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1.1.2: The programmes offered by the institution focus on employability / entrepreneurship / skill development and their course syllabi are adequately revised to incorporate contemporary requirements

SYLLABUS OF THE COURSES FOCUSING EMPLOYABILITY / ENTREPRENEURSHIP / SKILL DEVELOPMENT

Colour Coding

EMPLOYABILITY

ENTREPRENEURSHIP

SKILL DEVELOPMENT

B.C.A.

I B.C.A	PROGRAMMING IN C	CA101A
SEMESTER - I		HRS/WK- 4
CORE-1		CREDIT - 4

UNIT-I **[12 Hrs]**

C Fundamentals: Character set – Identifiers - keywords - Data types-Constants –Variables –Declarations – Expressions - Statements-Operators - Library functions.

UNIT-II **[12 Hrs]**

Control Statements: Data Input/Output functions - Simple C programs - flow of control-control structures - switch, break and continue - Go to statement-comma operator.

UNIT-III **[12Hrs]**

Functions: Defining, accessing functions - functions prototypes-passing arguments - call by value - call by reference - Recursions-storage classes.

UNIT-IV **[12Hrs]**

Arrays: Defining and processing – passing arrays of functions- Arrays and string – Structures - passing structures to functions - self-referential structures – unions

UNIT-V **[12Hrs]**

Pointers: Declarations - passing pointers to functions - operation with pointers - pointer and arrays - arrays of pointers - structure and pointers – Files and its operations.

TEXT BOOK:

1. E. Balagurusamy -Programming in ANSI C -Tata McGraw Hill Pub.

REFERENCE BOOKS:

1. Byron S. Gottfied - Schaum's outline Theory and problems of programming with C. Tata McGraw Hill Pub.
2. YeshwanthKanethkar -Let us C, BPB Publications.
3. K. R. Venugopal, S. R. Prasad -Mastering C – Tata McGraw Hill Pub.

I B.C.A	DIGITAL LOGIC FUNDAMENTALS	CA102A
SEMESTER - I		HRS/WK- 5
CORE-2		CREDIT - 4

UNIT-I **[15 Hrs]**

Number System: Number system and its conversions. The Basic Gates - Universal Gates - Boolean Algebra - Boolean Laws and Theorem.

UNIT-II **[15 Hrs]**

Simplification: Sum of products - Product of Sums - K-map simplifications (2,3 and 4 variables) - Don't care conditions-QuineMcclausky tabulation method (2,3 and 4 variables).

UNIT-III **[15 Hrs]**

Combinational Arithmetic Circuits: Adder – Half Adder – Full Adder –Binary Parallel Adder-Design Full adder using only half adders- Subtractor – Half Subtractor – Full Subtractor -BCD Adder.

UNIT-IV **[15 Hrs]**

Combinational Logic Circuits: Multiplexers (2x1 Multiplexer, 4x1 Multiplexer , 8x1 multiplexer) – Demultiplexers (1 x 2 Demultiplexer, 1 x 4 Demultiplexer, 1 x 8 Demultiplexer)-Decoders(3 to 8 line decoder, 4 to 16 line decoder) –Encoders(8 to 3 line encoder, 16 to 4 line encoder)

UNIT-V **[15 Hrs]**

Sequential Logic Circuit: Flip-Flops - Its types - RS Flip flop, JK Flip flop, D Flip flop, T and Master Slave. Shift Registers and its types(SISO,SIPO,PISO,PIPO registers). Counters - Asynchronous counter (Binary Ripple Counter, BCD Ripple Counter) - Synchronous Counter (Binary up counter, Binary down counter, Binary Up/Down counter).

TEXT BOOK:

1. M. Morris Mano -Digital Logic and Computer Design- PHI.

REFERENCE BOOKS:

1. Thomas C. Bartee Digital ComputerFundamentals- McGraw Hill Pub.
2. Malvino& Leach- Digital Principles and Applications –McGraw Hill Pub.
3. S. Ramalatha - Digital Computer Fundamentals, Meenakshi Agency.

