with other Social Sciences - Geographical Features of India Sources of Indian History.</p> <p>To know about the Indus Valley Civilization - Its Features & Decline.</p> <p>To gain knowledge on Rise of New Religious Movements, Jainism and Buddhism.</p> <p>To gain knowledge of Ashoka and His Dharma Polity Administration - Society Economy Religion Literature - Art and Architecture.</p> <p>To gain knowledge of Gupta Empire: A Brief Political Survey - Polity and Administration, Social and Economic Conditions, Agriculture and Land Grants – Feudalism.</p>
2	HISTORY OF INDIA (C.700-1526 CE) DISCIPLINE SPECIFIC COURSE - PAPER – II	<p>To Know the Cholas; Local Self Government under Cholas; Society, Economy, Literature, Art and Architecture.</p> <p>To Know the Arab Conquest of Sind, Ghaznavids and Ghoris; Foundation of Delhi Sultanate: Slave, Khaljis, Tughlaqs, Sayyids and Lodis Polity, Administration.</p> <p>To know the : Bhakti and Sufi Movements and their Impact on Society and Culture – Emergence of Composite Culture.</p> <p>To know the importance Kakatiyas Polity Administration - Society and Economy - Literature and Religion Art and Architecture Yadavas Hoysalas and Pandyas Brief History.</p>

		To gain knowledge of Vijayanagara Polity Administration - Society and Economy Religion Art and Architecture
3	HISTORY OF INDIA (1526-1857 CE) DISCIPLINE SPECIFIC COURSE - PAPER – III	To acquire knowledge to Establishment of Mughal Dynasty - Sources Shersah Sur and His Reforms -Brief Survey of political History of Mughals Akbar, Shah Jahan and Aurangzeb
		To acquire the knowledge Rise of Regional Powers - Marathas Shivaji and His Administration Peshwas -Sikhs.
		To acquire the knowledge Advent of European Powers - Portuguese, Dutch, English and French, Anglo- French Rivalry - Expansion and Consolidation of British Power We Subsidiary Alliance
		To know the Three Stages of Colonialism Mercantilism - Free Trade Policies Finance Capital - Land Revenue Settlements Cornwallis and Permanent Revenue Settlement
		To know the- Anti-Colonial Upsurge - 1857 Revolt Nature, Causes and Results.
4	HISTORY OF INDIA (1858-1964 CE) DISCIPLINE SPECIFIC COURSE - PAPER – IV	To Know the Queen’s Proclamation – Beginning of Colonial Rule – Introduction of Western Education
		To Know the Socio-Religions Reform Movements – Brahma Samaj - Arya Samaj – Theosophical Society - Ramakrishna Mission
		to know the importance Factors for the Rise of Nationalism – Formation of Indian National Congress –Three Phases of Freedom Struggle: Moderate Phase, Extremist Phase and Gandhian Era
		To know the Revolutionary Movement: Gadhar Party – Bhagath Singh – Chandra Sekhar Azad
		To know the Emergence of Communal Politics and Mohd. Ali Jinnah – Prelude to Partition of India - Sardar Vallabhai Patel
5		To gain knowledge Fall of Constantinople (1453 C.E.) – Beginning of Modern Age in Europe –Geographical Discoveries

		<p>The know the Reformation Movement – Causes – Martin Luther, John Calvin and Zwingli; Counter Reformation Movement and Ignatius Loyola</p>
		<p>To have the knowledge Emergence of Nation States – Causes – Spain – Charles V; England – Henry VIII -Glorious Revolution (1688); France under Bourbons – Louis XIV; Era of Enlightened Despotism – Peter the Great and his Policies</p>
		<p>To understand the importance End of Feudalism – Industrial Revolution</p>
		<p>To know the American War of Independence (1776) – French Revolution (1789)</p>
6	<p>TELANGANA (FROM EARLIEST TIMES TO 1724 CE)</p>	<p>To Know the Sources – Archaeological and Literary Sources - Geographical Features of Telangana - Pre History – The Age of Satavahanas</p>
		<p>To know about Post-Satavahana Period - Ikshvakus – Vishnukundins – A Brief Political History – Society – Economy</p>
		<p>To know the importance Origin and Early History of Chalukyas of Badami and their Contribution to Culture- Chalukyas of Vemulavada & Mudigonda</p>
		<p>To know the Kakatiyas – Origin and Early History – Ganapatideva, Rudramadevi and Prataparudra</p>
		<p>To know the: Qutb Shahis of Golconda – Origin and Political History</p>
7	<p>SKILL ENHANCEMENT COURSE - PAPER - III</p> <p>TELANGANA HERITAGE AND CULTURE</p>	<p>To acquire knowledge regarding the Definition of Heritage and Culture: Tangible heritage</p>
		<p>To know the : Archaeological sites, Art and Architecture- Buddhist heritage, Jain Heritage</p>
		<p>To Acquire the knowledge about Hindu Temple architectural heritage- Role of Government Museums.</p>
		<p>To Know INTACH in preservation of Heritage Telangana- Kotilingala (Jagityal District), Peddabankur (Peddapalli District)</p>
		<p>To know the Warangal -Heritage related Government Departments-Museums.</p>

