

GOVERNMENT DEGREE COLLEGE FOR WOMEN (AUTONOMOUS)

BEGUMPET, HYDERABAD-16

Affiliated To Osmania University, Re-Accredited With 'B+' Grade by NAAC



DEPARTMENT OF COMPUTER APPLICATIONS

SYLLABUS (2016-17)

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS
(W.e.f. 2016 - 17 Session)

PROGRAM OUTCOME:

1. Students will establish themselves as effective professionals by solving real problems through the use of computer science knowledge and with attention to team work, effective communication, critical thinking and problem solving skills.
2. Students will develop professional skills that prepare them for immediate employment and for life-long learning in advanced areas of computer science and related fields.
3. An ability to function effectively on teams to accomplish a common goal.
4. An understanding of professional, ethical, legal, security and social issues and responsibilities. An ability to communicate effectively with a wide range of audiences.
5. An ability to analyze the local and global impact of computing on individuals, organizations, and society.
6. An ability to use current techniques, skills, and tools necessary for computing practice.
7. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.

PROGRAMME SPECIFIC OUTCOME

1. The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, application program, database, graphics and networking for efficient design of computer-based systems of varying complexity.
2. Ability to provide socially acceptable technical solutions to complex computer science engineering problems with the application of modern and appropriate techniques for sustainable development relevant to professional engineering practice.
3. Ability to apply the knowledge of ethical and management principles required to work in a team as well as to lead a team. Ability to comprehend and write effective project reports in multidisciplinary environment in the context of changing technologies.

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BEGUMPET, HYDERABAD
DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS
ALLOCATION OF CREDITS

S.no	Semester	Nature of Module	Name of Module	Hours	Max. Marks	Credits
1	Paper-I(A)	Core -1	PROGRAMMING IN C	4	100	3
2	Practicals		PROGRAMMING IN C	3	50	1
3	Paper-I(B)	Core - 2	PROGRAMMING IN C++	4	100	3
4	Practicals		PROGRAMMING IN C++	3	50	1
5	Paper-II(A)	Core - 3	OOPs WITH C++	4	100	3
6	Practicals		OOPs WITH C++	3	50	1
7	Paper-II(B)	Core - 4	RDBMS	4	100	3
8	Practicals		RDBMS	3	50	1
9	Paper-III(A)	Core- 5	JAVA PROGRAMMING-I	4	100	3
10	Practicals		JAVA PROGRAMMING-I	3	50	1
11	Paper-IV(A)	Advanced –1 Elective – 1 or Elective - 2	WEB TECHNOLOGIES-I Or OPERATING SYSTEM-I	4	100	02*
12	Practicals		WEB TECHNOLOGIES-I Or OPERATING SYSTEM-I	3	50	1
13	Paper-III(B)	Core- 6	JAVA PROGRAMMING-II	4	100	3

14	Practicals		JAVA PROGRAMMING- II	3	50	1
15	Paper-IV(B)	Advanced –2 Elective – 1 or Elective - 2	WEB TECHNOLOGIES-II Or OPERATING SYSTEM-II	4	100	02*
16	Practicals		WEB TECHNOLOGIES-II Or OPERATING SYSTEM-II	4	50	1
17	Trans Disciplinary		Web Designing (Sem-III & IV)	1	50	2

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B.A (C/A) I YEAR

Semester-I

Subject: Computer Applications

Paper- I (A) Programming in C

COURSE CODE:CA101

Course Outcome:

1. Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.
2. Demonstrate an understanding of computer programming language concepts. To be able to develop C programs on Linux platform.
3. Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.
4. Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures.
5. Student must be able to define union and enumeration user defined data types. Develop confidence for self education and ability for life-long learning needed for Computer language.

Syllabus

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 associatively, 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 Vs Unions, Enumeration Types.

Files: Introduction, Using Files, Working with Text Files and Binary Files, Other File Management Functions. Text PradipDey, ManasGhosh, Computer Fundamentals and Programming in C (2e)

References:

1. Ivor Horton, Beginning C
2. Herbert Schildt, The Complete Reference C
3. Paul Deitel, Harvey Deitel, C How To Program
4. Byron S. Gottfried, Theory and Problems of Programming with C
5. Brian W. Kernighan, Dennis M. Ritchie, The C Programming Language
6. B. A. Forouzan, R. F. Gilberg, A Structured Programming Approach Using

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SEMESTER-I

B.A (C/A) I Year

Subject: Computer Applications

Paper: I (A) Programming in C

Practical: 2 Hours/Week

Credit: 1

Course Outcome:

1. Know concepts in problem solving
2. To do programming in C language
3. To write diversified solutions using C language

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.