I B.C.A	PROGRAMMING IN C	CAP101T
SEMESTER - I		HRS/WK- 3
PRACTICAL-I		CREDIT - 3

Lab Exercises:

1. Write a C program to find the odd or even numbers for the range of given number.
2. Write a C program to find the sum of series
3. Write a C program to generate the Fibonacci series
4. Write a C program to check whether the given year is leap year or not.
5. Write a C program to reverse a given number.
6. Write a C program to find the given number is Armstrong or not.
7. Write a C program to display the following output

(a) *
* *
***

(b) 1
1 2
1 2 3

(c) 1
2 2
3 3 3

(d) 3 3 3
2 2
1

8. Write a C program to find the largest number among the three numbers.
9. Write a C program to find whether the person is eligible to vote or not
10. Write a C program to display the grade of the student by using conditional statement
11. Write a C program to display the arithmetic manipulation using Switch statement
12. Write a C program to find out the Factorial with and without using recursive function.
13. Write a C program to add a 2 numbers by using all functions.
14. Write a C program to swap 2 numbers without using the temporary variables.
15. Write a C program to find the length of the string with and without using string function.
16. Write a C program to check whether the given string is Palindrome or not.
17. Write a c program for the following matrices
    (a) Addition Matrix (3X3)
    (b) Subtraction Matrix (2X2)
    (c) Multiplication Matrix (2X2)
    (d) Transpose Matrix (3X3)
18. Write a C program to generate the numbers in ascending order.
19. Write a C program to display the name, age ,mark, average and total for the 5 students By structure using array.
20. Write a C program to swap 2 numbers using pointer.

I B.C.A	OBJECT ORIENTED PROGRAMMING USING C++	CA203A
SEMESTER - II		HRS/WK- 5
CORE - 4		CREDIT - 4

UNIT-I **[15 Hrs]**

C++ fundamentals: Introduction to C++: Tokens, Keywords, Identifiers, Variables, Operators, Expressions and Control Structures-Arrays in C++ - CIN-COUT.

Unit-II **[15 Hrs]**

Principles of Object Oriented Programming(OOP): Evolution of C++ - Programming Paradigms – Key Concepts of OOP – Advantages of OOP – Usage of OOP and C++.

UNIT-III **[15Hrs]**

OOPS Fundamentals: Classes and Objects: Constructors and Destructors; and Type of Constructors – Inheritance: Single Inheritance – Multilevel inheritance – Multiple inheritance – Hierarchical Inheritance – Hybrid Inheritance.

UNIT-IV **[15 Hrs]**

Functions: Inline Functions – Friend Function-Virtual Function-**Polymorphism:** Function Overloading - Operator Overloading.

Input and Output in C++ - Streams-Stream classes- Formatted and Unformatted console I/O operations-Member functions of istream class-manipulators-manipulators with parameters

UNIT-V **[15 Hrs]**

Working with Files: Classes for File Stream Operations – Opening and Closing a File – End-of-File Detection – File Pointers – Updating a File – Error Handling during File Operations – Command-line Arguments.

TEXT BOOK:

1. E. Balagurusamy-Object Oriented Programming with C++.TMH-1995

REFERENCE BOOKS:

1. H. Schildt, C++: The Complete Reference,TMH-1998
2. Robert Lafore, Object Oriented Programming in Microsoft C++, Galgotia Publication.
3. Ashok N. Kamthane, Object Oriented Programming with ANSI & Turbo C++, Pearson Education, 2006.

I B.C.A	FUNDAMENTALS OF DATA STRUCTURES	CA204A
SEMESTER - II		HRS/WK- 4
CORE - 5		CREDIT - 4

UNIT-I **[12Hrs]**

Introduction: Definition of a Data structure – primitive and composite Data Types, Arrays, Operations on Array, Ordered lists.

UNIT-II **[12 Hrs]**

Stacks and Queues: Stacks – Applications of Stack – Infix to Postfix Conversion, Recursion, Maze Problems – Queues – Operations on Queues-Queue Applications- Circular Queue.

UNIT-III **[12Hrs]**

Linked List: Singly Linked List – Operations, Application – Representation of a Polynomial, Polynomial Addition; Doubly Linked List – Operations, Applications – Ordering Books in a Library (Alphabetical Ordering)

UNIT-IV: **[12Hrs]**

Trees: Terminology-Tree Representation

Binary Tree: properties of a Binary Trees –Binary tree Representation-Binary Tree Traversals (Inorder Traversal, Preorder Traversal, Postorder Traversal)-Conversion of Forest to Binary Tree

UNIT-V: **[12 Hrs]**

Graph: Introduction – Definition – Types of Graphs - Graph Representation -Graph Traversal(BFS and DFS)–Connected components – Spanning Tree- Shortest Path (Dijkstra's Algorithm.)