8	DISCIPLINE	To Know the : Congress of Vienna (1815) – Principles and Impact; Metternich and his System –1830 and 1848 French Revolutions
	SPECIFIC COURSE - PAPER – VI	To Know the First World War (1914-18) – Results –Treaty of Versailles
	WORLD HISTORY (1815-1950 CE)	To Know the Establishment of United Nations Organization (1945)
		To Know the knowledge Second World War – Causes and Results
		To know the Colonization of Asia - India and China under Colonial Rule
9	HISTORY OF TELANGANA (1724-2014 CE) DISCIPLINE SPECIFIC ELECTIVE - PAPER - II (A)	To know the Foundation of Asaf Jahi Dynasty – Nizam-ul-Mulk to Mir Mahaboob Ali Khan
		To know the Social, Cultural and Political Awakening in Telangana – Press, Journalism and Library Movements
		To Know the Anti-Nizam and Anti-Feudal Struggles – Telangana Peasants Armed Struggle 1946-51
		To know the Discrimination, Dissent and Protest – Violation of Gentlemen’s Agreement
		To know the Second Phase Movement for Separate Telangana – Formation of Various Associations –Telangana Aikhya Vedika – Telangana Jana Sabha - Telangana Rashtra Samithi 2001

DEPARTMENT OF ENGLISH

PROGRAMME OUTCOMES

The following are the expected Programme Outcomes of UG courses from Department of English at Government Degree College Narsampet, Warangal District, Telangana State.

[A] Critical Close Reading

An ability to read critically the prescribed texts and understand its broader implications. This includes:

- Read closely in a variety of forms, styles, structures, and modes.
- Use of various interpretative techniques.

[B] Critical Thinking

An ability to think critically on various issues and subject matters and relate the same with real life situations.

This includes the ability to:

- Synthesize and integrate knowledge.
- Practice and develop argumentative skills.
- In-depth study of the subject matter.

[C] Integration of Knowledge:

Demonstrate detailed knowledge in one or more disciplines and the ability to integrate knowledge across disciplinary boundaries.

This includes the ability to:

- Study the current state of knowledge.
- Multi-disciplinary learning ability.
- Show familiarity with works from other disciplines.

[D] Communication Skill

Demonstrate the ability to extract and convey information accurately in a variety of formats. This includes:

- An ability to adjust writing style appropriately to the content, the context, and nature of the subject.
- Ability to communicate ideas logically.
- Write clearly and effectively in a variety of forms, adapting writing and analytical skills to all situations

[E] Research Aptitude

Development of a spirit of critical and scholarly enquiry for the subject.

This includes:

- To identify and evaluate appropriate research sources,
- To incorporating the sources into documented academic writing,
- To formulate original arguments in response to those sources.
- To apply appropriate research methodologies to specific problems

[F] Role as a Global Citizen

A critical understanding about the ways of the world and realization of one's role within communities to effect change.

This includes the ability to:

- Demonstration of intercultural awareness.
- To understand the meaning of cultural globalization in true sense.
- Collaborate respectfully with others, individually and in teams.
- Maintain highest ethical standard in personal life.
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The students of Undergraduate are further

- Developing intellectual, personal and professional abilities through effective communicative skills; ensuring high standard of behavioral attitude through literary subjects and shaping the students socially responsible citizens.
- To enhance employability of the students by developing their linguistic competence and communicative skills

- Students should be able to develop their intellectual, personal and professional abilities. Students should acquire basic language skills, such as Listening, Speaking, Reading and Writing.