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B. A (C/A) I YEAR

Semester-II

Subject: Computer Applications

Paper- I (B) –Programming in C++

P.P.W: 6 (4T+2P)

Credits: 5 (4T+1P)

COURSE CODE:CA201

Course Outcome:

1. To understand how C++ improves C with object-oriented features.
2. To learn how to write inline functions for efficiency and performance.
3. To learn the syntax and semantics of the C++ programming language.
4. To learn how to design C++ classes for code reuse.
5. To learn how to implement copy constructors and class member functions.
6. To understand the concept of data abstraction and encapsulation.
7. To learn how to overload functions and operators in C++.
8. To learn how containment and inheritance promote code reuse in C++.
9. To learn how inheritance and virtual functions implement dynamic binding with polymorphism.
10. To learn how to design and implement generic classes with C++ templates.
11. To learn how to use exception handling in C++ programs.

Syllabus

Unit – I:

Introduction to C++: Applications, Example Programs, Tokens, Data Types, Variables, Operators, Expressions, Control Structures, Arrays, Strings, Pointers.

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 Vs Object-Oriented Programming, Terminology, Benefits, Languages, and 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, 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)

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++

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SEMESTER-II
B.A (C/A) I Year
Subject: Computer Applications
Paper –I (B) PROGRAMMING IN C++

Practical: 2 Hours/Week

Credit: 1

Course Outcome:

1. Creating simple programs using classes and objects in C++.
2. Implement Object Oriented Programming Concepts in C++.
3. Develop applications using stream I/O and file I/O.
4. Implement simple graphical user interfaces.
5. Implement Object Oriented Programs using templates and exceptional handling concepts.

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B.A II

Semester-III

Subject: Computer Applications

Paper-II (A) OOPs with C++

COURSE CODE:CA301

P.P.W: 6(4Th+2Pr)

Credits: 3Th+1Pr

Course Outcome:

1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc
3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
4. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.
5. Demonstrate the use of various OOPs concepts with the help of programs.

Syllabus

UNIT – I

Basic Concepts of OOPs: Comparison of procedural programming and OOP. Advantages of OOP and OOP Languages, definition of Class, Objects, Inheritance. Definition Encapsulation, Operator over Loading and Dynamic Binding.

Over view of OOP using C++: Basic Program Construction and Program Statement, Class Declaration, comments and C++ Compilation.

Elements of C++ Language: Tokens and Identifiers, Variables and Constants, Data Types, operators.

UNIT – II

Control Statements: The if Statement, if –else Statement, Switch Statements.

LOOP Statements: For Loop and While, do-While Statements, break, Continue and goto Statements.

UNIT-III

Classes and Objects: Declaration of classes and Objects in C++, Objects as function arguments. Object from Function, Structures and Classes, Constructors and Destructors.

UNIT – IV

Inheritance: Derived classes and Base class, Public and private Inheritance, Multiple Inheritance, Introduction to polymorphism, Runtime Polymorphism,

Suggested Books:

Prescribed Books:

C++ Programming: E.Balaguruswamy

Object Oriented Programming with C++:

E.Balaguruswamy Reference Books:

Using C++: Rob McGregor

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SEMESTER-III

B.A II Year Practical Question Bank

Subject: Computer Applications

Paper: II (A) OOPs with C++

Course Outcome:

1. Develop solutions for a range of problems using objects and classes.
2. Programs to demonstrate the implementation of constructors, destructors and operator overloading.
3. Apply fundamental algorithmic problems including type casting, inheritance, and polymorphism.
4. Understand generic programming, templates, file handling.