TEXT BOOK:

1. E. Horowitz and S. Shani, Fundamentals of Data Structures in C++, Galgotia Publications 1999.

REFERENCE BOOKS:

1. Alfred V. Aho, John E. Hopcroft, Jeffrey D. Ullman, Data structures and algorithms, Pearson Education India.
2. R. Kruse and N. Dale and S. C. Lily Pascal plus Data Structures Algorithms and Advanced Programming –Tata McGraw Hill-New Delhi(1990)

I B.C.A	PROGRAMMING IN C++	CAP202T
SEMESTER – II		HRS/WK- 3
PRACTICAL - II		CREDIT – 3

Lab Exercises:

1. Program using Classes and Objects
2. Program using Constructor and destructor
3. Program using Function overloading and Inline functions
4. Program using Operator Overloading
5. Program using Inheritance
6. Program using friend functions

Programs using Data Structure Concepts

7. Implement PUSH, POP Operations of Stack using Arrays.
8. Implement insert, delete Operations of a queue using Arrays.
9. Conversion of infix to postfix using stacks Operations.
10. Binary tree traversals using recursion

II B.C.A	PROGRAMMING USING JAVA	CA305A
SEMESTER - III		HRS/WK-5
CORE - 7		CREDIT-3

UNIT – I **[15 Hrs]**

Introduction to Java: Features of Java – Data Types – Variables – Arrays – Operators - Control Statements.

UNIT – II **[15 Hrs]**

Classes and Objects: Constructors –Inheritance- Overloading method– Overriding methods – Using super – Abstract class.

UNIT – III **[15 Hrs]**

Packages and Interfaces: Packages-Creating Packages –Importing Packages– Interfaces.
Exception Handling: Try, Catch, Throws, Throw and Finally.

UNIT –IV **[15 Hrs]**

Thread: Introduction to Thread-Multithread-implementation of multithread application using synchronization.
Streams: Simple Input Streams-Simple Output Streams – File Streams-

UNIT – V **[15 Hrs]**

Strings: String classes-String Buffer classes.
Predefined Classes: Vector class, Random class, Calendar class, Date Class.

TEXT BOOK:

1. E. Balagurusamy, Programming with JAVA, TMH.

REFERENCE BOOKS:

1. Cray S. Horstman, Gray Cornell – Core Java 2 Vol. I and Vol. II – 7th Ed. PHI, 2000.
2. H. Schildt – Java 2 (The Complete Reference) – Fourth Edition, TMH 1999.
3. Wesley, K. Arnold and J. Gosling – The Java Programming Language – Third Edition Addison – Wesley, 2000.

II B.C.A	COMPUTER ALGORITHMS	CA306B
SEMESTER - III		HRS/WK-5
CORE - 8		CREDIT-3

UNIT-I: **[15 Hrs]**

Introduction: Algorithm-Pseudocode-Time complexity - Space complexity-best case,worst case and average case analysis- asymptotic notations: Big Oh,BigOmega,theta,smallOh,small Omega.

UNIT-II : **[15 Hrs]**

Divide and Conquer: General method- Complexity analysis-Binary search algorithm-Finding Maximum and minimum - Merge sort –Quick sort - Strassen's Matrix Multiplication

UNIT-III: **[15 Hrs]**

Greedy method: General method- Knapsack problem–Prim's Algorithm - Kruskal's Algorithm- single source shortest path algorithm

UNIT-IV : **[15 Hrs]**

Dynamic Programming: General method-definition: principle of optimality-applications of dynamic programming -multistage graph: forward approach, backward approach-Traveling salesman problem.

UNIT-V : **[15 Hrs]**

Graph algorthims:-Depth first search- Breadth first search-applications of graph traversals-comparison between DFS and BFS-Connected components –Biconnected components.

TEXT BOOKS:

1. E. Horowitz, S. Sahni and S. Rajasekaran, Computer Algorithms Galgotia-1999.
2. Anuradha and A.Puntambekar,Analysis and Design of Algorthims-Technical Publications(page no-1-3 to1-10, 2-1 to2-8, 5-1to5-23)
3. A. Puntambekar, Design and Analysis of Algorthims-Technical Publications Pune(page no:4-1 to4-5, 4-34 to4-36, 6-6 to6-38)

REFERENCE BOOKS:

1. G. Brassard and Brately- Fundamentals of Algorithmics, PHI 1996.
2. Goodman S.E. and Hedetniemi S.T. - Introduction to the Design and Analysis of Algorithms - Tata McGraw Hill publication

II B.C.A	JAVA PROGRAMMING	19CAP303
SEMESTER - III		HRS/WK-5
PRACTICAL - III		CREDIT-3

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Lab Exercises:

