

Scheme & Syllabus

of

**B.Sc. (Computer Science)Hons.
Ist to VIth Semester**

**w.e.f. July 2011
(2011-2014 Batch onwards)**

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Proposed Syllabus & Scheme for B. Sc.(CS.)Hons. SEMESTER SYSTEM

(Effective from July 2011 session for 2011-14 batch onwards)

CLASS /SEMESTER	B. Sc.(CS)Hons.	CCE	MIN. MARKS	TERM END EXAM	MIN. MARKS	TOTAL 100%	MIN. MARKS
FIRST SEM.	CS-1101--Computer Organization	15	5	85	28	100	33
	CS-1101P- Practical on Computer Org. & MS Office	---	---	---	---	50	17
SECOND SEM.	CS-1201- Programming & Problem Solving through C.	15	5	85	28	100	33
	CS-1201P- Practical on C Language	---	---	---	---	50	17
THIRD SEM.	CS-2301-Data Structure using C Language.	15	5	85	28	100	33
	CS-2301P-Practical on Data Structure using C	---	---	---	---	50	17
FOURTH SEM.	CS-2302- Operating System using Linux	15	5	85	28	100	33
	CS-2401- Database Management System	15	5	85	28	100	33
FIFTH SEM	CS-2401P-Practical on RDBMS	---	---	---	---	50	17
	CS-2402-System Programming	15	5	85	28	100	33
FIFTH SEM	CS-3501 Object Oriented Programming using C++	15	5	85	28	100	33
	CS-3501P-Practical on C++	---	---	---	---	50	17
SIXTH SEM	CS-3502 Computer Graphics	15	5	85	28	100	33
	CS-3502P Practical on Computer Graphics	--	---	---	---	50	17
SIXTH SEM	CS-3503 Computer Oriented Numerical Method	15	5	85	28	100	33
	CS- 3503P Practical on CONM using C++	--	---	---	---	50	17
SIXTH SEM	CS-3601-Computer Network	15	5	85	28	100	33
	CS-3601P-Practical on Computer Network	---	---	---	---	50	17

(Effective from July 2011 session for 2011-14 batch onwards)

	CS-3602 Computer Architecture	15	5	85	28	100	33
	CS-3603 VB .NET	15	5	85	28	100	33
	CS-3602P Major Project	-	-	-	-	100	33

PS :- CCE ----- CONTINUOUS COMPREHENSIVE EVALUATION, INDIVIDUAL PASSING REQUIRED FOR THEORY.

(Effective from July 2011 session for 2011-14 batch onwards)

CS-2301 DATA STRUCTURE USING C LANGUAGE

Commencing from 2012 onwards

Unit- I

Introduction to Data Structures: Definition of Data structure and Abstract data type

Classification of Data structures: Linear, Non-linear, homogeneous, non-homogeneous, static & dynamic.

Arrays: Definition & types of array, Memory representation of one & two dimensional array, Operations: Insertion, Deletion, Traversal

Sparse Matrix: Definition & memory representation.

Unit- II

Stack : Definition, Array implementation of stack (static stack) : Operations PUSH, POP, TRAVERSE .

Applications of stack : Infix, Prefix , Postfix representation and evaluation using stack, Use of stack in recursive implementation.

Queue : Definition, Array implementation of queue (static queue) : Operations INSERT, DELETE, TRAVERSE.

Introduction to Circular queue: Definition & implementation, Priority queue, Double ended queue

Applications of queue

Unit- III

Introduction to Linked List: Definition, advantages, Types of linked list: single, doubly, circular linked list

Operations: Creation, insertion, deletion & traversal of linked list

Unit- IV

Complexity of Algorithms: Time & space complexity, Best-case, worst-case, average-case, Big –oh notation.

Searching Algorithm: Linear or sequential search, Binary search, Interpolation search using array.

Complexity of Linear search, Binary search, Interpolation Search

Sorting Algorithm: Bubble sort, Selection sort, Insertion sort, Merge sort

Complexity of sorting algorithm.