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Department Of Computer Science & Applications
Trans Disciplinary Elective
Semester-III
Subject: Web Designing
Paper-II (A)

COURSE CODE: CA302

No. of
Lectures:
15 No. of
Credits: 1

Course Outcome:

1. Be able to use the HTML programming language.
2. Resolves written HTML codes.
3. Runs the page he/she has designed using HTML codes.
4. Be able to use the Design Programs.
5. Uses Microsoft Expression Web 4 programme.
6. Designs site and page via Microsoft Expression Web 4 programme.
7. Uses the program Web Page Maker.

Syllabus

UNIT-I:

Introduction to internet, applications of internet, Web Browser, various Web Browsers and Client-Server Techniques.

UNIT-II

Introduction to HTML:

Basics-Introduction to HTML (Hypertext markup language)-Structure of HTML-Formatting tags-Physical tags-Logical tags -Header tags.

UNIT-III

Creating tables:

Creating Tables-Adding Borders- Cell Padding- Cell Spacing- Spanning- Using Colors-Aligning Tables in web Pages- Using Images in tables- Nesting Tables.

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B.A (C/A) II YEAR

Semester-IV

Subject: Computer Applications

Paper- II (B) Relational Database Management Systems

COURSE CODE:CA401

Course Outcome:

1. Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.
2. Design ER-models to represent simple database application scenarios
3. Convert the ER-model to relational tables, populate relational database and formulate SQL queries on data.
4. Improve the database design by normalization.
5. Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing.

Syllabus

Unit – I

Introduction to Databases: Introduction, Traditional File-Based Systems, Database Approach, 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.

Unit – II

SQL: Introduction, Data Manipulation Language commands, Sorting Results, Using the SQL Aggregate Functions, Grouping Results, Sub-queries, ANY and ALL, Joins, EXISTS and NOT EXIST, Combining Result Tables.

SQL: The ISO SQL Data Types, Data Definition Language commands –Creating an Index, Removing an Index, Views–Creating a View, Removing a View, WITH CHECK OPTION, Advantages and Disadvantages of Views.

Unit – III

Advanced SQL: The SQL Programming Language–Declarations, Assignments, Control Statements, Exceptions, Cursors, Subprograms, Stored Procedures, Functions, and Packages, Triggers, Recursion.

Entity–Relationship Modeling: Entity Types, Relationship Types, Attributes Keys, Strong and Weak Entity Types, Problems with ER Models–Fan Traps, Chasm Traps.

Enhanced Entity–Relationship Modeling: Specialization/Generalization, Aggregation, and Composition.

Unit – IV

Functional–Dependencies: Anomalies, Partial Functional Dependency, Transitive Functional Dependency.

Normalization: The Purpose of Normalization, Data Redundancy, Functional Dependencies, 1NF, 2NF, 3NF, BCNF.

Transaction Management: Transaction Support–Properties of Transactions, Concurrency Control–The Need for Concurrency Control, Serializability and Recoverability, Locking Methods, Deadlock, Time Stamping Methods.

Text Books:

Text Thomas M. Connolly, Carolyn E. Begg, Database Systems–A Practical Approach to Design, Implementation, and Management (6e)
Sharon Allen, Evan Terry, Beginning Relational Data Modeling

Reference

Jeffrey A. Hoffer, V. Ramesh, HeikkiTopi, Modern Database Management Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems RamezElmasri, Shamkant B. Navathe, Fundamentals of Database Systems Abraham Silberschatz, Henry F. Korth, S. Sudarshan, Database System Concepts
Carlos Coronel, Steven Morris, Peter Rob, Database Systems: Design, Implementation, and Management

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B.A (C/A) II YEAR

Semester-IV

Subject: Computer Applications

Practical

2 Hours/Week

1 credit

Relational Database Management Systems Lab Course

Outcome:

- 1) To explain basic database concepts, applications, data models, schemas and instances.
- 2) To demonstrate the use of constraints and relational algebra operations. IV. Describe the basics of SQL and construct queries using SQL.
- 3) To emphasize the importance of normalization in databases.
- 4) To facilitate students in Database design .
- 5) To familiarize issues of concurrency control and transaction management.

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Department Of Computer Science & Applications Trans
Disciplinary Elective
Semester-IV
Subject: Web Designing
Paper- II (B)

COURSE
CODE:CA402

No. of Lectures:
15 No. of
Credits: 1

Course Outcome:

1. Understand the principles of creating an effective web page, including an in-depth consideration of information architecture.
2. Become familiar with graphic design principles that relate to web design and learn how to implement theories into practice.
3. Develop skills in analyzing the usability of a web site.
4. Understand how to plan and conduct user research related to web usability.
5. Learn the language of the web: HTML and CSS.
6. Learn CSS grid layout and flexbox.
7. Learn techniques of responsive web design, including media queries.