1. Finding area and Perimeter of a circle. Use Buffered Reader class.
2. Determining the order of numbers generated randomly using Random class.
3. Implementing and importing packages.
4. Implementing Interfaces-Arithmetic Manipulations
5. Exception Handling
6. Multithreading
7. String Manipulation using buffered Reader
8. Usage of Calendar Class and manipulation
9. Application using File streams(Sequential File)
10. Application using File streams(Random File)

II B.C.A	INTERNET TECHNOLOGIES	CA407A
SEMESTER – IV		HRS/WK-4
CORE- 9		CREDIT-3

UNIT – I **[12 Hrs]**

Internet Connection Concepts : Internet Communication Protocols – Internet Hosts – Internet Protocol(IP) Addresses – Domain and Host Name - Servers and Clients – Ports and Port Numbers – Types of Internet Connections – Internet Service Providers(ISPs)

UNIT – II **[12 Hrs]**

World Wide Web Concepts : URLs and Transfer Protocols – HTML – Java and JavaScript – VBScript – Plug-ins – XML – Cascading Style Sheets(CSS) – Websites – Portals – Web Directories and Search Engines – Home Pages.

UNIT – III **[12 Hrs]**

HTML tags : History of HTML – Structure of HTML – Basic Tags of HTML - List – Linking Document – Frames – Graphics to HTML Documents.

UNIT – IV **[12 Hrs]**

Style Sheet Basics : Introduction to CSS – Add Style to document – Creating Style Sheet rules – Style sheet Properties – Font – text – Color and Background Color – Box Properties.

UNIT – V **[12 Hrs]**

JavaScript : Introduction – Advantage of JavaScript – JavaScript Syntax – data type – Variable – Array – Operator & Expressions – Looping Constructors – Function – Dialog Box.

TEXT BOOK:

1. Ivan Bayross, Web Enable Commercial Application Development using HTML, DHTML, Javascript, PERL CGI, BPB Publications, 2000.

REFERENCE BOOKS:

1. Thomas A. Powell – HTML and XHTML: The Complete Reference, Tata McGrawHill, 4th Edition 2003.
2. E. Stephen Mack and Janan Platt, HTML 4.0: No Experience Required, Sybex Inc.
3. H. M. Deitel, P.J. Deitel, A.B. GoldBerg, Internet & World Wide Web: How to Programme, Prentice Hall, Third Edition

II B.C.A	ADVANCED JAVA PROGRAMMING	CA408B
SEMESTER - IV		HRS/WK-4
CORE- 10		CREDIT-3

UNIT - I **[12 Hrs]**

AWT Overview: Components, Container-AWT classes: Button, TextField, Checkbox-Layouts-Simple example using AWT. **Applet**: Introduction to Applet-Life Cycle of Applet.-Simple example using applet.

UNIT - II **[12 Hrs]**

Networks: Network Basics-socket overview-Internet Addressing-DNS-TCP/IP-URL-Example using network concepts.

UNIT - III **[12 Hrs]**

DataBase: JDBC-ODBC Driver-Connection class-Statement class-ResultSet class-Example using database (MS Access).

UNIT - IV **[12 Hrs]**

RMI: Introduction – RMI Package-RMI Classes and Methods-stub and skeleton-Architecture of RMI-Requirements for distributed applications-Steps to write the RMI program- Example program using RMI.

UNIT - V **[12 Hrs]**

Servlet: Servlet overview – your first servlet – servlet chaining – session management in servlet: Session Tracking-simple database program using Servlet.

TEXT BOOK:

1. H. Schildt – Java 2 (The Complete Reference] – Fourth Edition, TMH 1999.

REFERENCE BOOKS:

1. Cray S. Horstman, Gray Cornell – Core Java 2 Vol. I and Vol. II – 7th Ed. PHI, 2000.
2. Wesley, K. Arnold and J. Gosling – The Java Programming Language – Third Edition Addison – Wesley, 2000.

II B.C.A	ADVANCED JAVA PROGAMMING	CAP404T
SEMESTER - IV		HRS/WK-5
PRACTICAL - IV		CREDIT-3

Lab Exercises:

1. To implement Bio-Data Information using Frame class with various controls.
2. Display different graphical symbols using Applet class.
3. To implement for sending a string from one system to another using TCP/IP.
4. Chatting Application using TCP/IP.
5. To develop an application for telephone directory using data base(MS access).
6. To implement student mark list using AWT classes with data base (MS access).
7. To develop a program for prime number using RMI.
8. To develop a program for Arithmetic Operation using Servlets.
9. To develop an application for simple EB Bill using Servlets with database.