Unit- V

Introduction to Tree: Definition, Binary tree: Definition, representation,

Operations: Traversal, insertion, deletion

Binary search Tree(BST): Definition and creation, Search using BST

Introduction to B-Tree & B+ tree.

Introduction to graph: Definition & representation, Graph Traversal : Depth First Search(DFS), Breadth First Search(BFS) algorithm.

Text Books:

1. Yedidyah Langsam Moshe J. Augenstein, Aaron M. Tenenbaum, "Data Structures using C & C++", PHI New Delhi, 2nd Edition

Reference Books:

1. G.S. Baluja, "Data Structures Through C", Dhanpat Rai & Co., 4th Edition
2. Seymour Lipschutz, "Data Structures", Schaum's Outline Series, Tata Mc Graw Hill Publishing Company Ltd.
3. Adam Drodzsek, "Data Structures & Algorithm in C++", 2nd Edition

(Effective from July 2011 session for 2011-14 batch onwards)

CS-2301P Practical exercise on Data Structure using C
Commencing from 2012-13 onwards

1. Write a program for address calculation of an element in one and two dimensional array (row major order and column major order).
 2. Write a program for insertion, deletion and traversal of elements of an array.
 3. Write a program for sparse matrix implementation.
 4. Write a program for complete implementation of stack using array with push, pop and traversal operations.
 5. Write a program for conversion of an infix expression into postfix representation and evaluation of that postfix form.
 6. Write a program for complete implementation of queue using array with insertion, deletion and traversal operations.
 7. Write a program for complete implementation of circular queue using array with insertion, deletion and traversal operations.
 8. Write a program for complete implementation of double ended queue using array with insertion, deletion and traversal operations.
 9. Write a program to create singly link list (creation, insertion, deletion and traversal).
 10. Write a program to create doubly link list (creation, insertion, deletion and traversal).
 11. Write a program to create circular singly link list (creation, insertion, deletion and traversal).
 12. Write a program to create circular doubly link list (creation, insertion, deletion and traversal).
 13. Write a program for complete implementation of stack using link list with push, pop and traversal operations.
 14. Write a program for complete implementation of queue using link list with insertion, deletion and traversal operations.
 15. Write a program for implementation of binary tree (creation, insertion, deletion), with preorder, inorder and postorder traversal.
 16. Write a program for implementation of binary search tree (creation, insertion, deletion), with preorder, inorder and postorder traversal.
 17. Write a program for implementing graphs and showing depth first search and breadth first search traversals.
 18. Write a program for linear search.
 19. Write a program for Binary search.
 20. Write a program for interpolation search.
 21. Write a program for bubble sort.
 22. Write a program for selection sort.
 23. Write a program for insertion sort.
 24. Write a program for merge sort.
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CS – 2302 OPERATING SYSTEM USING LINUX
Commencing from 2012-13 onwards

UNIT – I

Evolution of Operating System, Definition of Operating System, Objectives & Function of Operating System, Operating System as a resource manager, Types of Operating System, features of Linux, Basic Architecture of Linux system, features of Kernel and Shell. Differentiate DOS, Windows & Linux.

UNIT –II

Structure of file system, Essential Linux commands - Commands for files and directories creating and viewing files using cat, cd, ls, cp, md, rm, mkdir, rmdir, pwd, file, more, less, file comparisons – cmp & comm, View files, disk related commands, checking disk free spaces, chmod with its options, cal, date, who, tty, lp, stty.

UNIT –III

Filters and pipes : head, tail , wc, pr, cut, paste, sort, unique, grep, egrep, fgrep ,tee, The process : shell process, parent and children ,process status, system process, multiple jobs in background and foreground, changing process priority with nice, premature termination of process, Mathematical commands- bc, expr, factor, units.

UNIT –IV

Creating and editing files with VI editor with their command options, Operators, text deletion, text movement, changing text, yanking text, filtering text, the ex mode, moving text from one file to another.

Communication: The bulletin board –news, write, mesg, talk, mail, elm, pine, finger, vacation and connecting to remote machine.