Syllabus

UNIT-I

Working with Links and Lists:

Creating Hyperlinks-URL (Uniform Resource Locator)-Creating Image Maps-Creating List-Ordered list-Unordered List-Definition List.

UNIT-II

Working with Images:

Images in web pages-graphic formats-graphic color-Creating Images-Adding an Image to web page-Allocating space for Image-Adding Borders to Images-Aligning the Text and Images-Setting page background Images.

UNIT-III

Working with Frames & Forms:

Creating Frames- Vertical Frames- Horizontal Frames. Creating HTML Forms with Example.

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B.A III YEAR

Semester-V

Subject: Computer Applications

Paper- III (A) JAVA PROGRAMMING-I

COURSE CODE:CA501

P.P.W: 6(4Th+2Pr)

Credits: 3Th+1Pr

Course Outcome:

1. Each course outcome is followed in parentheses by the Program Outcome to which it relates. - Write, compile, and execute Java programs that may include basic data types and control flow constructs using J2SE or other Integrated Development Environments (IDEs) such as Eclipse, NetBeans, and JDeveloper.
2. Write, compile and execute Java programs using object oriented class structures with parameters, constructors, and utility and calculations methods, including inheritance, test classes and exception handling.
3. Write, compile, and execute Java programs using arrays and recursion.
4. Write, compile, and execute Java programs manipulating Strings and text documents.
5. Write, compile, execute Java programs that include GUIs and event driven programming. Write a final project that may be selected from among the following: applets for inclusion in web pages; applets to access enterprise data bases in robust, enterprise three level applications; secure communications over the internet; or an approved project chosen by the student.

Syllabus

UNIT-1: Introduction to Java, language and Importance of Java on Internet. Java Buzz words, object oriented programming and Java Demo on sample program and Compiling the program, Data Types.

UNIT-2 Variables [Declaration Dynamic Initialization and scope & lifetime] Type conversion, Arrays, operators [Arithmetic, Relational Boolean] Java control statement Iteration statements, Iteration statements Jump statement Introduction to Classes and objects.

UNIT-3 Introduction to methods and Constructors Garbage Collection Introduction to Overloading. Overloading in detail, Introduction to Inheritance, Inheritance in detail. Introduction to Multiple hierarchy and in detail, Introduction to Abstract classes in detail.

UNIT-4 Packages and Interfaces :- Introduction to package and in detail, Access protection with examples, Important packages Interfaces: Defining and Implementing and with examples,

Exception Handling, Fundamentals, different types of Exception handling use of Try, catch, throw, Throws and Finally.

Suggested Books:

Prescribed Books:

Programming with
Java:E.Balagurusamy Java Complete
reference.

Reference Books:

Java 2.0:Ivan Bayross
Java Tutorial:Sun microsystems
Special edition using Java 2:Joseph L.Weber

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SEMESTER-V

B.A III Year Practical Question Bank

Subject: Computer Applications

Paper: III (A) JAVA PROGRAMMING-1

Course Outcome:

1. Implement Object oriented features using Java
2. Apply the concept of polymorphism and inheritance.
3. Implement exception handling
4. Develop network and window application using awt and swings.

Practical Question Bank

1. Write a Java program using various control statements.
2. Write a Java program using Constructors.
3. Write a Java program to demonstrate Multi-level Inheritance.
4. Write a Java program for Matrix Multiplication.
5. Using Packages in Java, Write a appropriate...
6. Write a Java code for implementation of Interfaces.
7. Explain "Exception handling" with suitable example.
8. Implementing String handling functions using Java program.
9. Write a java program to determine the sum of the following harmonic series for a given value of 'n'.
$$1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n}.$$
10. Write a program to perform the following operations on string through interactive input.
 - (a) Sort given Strings in alphabetical order.
 - (b) Check whether one String is Sub String of another String or not.