III B.C.A	RELATIONAL DATABASE MANAGEMENT SYSTEMS	19CA509
SEMESTER - V		HRS/WK-5
CORE- 11		CREDIT - 4

UNIT-I : **[15 Hrs]**

Introduction : Database system applications – Purpose of database systems – View of data : Data Abstraction – Instances and Schemas – Data Models – Database Languages: Data Manipulation Language – Data Definition Language - Data storage and querying: Storage Manager – The query processor – Database architecture- Database users and administrators: Database Users and User Interfaces – Database Administrator.

UNIT-II: **[15 Hrs]**

The Entity-Relationship Model: Entitysets – Relationshipsets – Attributes – Constraints : Mapping Cardinalities - Keys – Entity Relationship Diagrams : Basic Structure of E-R Diagram – Mapping Cardinality in E-R diagram – Complex Attributes – Roles – Non Binary Relationshipsets – Weak Entity sets.

UNIT-III: **[15 Hrs]**

Relational database design: First normal form – Decomposition using functional dependencies: Keys and functional dependencies – Boyce Codd normal form – Third normal form – Decomposition using Multivalued dependencies: Multivalued dependencies – Fourth normal form.

UNIT-IV: **[15 Hrs]**

Introduction to Oracle SQL: DDL,DML,DCL,TCL-Integrity Constraints-Built-in-functions: Character functions – number functions – Date functions- Conversion functions - Aggregate functions – SET operations – Grouping and ordering data – Joins - Subqueries – Views.

UNIT-V: **[15Hrs]**

Introduction to PL/SQL: PL/SQL blocks – Explicit Cursors – Exception handling section – Procedures – Functions – Packages – Triggers.

TEXT BOOKS:

1. "Database System Concepts", Abraham Silberschatz, Henry F.Korth, S.Sudarshan , International Edition , McGrawHill Publications , Sixth edition, 2002.
2. "SQL, PL/SQL, The Programming Language of ORACLE" (fourth Revised Edition) – Ivan BayRoss , BPB Publications, 2009.

REFERENCE BOOKS:

1. "An Introduction to Database Systems", C.J.Date, A.Kannan, S.Swamynathan, Eighth Edition, Pearson Education , 2007.
2. "Oracle Database 10g, The Complete Reference" , Kevin Loney , Tata McGraw Hill Publishing Company Limited , 2004.

III B.C.A	PROGRAMMING IN ASP.NETUSING C-SHARP	19CA510
SEMESTER - V		HRS/WK-5
CORE- 12		CREDIT – 4

UNIT - I **[15 hrs]**
Introduction to Dot Net:- Dot Net Framework –CLR-MSIL-JIT-Managed Code-Benefits of Dot Net.

UNIT - II **[15 hrs]**
C#.Net: Data types-Variables-Arrays-Properties-Namespace-Methods-Interface-Delegation.

UNIT - III **[15 hrs]**
Asp .Net: Difference between Asp and Asp.net-Architecture of Asp.net-Execution model-Difference between Code Behind and aspx file-Implementation of simple web application.

UNIT - IV **[15 hrs]**
Controls in C#: Button-Textbox-Timer-PictureBox-RadioButton-Menu. **Web Controls**: AdRotator-Validation-Calendar .

UNIT – V **[15 hrs]**
ADO.NET: ADO.Net Objects Model – Architecture of ADO.NET-Working with Grid control-Working with Crystal Report Viewer control.

TEXT BOOKS:

1. E. Balaguruswamy, Programming with C#, First Edition, Tata McGraw Hill Publication.
2. Matthew Macdonald, ASP.NET: The Complete Reference, McGraw Hill Publication.

REFERENCE BOOKS:

1. Harvey M. Deitel& Paul J. Deitel- C# Programmers- Second Edition-Pearson Edition.
2. YashavantKanetkar, 2004 C# .Net, Motilal Books of India.
3. Peter Drayton , Ben Albahari, Ted Neward. C# in an nutshell, O'Reilley Publication.
4. Herbert Schlit. 2002 C# - A Beginner's Guide. Osborne, Tata McGraw Hill Publication.
5. Burton Harvey, Simon Robinson, Julian Templeman and KarliWaston, 'C# Programming with the Public Bata', Shroff Publishers & Distributors Pvt. Ltd (SPD) Mumbai, April 2001.
6. Ben Albahart, Peter Drayton and Brad Merrill, 'C# Essentials', SPD, Mumbai March 2001.
7. ThamariSelvei, AText Book on C#: A Systematic Approach to OOP, Pearson Ed.