UNIT – V

System administration Common administrative tasks, identifying administrative files – configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Installation of Linux system–Linux Installation requirement, complete Procedure steps, Partitioning the Hard drive, System startup and shut-down process, init and run levels. File system mounting, lpstat, backup strategy, installing software on Linux.

TEXT BOOK

1. Unix concepts and Application- Sumitabha Das-Tata McHill .

REFERENCE BOOKS:

1. Unix – Syed mansoor sarwar, Robert kortskey - Pearson Education
2. Using Linux – David Bandel and napier – Pearson Education

CS-2401 Database Management System **Commencing from 2012-13 onwards**

Unit – 1

Fundamentals of DBMS: Data, Information, Database & Computers, DBMS Definition, DBMS versus file processing system, Components of DBMS Environment, Instances & Schemas, Three Levels Architecture, Data Independence, Data Dictionary, Database Users, Data Administrators.

Unit – 2

Modeling the Real World, Various Data Models & their Comparison, Entity Relationship Models. RDBMS –Concept, Components, Data Integrity, Keys, Relational data Manipulations and Relational Algebra, Tuple Calculus.

Unit – 3

Normalization: Definition, Decomposition, Basic Concepts like FD, Objectives of Normalization. Normal Forms- First, Second, Third Normal Form, BCNF, Concept of Multi Valued Dependencies & Higher Normal Forms.

Unit – 4

Introduction to SQL, DDL, DML, and DCL statements, Creating Tables, Adding Constraints, Altering Tables, Update, Insert, Delete & various Form of SELECT- Simple, Using Special Operators for Data Access. Nested Queries & Exposure to Joins, Aggregate Functions.

Unit – 5

Transaction: Concept of Transaction, Concurrency Control-Problem & its Basis, Concurrency Control - Locks & Deadlocks. Recovery-Kind of Failures, Recovery Techniques, Security-Authentication, Authorization, Access Control.

Text Book:

1. H. F. Korth & A. Silverschatz, Database Concepts, Tata McGraw Hill, New Delhi

Reference Books:

1. Elmasri & Navathe, Fundamentals of Database systems, Addison & Weisely, New Delhi.
 2. C. J. Date, Database Systems, Prentice Hall of India, New Delhi.
 3. Ivan Bayross, SQL, PL/SQL, BPB Publications, New Delhi.
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CS-2402 SYSTEM PROGRAMMING

Commencing from 2012-13 onwards

UNIT I FUNDAMENTALS

System software and machine architecture – The Simplified Instructional Computer(SIC)
Machine architecture – Data and instruction formats – Addressing modes
Instruction sets – I/O and programming.

UNIT II ASSEMBLERS

Basic assembler functions – A Simple SIC assembler – Assembler algorithm and data structures
Machine Dependent assembler features – Instruction formats and addressing modes
Program relocation – Machine independent assembler features
Literals – Symbol – Defining statements – Expressions – One pass assemblers and multi pass assemblers – Implementation example – MASM assembler.

UNIT III LOADERS AND LINKERS

Basic loader functions – Design of absolute loader – Simple bootstrap loader
Machine dependent loader features – Relocation – Program linking
Algorithm and data structures for linking loader – Machine independent loader features – Automatic
library search – Loader options – Loader design options – Linkage editors – Dynamic linking
Bootstrap loaders – Implementation example– MSDOS linker.

UNIT IV MACRO PROCESSORS

Basic macro processor functions – Macro definition and expansion – Macro processor algorithm and data structures – Machine independent macro processor features – Concatenation of macro parameters – Generation of unique labels – Conditional macro expansion – Keyword macro parameters – Macro within macro – Implementation Example – MASM Macro Processor – ANSI C Macro Language.

UNIT V SYSTEM SOFTWARE TOOLS

Text editors – Overview of the editing process – User interface – Editor Structure
Interactive debugging systems – Debugging functions and capabilities
Relationship with other parts of the system – User interface criteria.

TEXT BOOK

1. Donovan, J.J., “Systems Programming”, Tata McGraw-Hill, 1972

REFERENCES

1. Dhamdhare, D. M., “Systems Programming and Operating Systems”, 2nd Revised Edition, Tata McGraw-Hill, 1999.
2. Beck, L.L. “System Software - An Introduction to Systems Programming” 3rd Edition, Pearson Education, 2000.