PROGRAMME SPECIFIC OUTCOMES

- On successful completion of the Programme, the students will be accurate both in oral and written communication as they will be strong in Grammar and its usage.
- They can express a thorough command of English and its linguistic Structures.
- They can apply critical frameworks to analyze the linguistic, cultural and historical background of texts written in English.
- They will be familiar with the conventions of diverse textual genres including fiction, non-fiction, poetry, autobiography, biography, Journal, film, plays, editorials etc.
- To enable students to understand the passage by silent reading
- To learn phonetics and proper intonation

DEPARTMENT OF ENGLISH

COURSE OUTCOMES :

S. No.	Semester	Course	Course Outcome
1	I	English for Advancement	<ul style="list-style-type: none">➤ Students can enjoy all the essays and improves literary skills➤ Students can learn all the grammar skills
2	II	English for Advancement	<ul style="list-style-type: none">➤ Students will be able to improve comprehensive skills as well as advanced grammar skills➤ Students can understand the values of literature
3	III	English for Excellence	<ul style="list-style-type: none">➤ The text contains Gender studies focusing on achieving gender equality, gender roles and violence against women.➤ Students will also be able to make use of grammar and soft skills when they face competitive exams
4	IV	English for Excellence	<ul style="list-style-type: none">➤ The text contains issues of environmental pollution such as renewable and non-renewable resources and its uses, ecosystem and conservation of Biodiversity➤ Students can improve reported speech, conditionals, common errors, collocations, etc.
5	V	Communication Skills English through Human Values and Ethics	<ul style="list-style-type: none">➤ The text contains an anthology of literary pieces of prose and poetry focusing on human values and ethics➤ The students will be able to enhance their writing skills through note-making, paragraph writing and speaking skills
6	VI	Communication Skills English for Employability Skills	<ul style="list-style-type: none">➤ The text contains an anthology of literary pieces of prose and poetry focusing on human values and ethics➤ The students will be able to enhance their writing skills through letter writing, email writing etc.

DEPARTMENT OF ECONOMICS

PAPER	COURSE OUTCOMES
MICROECONOMICS	Students will be able to apply supply and demand analysis to examine the impact of government regulation and it also enable them to explain determinants of demand, responses of market and the benefits of exchange.
MACROECONOMICS	It provides knowledge regarding the formulation of broad economic policies that maximize the level of national income, providing economic growth to achieve sustainability, full employment, price stability, external balance, increasing productivity in the long run.
BASIC STATISTICS	Students will be able to identify data provided and interpret summary statistics and analyze the data.
INTERNATIONAL TRADE AND PUBLIC FINANCE	Enable the students the pattern and nature of international trade and their contribution to economic development. It also enables learners to know the role of public authorities in raising revenue and its spending.
ECONOMICS OF DEVELOPMENT	It makes the students to understand the aspect of development process in low income counties. Its focus is on improving the potential for the mass of population through health and education.
INDIAN ECONOMY	It makes learners to understand the economic functioning and conditions of our country in the context of past, present and future.

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES

PAPER-I: DIFFERENTIAL AND INTEGRAL CALCULUS:

Sl. No.	Course Name	Course Outcomes
1	DIFFERENTIAL AND INTEGRAL CALCULUS	<p>To enable the students to solve mathematical problems of daily life. We have to select the content and methods of teaching so that the students are able to make use of their learning of mathematics in daily life.</p> <ol style="list-style-type: none">1. To enable the students to understand the contribution of mathematics to the development of culture and civilization.2. To develop thinking and reasoning power of the students.3. To prepare a sound foundation needed for various vocations. Mathematics is needed in various professions such as those of engineers, bankers, scientists, accountants, statisticians etc.4. To prepare the child for further learning in mathematics and the related fields. School mathematics should also aim at preparing him for higher learning in mathematics.5. To give the child an insight into the relationship of different topics and branches of the subject.6. To enable the child to understand popular literature. He should be so prepared