III B.C.A	DATA COMMUNICATION NETWORKS	ECA511
SEMESTER - V		HRS/WK-5
DSE - I		CREDIT - 4

UNIT -I **[15 hrs]**

Introduction: Networks – protocols and standard – line configuration – topology – transmission mode – categories of networks – inter networks.

UNIT -II **[15 hrs]**

OSI model: functions of the layers – TCP/IP protocol suite – signals – analog and digital signal – periodic and a periodic signals – analog signals – digital signal – data transmission – data terminal equipment – data circuit terminals equipment – modems.

UNIT -III **[15 hrs]**

Transmission media: guided media – unguided media – transmission impairments – media comparison. Multiplexing – FDM – TDM – WDM. Error detection and correction – types of errors–detection – vertical redundancy check (VRC) – longitudinal redundancy check (LRC) – cyclic redundancy check (CRC) – check sum – error correction.

UNIT -IV **[15 hrs]**

Switching Techniques: circuit switching – packet switching – message switching – networking and internetworking devices – repeaters – bridges – routers – gateways.

UNIT -V **[15 hrs]**

Routing algorithms: distance vector routing – link state routing – data link control – line discipline – flow control – error control.

TEXT BOOK:

1. Behrouz A Forouzan, Data Communications and Networks, Second Edition, McGraw Hill, 2002.

REFERENCE BOOKS:

1. William Stallings, Data & Computer Communications, Sixth Edition, Pearson Education, 2001.
2. Andrew S. Tanenbaum, Computer Networks, Pearson Education, 3rd Edition.
3. Fred Halsall, Data Communications, Computer Networks and Open Systems, Addison Wessley, 1995.

III B.C.A	ORGANIZATIONAL BEHAVIOR	19GCA52A
SEMESTER - V		HRS/WK-5
GE-I		CREDIT-4

UNIT- I **[15 Hrs]**

INTRODUCTION TO ORGANIZATIONAL BEHAVIOR : Definition-Key Elements of OB-Need for studying OB-Contributing Disciplines to OB-Challenges faced by the Management-OB Frame work – OB models.

UNIT-II **[15 Hrs]**

INDIVIDUAL BEHAVIOUR: Introduction to Personality –Determinants of Personality-Personality Types –Theories of Personality-Perceptual Process-Factors affecting Perception-Job Satisfaction-Determinants of Job Satisfaction-MotivationProcess -Need for Motivation-Maslow's Need Hierarchy Theory of Motivation.

UNIT- III **[15 Hrs]**

GROUP BEHAVIOUR: Definition andCharacteristics of Group-Need for people to form and join Group-Types of Group-Stages of Group Development-Team Building-Types of Team-Team Building Process.

UNIT - IV **[15 Hrs]**

COMMUNICATION: Introduction-Nature and Need for Communication-Process of Communication-Channels of Communication-Barriers to Communication

LEADERSHIP: Meaning-Functions of Leadership-Leadership Styles-Factors determining Effective Leadership-Leadership Theories - Transactional and Transformational Leadership.

UNIT -V **[15 Hrs]**

CONFLICTS: Introduction - Sources of Conflicts – Types of Conflicts – Conflict Management **STRESS:** Introduction - Sources of Stress – Consequences of Stress.

ORGANIZATIONAL CLIMATE: Definition-Dimensions of Organizational Climate - Determinants of Organizational Climate

ORGANIZATIONAL CULTURE: Organizational Culture: Definition and Characteristics - Types of Culture.

TEXT BOOK:

1. Dr. S.S. Khanka, Organizational Behaviour, S.Chand Publication, 4th Revised Edition

REFERENCE BOOKS:

1. Stephen P. Robins, Organisational Behavior, PHI Learning / Pearson Education, 11th edition, 2008.
2. Fred Luthans, Organisational Behavior, McGraw Hill, 11th Edition, 2001.