CS-3501 Object Oriented Programming using C++ Commencing from 2013-14 onwards

To introduce the concept of object oriented programming through C++.

UNIT I

Introduction, OOPS languages, characteristics of OOP's languages, application of OOP's, OOP's paradigm, concepts: object, class, data abstraction, data encapsulation, inheritance, and polymorphism. Static and dynamic binding, message passing, benefits of OOP's, disadvantage of OOP's. Application of OOP's.

UNIT II

C++ programming basics, basic program structure ,preprocessor directive, data types, operators, manipulator, type conversions, C++ stream class. Control statement: for, do, while, do-while Decision statement if, if-else, switch-Case. Jump statement: break, continue, go to, exit.

UNIT III

Function and arrays. Classes and instances, defining classes in object oriented language, building and destroying instances (constructors and destructors), modifiers, friend and inline functions, string handling function.

UNIT IV

Data encapsulation, polymorphism, operator overloading, function overloading, virtual functions.

UNIT V

Inheritance, reusability of code through inheritance, type of inheritance, data abstraction, abstract classes. Templates and exception handling.

TEXT BOOK:

1. Object oriented programming with c++ by Balaguruswamy. TMH Publishing

REFERENCE BOOKS:

1. C++, The Complete Reference, 4th Edition, Herbert Schildt, TMH.
 2. C++ Primer, 3rd Edition, S.B.Lippman and J.Lajoie, Pearson Education.
 3. The C++ Programming Language, 3rd Edition, B.Stroutstrup, Pearson Education.
 4. OOP in C++, 3rd Edition, T.Gaddis, J.Walters and G.Muganda, Wiley DreamTech Press.
 5. Object Oriented Programming in C++, 3rd Edition, R.Lafore, Galigotia Publications Pvt Ltd.
 6. Computer Science, A Structured Programming Approach Using C++, B.A.Forouzan and R.F.Gilberg, Thomson
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CS-3501P PRACTICAL (OBJECT ORIENTED PROGRAMMING THROUGH C++)

1. Write a program to find the maximum of three using conditional operator.
 2. Write a program to find the largest, second largest and third largest in a given array.
 3. Write a program to generate Armstrong series.
 4. Write a program to find the factorial of a given number.
 5. Write a program to generate the Fibonacci series.
 6. Write a program to check whether the given number is palindrome or not.
 7. Write a program to find the GCD and LCM of two no's.
 8. Write a program to print the diagonal elements of matrix.
 9. Write a Program to demonstrate use of array of objects.
 10. Program to demonstrate use of function overloading.
 11. Write a function which accept object as a parameter and returns object.
 12. Write a Program to demonstrate the virtual base class.
 13. Write a Program to demonstrate use of polymorphism (virtual function).
 14. Write a program to overload ++ operator to increment age of person by one month.
 15. Write a program to illustrate the use of scope resolution operator.
 16. Write a program to find the square root using inline function.
 17. Write a program to illustrate the use of friend function.
 18. Create two employee objects and display each object's yearly salary.
 19. Give each employee a 10% raise and display each Employee's yearly salary again..
 20. Write C++ program to create five object of book, get information of book using getdata() function including name, price, publication and author.
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CS-3502 COMPUTER GRAPHICS
Commencing from 2013-14 onwards

UNIT – I

Introduction to computer graphics, application of computer graphics, Hardware and software requirements for computer graphics, Pixel, frame buffer, Resolution, aspect ratio.
Types of graphics Display Devices: Video Display Devices: Random Scan, Raster Scan Monitors, Color CRT Monitor, DVST, flat panel and Plasma Panel display devices.
Input Devices: mouse, Trackball, Light pen, Scanner, Digital Camera and
Hard copy devices: Printers & plotters

UNIT – II

Basic Raster Graphics algorithms for drawing 2-D Primitives: Algorithms for line Generation, circle generation, polygon generation and polygon filling algorithm, Anti aliasing.
Windowing and clipping: window, viewport, window to viewport transformation, clipping operations: point clipping, line clipping, text clipping, polygon clipping.