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B. A III YEAR

Semester-V

Subject: Computer Applications

Paper- IV (A) – WEBTECHNOLOGIES-I

P.P.W: 5(3Th+2Pr)

Credits: 2Th+1Pr

COURSE CODE:CA502

Course Outcome:

1. Gain knowledge of client side scripting, validation of forms and AJAX programming.
2. Have understanding of server side scripting with PHP language.
3. Have understanding of what is XML and how to parse and use XML Data with Java.
4. Create applications by using the concepts like JSP and Servlet

Syllabus

UNIT I : **Introduction to Internet basics**, Client & Server technology Inter connectivity. Web Client/ Browser, available. Introduction to HTML (Hypertext markup language), HTML commands, Titles & Footers, Text formatting, Text Styles

UNIT II : , **Classification of Tags**-Padded tags Unpadded tags-Formatting Tags-Hyper Links-Heading tags.

Lists, Text effect Adding Graphics to Html document, Tables, Linking of documents, Frames some exercises. Forms-Meaning of Forms-Creation of Forms.

UNIT-III : **Dynamic HTML Programming Introduction**-Difference between

HTML and DHTML.Static and Dynamic tags, Procedural and Non-Procedural Programming in DHTML, Event Handling.

UNIT IV : **Cascading Style Sheets (CSS)**-Document Object Model (DOM)-Change like Style, Text, Graphics, Placement, Creating multimedia effects with Filters-Different types of Errors, Runtime Errors, System Errors etc.

Suggested Books:

Prescribed Books: HTML, DHTML, JAVASCRIPT, PERL, CGI:Ivon bayross
The complete reference Webdesign:Thomas A.Powel.

Reference Books:

Scripting Language and Web designing:R.singh,Mamatha varma.s.Mahindru
World wide Web :Rick Stout

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SEMESTER-V

B.A III Year Practical Question Bank

Subject: Computer Applications

Paper – WEBTECHNOLOGIES-I

Course Outcome:

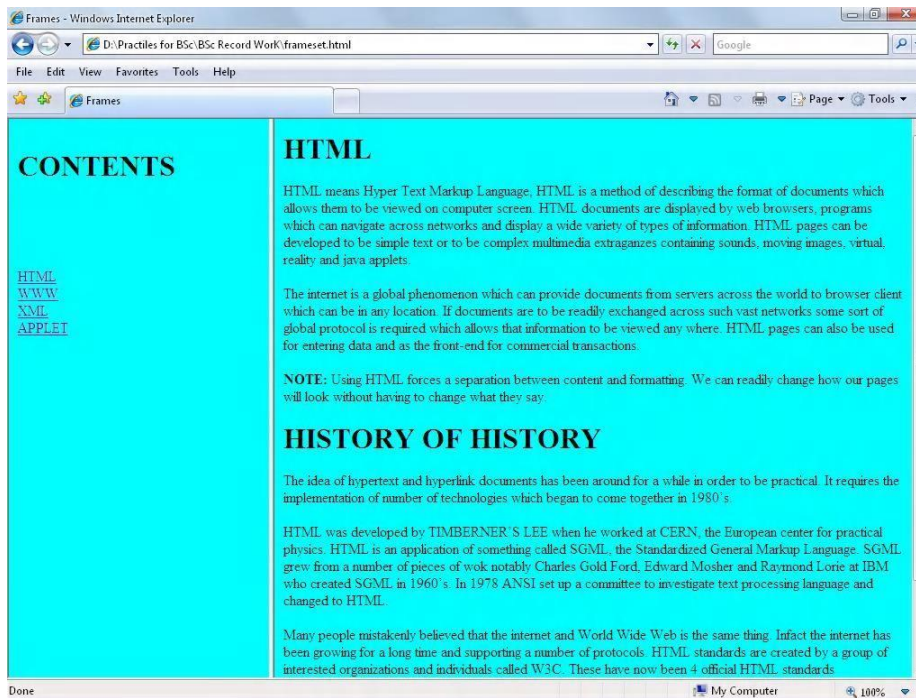
1. Students are able to develop a dynamic webpage by the use of java script and DHTML.
2. Students will be able to write a well formed / valid XML document.
3. Students will be able to connect a java program to a DBMS and perform insert, update and delete operations on DBMS table.
4. Students will be able to write a server side java application called Servlet to catch form data sent from client, process it and store it on database.
5. Students will be able to write a server side java application called JSP to catch form data sent from client and store it on database.