		<p>that he finds no handicap in understanding mathematical terms and concepts used in various journals, magazines, newspapers etc.</p>
2	<p>DIFFERENTIAL EQUATIONS</p>	<ol style="list-style-type: none"> 1. To analyze real world scenarios to recognize when ordinary differential equations (ODEs) or systems of ODEs are appropriate, formulate problems about the scenarios, creatively model these scenarios (using technology, if appropriate) in order to solve the problems using multiple approaches, judge if the results are reasonable, and then interpret and clearly communicate the results. 2. To recognize ODEs and system of ODEs concepts that are encountered in the real world, understand and be able to communicate the underlying mathematics involved to help another person gain insight into the situation. 3. To work with ODEs and systems of ODEs in various situations and use correct mathematical terminology, notation, and symbolic processes in order to engage in work, study, and conversation on topics involving ODEs and systems of ODEs with

		colleagues in the field of mathematics, science or engineering.
3	REAL ANALYSIS	<p>Upon successful completion of Real Analysis, students will be able to</p> <ol style="list-style-type: none"> 1. Describe the real line as a complete, ordered field. 2. Determine the basic topological properties of subsets of the real numbers. 3. Use the definitions of convergence as they apply to sequences, series, and functions. 4. Determine the continuity, differentiability, and integrability of functions defined on subsets of the real line. 5. Apply the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis. 6. Produce rigorous proofs of results that arise in the context of real analysis.
4	ABSTRACT ALGEBRA	<p>Upon successful completion of Abstract Algebra, students will be able to</p> <ol style="list-style-type: none"> 1. Assess properties implied by the definitions of groups and rings. 2. Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings (including polynomial rings and

		<p>modular rings).</p> <ol style="list-style-type: none"> 3. Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups. 4. Analyze and demonstrate examples of ideals and quotient rings. 5. Use the concepts of isomorphism and homomorphism for groups and rings.
5	LINEAR ALGEBRA	<p>Upon successful completion of Linear Algebra, students will be able to</p> <ol style="list-style-type: none"> 1. Solve systems of linear equations 2. Analyze vectors in \mathbb{R}^n geometrically and algebraically. 3. Recognize the concepts of the terms span, linear independence, basis, and dimension, and apply these concepts to various vector spaces and subspaces. 4. Use matrix algebra and the related matrices to linear transformations, compute and use determinants. 5. Compute and use eigenvectors and eigenvalues. 6. Determine and use orthogonality.
		<p>After studying this course, students should be able</p> <ol style="list-style-type: none"> 1. To understand geometrical terminology for angles, triangles,

6	SOLID GEOMETRY	<p>quadrilaterals and circles.</p> <ol style="list-style-type: none"> 2. To measure angles using a protractor. 3. To use geometrical results to determine unknown angles. 4. To recognise line and rotational symmetries. 5. To find the areas of triangles, quadrilaterals and circles and shapes.
7	NUMERICAL ANALYSIS	<p>Upon successful completion of Numerical Analysis, a student will be able to</p> <ol style="list-style-type: none"> 1. Derive numerical methods for approximating the solution of problems of continuous mathematics. 2. Analyze the error incumbent in any such numerical approximation. 3. Implement a variety of numerical algorithms using appropriate technology. 4. Compare the viability of different approaches to the numerical solution of problems arising in roots of solution of non-linear equations, interpolation and approximation, numerical differentiation and integration, solution of linear systems.
		<p>Upon successful completion of Multiple Integrals & Vector Calculus, a student will be compute</p>

8	<p>MULTIPLE INTEGRALS AND VECTOR CALCULUS</p>	<p>and analyze</p> <ol style="list-style-type: none"> 1. The vector-valued functions of a real variable and their curves and in turn the geometry of such curves including curvature, torsion and the Frenet-Serre frame and intrinsic geometry 2. Scalar and vector valued functions of 2 and 3 variables and surfaces, and in turn the geometry of surfaces 3. Gradient vector fields and constructing potentials, Integral curves of vector fields and solving differential equations to find such curves 4. The differential ideas of divergence, curl, and the Laplacian along with their physical interpretations, using differential forms or tensors to represent derivative operations. 5. The integral ideas of the functions defined including line, surface and volume integrals - both derivation and calculation in rectangular, cylindrical and spherical coordinate systems and understand the proofs of each instance of the fundamental theorem of calculus. 6. stepinput functions using the Laplace transform
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