UNIT – III 2D Transformation: Translation, Scaling, Rotation, Reflection, shearing, composite transformation, homogeneous Coordinates.

3-D Transformation: Translation, Scaling, Rotation, Reflection, shearing, composite transformation.

3-D Viewing: Viewing pipeline, Projections: parallel and perspective.

UNIT – IV

Hidden Surface removal—Depth comparison, Z-Buffer Algorithm, Back-Face Removal, The Painter's Algorithm, Scan-Line Algorithm, Subdivision Algorithm.

UNIT – V

Light and Color, Different color models, RGB, CMY, YIQ. Introduction to multimedia, Computer animation, Raster animation, Computer animation languages.

Text Books:

1. Computer Graphics by Donald Hearn and M. Pauline Baker.

Reference Books:

1. Computer Graphics by Zhigang Xiang and Roy Plasock, Schaum's Outlines.
 2. Computer Graphics and Multimedia by G.S.Baluja, Dhanpat Rai and Co.
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CS-3502P Practical on Computer Graphics
Commencing from 2013-14 onwards

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1. Write program for DDA line Method.
 2. Write program for Brasnham's line drawing Algorithm.
 3. Write program for Brasnham's Circle drawing Algorithm.
 4. Write program for drawing a polygon.
 5. Write program for Scan – Filling a Polygon.
 6. Write program for translation transformation for an object.
 7. Write program for rotation transformation for an object.
 8. Write program for scaling transformation for an object
 9. Write program for Sutherland Hodgeman Polygon Clipping.
 10. Write program for Cohen- Sutherland line clipping method and clip a line using this.
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CS-3503 Computer Oriented Numerical Methods
Commencing from 2013-14 onwards

Unit I

Computer Arithmetic and Solution of Non-Linear Equations : Introduction – Floating Point Arithmetic and Errors: Floating point represent of Numbers – Sources of Errors – Non-Associativity of Arithmetic – Propagated Errors – Pitfalls in Computation.

Unit-II

Solution of Non-Linear equations: Bisection – Fixed point – Regula falsi – Newton's Raphson – Secant method. Convergence criteria of Iterative methods .

Unit III

Solution of simultaneous Linear Algebraic Equations and ordinary differential equations : Cramer's Rule - Gauss elimination method – Pivoting Strategies - Gauss Jordan method – Jacobi Iterative method – Gauss Seidal method –Comparison of Direct and Iterative methods.

Unit IV

Interpolation and Curve Fitting : Problem of Interpolation – Lagrange's method of Interpolation – Inverse Interpolation – Newton's interpolation formulae – Error of the Interpolating Polynomial - Interpolation at equally spaced points : Forward and Backward differences – Newton's forward and backward difference formulas. Fitting of polynomials and other curve - Least square approximation of functions, linear and polynomial regressions.

Unit V

Numerical differentiation and Integration : Differentiation based on polynomial fit - Numerical integration using Simpson's rule and Gaussian quadratic formula - Numerical solution of differential equations of the form $dy/dx=f(x,y)$ using Euler's method and Runge-Kutta method

Text Book:

1. V. Rajaraman, Computer Oriented Numerical Methods, PHI.

Reference Books:

1. Numerical methods for Scientific and Engineering Computation by M.K.Jain, S.R.K.Iyengar, R.K. Jain.
 2. Elementary Numerical Analysis by Samuel D.Conte and Cart de Boor, McGraw Hill International Edition.
 3. Numerical methods for Science and Engineering, PHI by R.G.Stanton
 4. Computer based numerical algorithms by E.V.Krishnamoorthy
 5. Introduction to Numerical Analysis by E.Atkinso
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CS-3601 Computer Network **Commencing from 2013-14 onwards**

UNIT-I

Computer Network, Goals and Applications, Reference models – OSI and TCP/IP. A Comparative study. Network hardware – LAN, MAN and WAN and topologies, LAN components – File server, Workstations, Network Adapter Cards. Connection Oriented and Connection less services,

UNIT-II

Data communication system, data communication links, character codes, digital data rates, serial data formats, encoded data formats, error detection & correction. Transmission media- guided and unguided media, Switching Techniques – Circuit Switching, Packet Switching, Message Switching.