Practical Question Bank

1. Create a web page illustrating text formatting tags.
2. Create a web page to demonstrate font variations.
3. Prepare a sample code to illustrate three types of lists in HTML.
4. Using tables create your Curriculum Vitae.
5. Using Table related tags align the images



6. Explain hyper link example with target attribute as follows.



7. Illustrate with example the horizontal rulers in your page.

8. Create a Web page to display the timetable of your class with the following format and use all the attributes associated with table tag.

9. Create a Web page to display the following table using all the attributes of table tag:

IMG LOGO		POPULATION			
		STATE 1		STATE 2	
		M	F	M	F
2005	Lit				
	illit				
2006	Lit				
	illit				

9. Create a web page of Employee information form, when the information is submitted, message should be displayed.

10. a) Create a web Page to display 5 images using all the attributes of the image tag

11. b) Create a Web Page to display ordered list, unordered list, and definition list.

12. Create a Web Page to display frame with the following format, Use necessary attributes for the tags. When the user clicks the link in the left frame the contents should be displayed in the right frame.

HEADING	
Order list	Display the clicked page here
Unorder list	
Definition list	

13. Create a Web page to display Overlapping of Images. The images should scroll block.

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B.A III YEAR

Semester-VI

Subject: Computer Applications

Paper- III (B) JAVA PROGRAMMING-II

COURSE CODE:CA601

P.P.W: 6(4Th+2Pr)

Credits: 3Th+1Pr

Course Outcome:

1. Each course outcome is followed in parentheses by the Program Outcome to which it relates. - Write, compile, and execute Java programs that may include basic data types and control flow constructs using J2SE or other Integrated Development Environments (IDEs) such as Eclipse, NetBeans, and JDeveloper.
2. Write, compile and execute Java programs using object oriented class structures with parameters, constructors, and utility and calculations methods, including inheritance, test classes and exception handling.
3. Write, compile, and execute Java programs using arrays and recursion.
4. Write, compile, and execute Java programs manipulating Strings and text documents.
5. Write, compile, execute Java programs that include GUIs and event driven programming. Write a final project that may be selected from among the following: applets for inclusion in web pages; applets to access enterprise data bases in robust, enterprise three level applications; secure communications over the internet; or an approved project chosen by the student.

Syllabus

UNIT-1 : Built-in exception, I/P-O/P: I/O Basic reading console I/P & writing Console O/P Reading and writing String Handling ,String constructor, String operators, Character Extraction String comparison searching and Modifying Strings, Data conversion, String buffer, Applet basics ,Architecture of Applets

UNIT-2 : Some simple Applet display methods ,requesting Repainting, using the Status window ,understanding the HTML Applet tags. Passing parameter to Applet event model, Event model, Event classes, Sources of Events, Event listener Interfaces, Adapter classes and Inner classes.

UNIT-3 : Introduction to AWT classes window fundamentals, Frame windows, creating a Frame window, Creating Windowed program and Sizing graphics, Color and use of Font Methics using AWT controls, Lists and using Buttons, Check box group and using Buttons, Check box group and Choice control using List and managing Scroll bars, using Text file and Text area.

UNIT-4: Understanding Layout Management: Form layout, Border layout, Menus and Dialog boxes, Files dialog and Exploring the Controls, Menus and Layout Manager.

Suggested Books:

Prescribed Books:

Programming with Java:
E.Balagurusamy Java Complete
reference:

Reference Books:

Java 2.0: Ivan Bayross
Java Tutorial: Sun Microsystems
Special edition using Java 2: Joseph L.Weber

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SEMESTER-V

B.A III Year Practical Question Bank

Subject: Computer Applications

Paper: III (A) JAVA PROGRAMMING-II

Course Outcome:

1. Implement Object oriented features using Java
2. Apply the concept of polymorphism and inheritance.
3. Implement exception handling
4. Develop network and window application using awt and swings.

Practical Question Bank

1. Demonstrate Applets in Java.
2. Write a suitable code in Java for event handling.
3. Write a code in Java using AWT Controls.
4. Write a Java code using Super Keyword.
5. Explain the abstract classes with suitable examples.
6. Explain function overloading with an example.
7. Menu-Driven program
8. Write an Applet program to design a simple calculator.
9. Write a program to read a text and count all the occurrences of a given word. Also display their positions.
10. Write an applet illustrating sequence of events in an Applet.
11. Illustrate the method of overriding in Java.