III B.C.A	RDBMS – ORACLE	CAP505T
SEMESTER - V		HRS/WK-4
PRACTICAL - V		CREDIT - 3

Lab Exercises:

SQL

1. Simple Queries using DDL,DML and DCL
2. SQL In-Built Functions
3. SET Operations
4. Views
5. Joins
6. Sub Queries

PL/SQL

7. PL/SQL Block
8. Procedures
9. Functions
10. Packages
11. Triggers
12. Cursors

III B.C.A	PROGRAMMING IN ASP.NET USING C-SHARP	19CAP506
SEMESTER - V		HRS/WK-4
PRACTICAL -VI		CREDIT - 3

Lab Exercises:

WINDOWS APPLICATION:

1. To develop simple student bio data
2. Create a color chooser using standard control.
3. To develop Notepad Application.
4. Login Form Creation using Ms Access.

WEB APPLICATION:

1. Create an application to sending a request from one page to another using session.
2. Create a simple website for an organization using Master Page.
3. To develop database application for student mark list processing using validation control (Oracle)
4. To develop database Application for Telephone Directory to store phone number, Customer name and Customer address and display it with Grid View control.(SQL server)

III B.C.A	PYTHON PROGRAMMING	19SCA51
SEMESTER - V		HRS/WK- 2
SEC		CREDIT - 2

Lab Exercises

1. Working with Charts
2. Manipulation using List
3. String Manipulation
4. Image manipulation using Arrays
5. Greatest of Three numbers
6. Finding factorial of a Number
7. Generation of n prime numbers
8. Computing summation of series
9. Finding factorial of a number using function.
10. Generation of n prime numbers using function.

III B.C.A	OPEN SOURCE TECHNOLOGY-PHP	CA614Q
SEMESTER - V		HRS/WK- 6
CORE		CREDIT - 4

UNIT-I **[18 Hrs]**

BASICS OF PHP:-History of PHP-Language basics:-Lexical structure-Data types-variables-Expressions and operators-flow control statements:if,if-else,while,do-while,switch,for,foreach-Functions:defining functions-variable scope(global and local variables)-function parameters: call by reference-call by value-return values: return single value, multiple value-handling missing parameters-default parameters.

UNIT-II **[18 Hrs]**

STRING: String constants-printing string functions: print, print_r, printf, echo, var_dump-string manipulation functions: trim, ltrim, rtrim, strtolower, strtoupper, ucfirst, ucwords, strpos, substr,chartocode, strlen, strrev,str_word_count, strcmp, strcasecmp

ARRAY: Indexed – Associative-multidimensional arrays-Array Sorting: sort, asort, ksort, rsort, arsort, krsort, usort, uasort, uksort, ord functions.

OOPS IN PHP: Class, Object, Inheritance, Creating a class-creating object-accessing properties and methods-this variable –inheritance-use of extend keyword-constructor.

UNIT-III **[18 Hrs]**

BUILT IN FUNCTIONS IN PHP:

Mathematical functions: floor, fmod, pow, round, rand, sqrt, max, min, log, hexdec.

Date and Time Functions: data, data_default_timezone_set, strtotime, mktime.

Handling Files: create- fopen - fread - fwrite – include – fclose – unlink – fgets – fgetc – feof - require-require_once.

UNIT-IV **[18 Hrs]**

Handling Web Pages: HTML – HTML tags-tables-frames-images-textfiled-textarea-listbox-checkbox-select-radiobutton-button-fileupload button-file download.Javascript –Javascript basics –validating forms.

Handling Session and Cookies: Global variables:-$_Globals, $_Server, $_request, $_Post, $_files, $_Cookies, $_Session.

UNIT-V **[18 Hrs]**

Working with Databases: Creating a MYSQL database-Creating a new Table-Inserting data into the database-Updating databases-Deleting records- Accessing the database records from PHP.

TEXT BOOK:

1. Steven Holzner, ”The Complete Reference PHP”, Tata McGraw Hill Pvt.Ltd., 2008.

REFERENCE BOOK:

1. Leon Atkinson, ”Core PHP programming”, Pearson Education, 2004.

III B.C.A	OPERATING SYSTEMS	CA615A
SEMESTER - VI		HRS/WK-6
CORE- 14		CREDIT - 4

UNIT-I **[18 Hrs]**

Introduction: History of Operating system - Operating system functions –Definition of Operating System–Different services of the operating system –Uses of System Calls –User's view of the operating system –The Macro Facility –GUI –The Kernel –Booting– Information Management (IM) –File system– Disk space allocation method–Directory structure.

UNIT-II **[18 Hrs]**

Process Management: Inter-process communication - Dead Lock - Dead Lock prerequisites - Dead Lock Strategies

UNIT-III **[18 Hrs]**

Memory Management: - Single Contiguous – Fixed Partitioned – Variable Partitions – Non-Contiguous allocations - Paging – Segmentation - Virtual Memory Management Systems.