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B. A III YEAR

Semester-VI

Subject: Computer Applications Paper- IV (B) –

WEBTECHNOLOGIES-II

COURSE CODE:CA602

P.P.W: 5(4Th+2Pr)

Credits: 2Th+1Pr

Course Outcome:

1. Gain knowledge of client side scripting, validation of forms and AJAX programming.
2. Have understanding of server side scripting with PHP language.
3. Have understanding of what is XML and how to parse and use XML Data with Java.
4. Create applications by using the concepts like JSP and Servlet

Syllabus

UNIT I: Introduction to Java Script Java Script in Web pages, Advantages of Java Script, writing Java Script into HTML, Building Java Script syntax, Operators & Expressions in Java Script . Conditional checking statements, Loops & Functions in Java Script Dialog boxes

UNIT II:

Variables, Arrays, Objects in Java Script: Data and objects in java script, Regular expressions, Exception Handling, Built in objects, Events. Dynamic HTML with Java Script: Data validation, Opening a new window, Messages and Confirmations, The status bar, writing to a different Frame, Rollover buttons, Moving images.

UNIT III:

Data for Web applications: Basic XML, Document type definition, XML Schema, Active Server Pages and Java: Active Server Pages, Java.

XML: Defining Document Object Model, Presenting XML.

UNIT IV:

Protocols: Protocols, IP and TCP, Hyper Text Transfer Protocol, Common Gateway Interface, The Document Object Model, introducing the Document Object Model, Exercises

Suggested Books:

Prescribed Books:

HTML, DHTML, JAVASCRIPT, PERL, CGI: Ivon bayross
The complete reference Webdesign: Thomas A. Powel

Reference Books:

Scripting Language and Webdesigning: R.singh, Mamatha varma.s.Mahindru

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SEMESTER-VI

B.A III Year Practical Question Bank

Subject: Computer Applications

Paper – WEBTECHNOLOGIES-II

Course Outcome:

1. Students are able to develop a dynamic webpage by the use of java script and DHTML.
2. Students will be able to write a well formed / valid XML document.
3. Students will be able to connect a java program to a DBMS and perform insert, update and delete operations on DBMS table.
4. Students will be able to write a server side java application called Servlet to catch form data sent from client, process it and store it on database.
5. Students will be able to write a server side java application called JSP to catch form data sent from client and store it on database.

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B.A (C/A) I, II & III Year Examination
Subject: Computer Applications
MODEL PAPER

Time: 2 1/2hrs

Max Marks: 75

SECTION-A

I Answer all the questions.

4X10=40

1. a) Question from Unit-I.

(OR)

b) Question from Unit-I.

2. a) Question from Unit-II.

(OR)

b) Question from Unit-II.

3.a) Question from Unit-III.

(OR)

b) Question from Unit-III.

4.a) Question from Unit-

IV.

(OR)

b) Question from Unit-IV.

SECTION-B

II. Answer Any 5 questions.

5X5=25

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

SECTION-C

III Answer Any 5 questions.

5X2=10

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

Trans Disciplinary Elective
PATTERN OF EXAMINATION

Question Paper Pattern for Assignments and Theory Examinations of Semester III & IV for all combinations.

Assignments

1. 3 Assignments of 10 marks each and best 2 out of 3 will be considered.

Semester Examination

1. To be held in the month of October and March/April months.
2. The Time Duration of Semester examination is 2 hrs.
3. 30 marks are allotted for the main exam for each semester
4. Section – A: 12 Multiple Choice Questions each carries 1 mark. 12x1=12M
 B: 6 out of 9 questions each question carries 3 marks 6x3=18M

Total marks=30 (End Semester Exam) + 20(Assignments)

Practical Examinations

1. Practical examinations will be held at the end of each Semester.
2. 50 marks are allotted for the Practical examination consisting of External and Internal Evaluation.
3. Practical Question Bank is prepared & provided to the students from which practical will be conducted.
4. Practical shall be conducted in each Semester as per the Syllabus and Time table.