UNIT-IV **[18 Hrs]**

GUI: – Components of GUI – Requirements of Windows based GUI –Security Protection: Threats – Attacks – Worms – Virus - Design principles – Authentication – Protection mechanisms – Encryption.

UNIT-V **[18 Hrs]**

Unix OS: Overview of Unix-Unix File System: Users View of File System-Types of Files-Internals of File System: Logical Layout of the File-The Super Block-Structure of inode-Address Translation-run-Time Data Structure for File system: UFDT-File Table-Inode Table-System Calls: Open-Read-Write-Random Seek-Close-Create a File-Unlink a File-Change Directory. Basic Commands in Unix.

TEXT BOOK:

1. A. S. Godbole, Operating Systems, Tata McGraw Hill, 1999.

REFERENCE BOOK:

1. A. Silberschatz and P. B. Galvin- Operating system concepts, Addision-Wesley Publishing company, Fifth Edition, 1998.
2. William Stallings, Operating Systems: Internals and Design Principles, Pearson Education India.

III B.C.A	SOFTWARE ENGINEERING	ECA616T
SEMESTER - VI		HRS/WK-5
DSE - II		CREDIT - 4

UNIT - I **[15 hrs]**

Introduction: Evolving Role of Software-Characteristics of Software-Software Myths-Process Models: Waterfall Model- Evolutionary Process Models.

UNIT –II **[15 hrs]**

Requirement Engineering: Tasks - Initiating the Requirements Engineering Process- Eliciting Requirements.

UNIT III **[15 hrs]**

Building Analysis Model: Requirement Analysis - Data Modeling – Flow Oriented Modeling – Class Based Modeling – Creating a Behavioral Model.

UNIT –IV **[15 hrs]**

Testing: Software Testing Methods - Software Testing strategies –White Box Testing – Basic Path- Control Structure – Black Box Testing.

UNIT –V **[15 hrs]**

Project Management: Management Spectrum - Formal Technical Reviews – Software Change Management Process – Clean Room S/W Engineering Specification-Design and Testing.

TEXT BOOK:

1. R. S. Pressman, Software Engineering, Sixth Edition, Tata McGraw Hill International Edition – 1997.

REFERENCE BOOKS:

1. Richard Fairley, Software Engineering (Design, Reliability and Management), Tata McGraw Hill edition, 1983.
2. Carlo Ghezzi, Mehdi Jazayasi, Dino Mandrioloi, Fundamentals of Software Engineering, PHI Pvt. Ltd., 1991.

III B.C.A	PROGRAMMING IN PHP	CAP607Q
SEMESER - VI		HRS/WK- 5
PRACTICAL– VII		CREDIT -3

Lab Exercises:

1. Simple Programs (Factorial , prime number, Fibonacci series)

2. String Functions:
(trim,ltrim,rtrim,strtolower,strtoupper,ucfirst,ucwords,strops,substr,chartocode, strlen,strrev,str_word_count,strcmp,strcasecmp)

3. Arrays

4. Functions-Math function:-floor,pow,round,rand,sqrt,max,min,hexdec.
Date and Time functions:-strtotime,mktime,data_default_timezone_set.

5. Create a Home Page using PHP and validating the form using javascript.

6. Form creation using POST method

7. Database Operations

8. Login form

9. Student mark list creation

10. Electricity bill preparation.

III B.C.A	MINI-PROJECT	JCA601
SEMESTER - VI		HRS/WK-3
PROJECT - I		CREDIT - 3

Mini-Project on Multimedia/ Web design/Mobile Applications.

FORMAT FOR PREPARING MINI PROJECT REPORT

Arrangement of contents

1. Title Page
2. Bonafide Certificate
3. Acknowledgement
4. Table of contents
5. Abstract
6. Chapters of the Report
7. References
8. Appendices, if any

Appendices should be named as

APPENDIX – A
APPENDIX - B

BINDING SPECIFICATION

- Report should be found using flexible cover of thick white art paper.
- The Spine for the bound volume should be 2cms width.
- The Cover should be printed in block letters.

MARGIN SPECIFICATION

Top : 4 cms
Bottom : 3 cms
Left : 4.5 cms
Top : 2.5 cms

PAGE NUMBERING

All Page numbers should be typed without punctuation on the bottom-center portion of the page. The Preliminary pages(table of contents and abstract) should be numbered in lowercase roman literals. Papers of main text, starting with chapter-1, Should be consecutively numbered using Arabic numerals.