UNIT-III

Data link protocol, character oriented protocol & bit oriented protocol, network architecture protocols, Ethernet, token bus & token ring.

UNIT-IV

Internet basics: - Elements of the web, viewing web pages with a browser, using a browser for a mail, News and chat, security and privacy issues. Internet: advantage and disadvantage. Internet Services

Web server and proxy server, Web caches, Web browser like Internet Explorer, Netscape Navigator, and Communication Suit, Internet Security issues, Embedded and Software based firewall, Data encryption and Digital Signature and Certificates

UNIT-V

The art of creating the website and home page, The HTML programming basics, Syntax and rules, Tables, Frames, Forms, Example of HTML page, Choice of colour, banners, Linking with HTML page, Div, Span, met tags, span, Introduction to DHTML, JavaScript, Use of JavaScript, JavaScript Syntax, Data type, Variable , Array , Operator and Expressions.

Text Books:

1. Data & Network Communication by Michael A. Miller

Reference Books:

1. Deitel & Deitel, Goldberg, "Internet and World Wide Web-How to Program", Pearson Education Asia, 2001.

2. Computer Networks-A.S.Tanenbaum.

CS-3601P (Practical Exercise on Computer Networking)
Commencing from 2013-14 onwards

1. Create a webpage that prints your name to the screen.
 2. Create a webpage that print the numbers 1 - 10, each number being a different colour.
 3. Print a paragraph with 4 - 5 sentences. Each sentence should be a different font.
 4. Print two lists with any information you want. One list should be an ordered list, the other list should be an unordered list.
 5. Print a paragraph that is a description of a book, include the title of the book as well as its Author. Names and titles should be underlined, adjectives should be italicized and bolded
 6. Print some preformatted text of your choosing
 7. Create a page with a link at the top of it that when clicked will jump all the way to the bottom of the page. At the bottom of the page there should be a link to jump back to the top of the page
 8. Display an image that has a border of size 2, a width of 200, and a height of 200.
 9. Display five different images. Skip two lines between each image. Each image should have a title
 10. Display an image that when clicked will link to a search engine of your choice
 11. Add a simple table to for storing Train information (Train No, Name, Source, Destination, Time) without borders. Do the following
 1. Add border value of 1, save and view.
 2. Add a border value of 5, save and view.
 3. Make the top row a table header, save and view.
 4. Align all data elements to the middle of their cells, save and view.
 5. Divide Time into Departure Time, Arrival Time.
 12. Write a JavaScript, which calculate sum or product depending on the drop down menu selection of two numbers, accepted using textbox and display the result in the third textbox. The action performs on click event on button.
 13. Write a JavaScript which displays current date and time when page loads.
 14. Write a JavaScript that prompts the user for his or her name as the page load (via dialog box) and then welcome the user by name in the body of the page.
 15. Create a Webpage using two image files, which switch between one another as mouse pointer mover over the images.
 16. Write a JavaScript, which calculates factorial of a number, accepted using textbox and displays the result in second textbox. The action performs on click event on button.
 17. Write a JavaScript which reverses the number accepted in textbox.
 18. Create an HTML form which has number of textboxes like First Name, Last Name, Address and PinCode. Write a JavaScript code to verify following on click event of a button:
 1. Pop up an alert indicating which textbox has left empty and set focus on that specific textbox.
 2. Give message "Thank You" if all text boxes are filled.
 3. Pop Up an alert message if text within Pin code is not numeric value and greater than 6 digits and set focus on it till it is given proper value.
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CS-3602 COMPUTER ARCHITECTURE

Commencing from 2013-14 onwards

UNIT I

A brief history of Computers. structure and function ,Pentium and power evolution, computer components, computer function, interconnection structure, bus interconnection, PCI .

UNIT II

Computer Memory System, Semiconductor main memory, cache memory, advance DRAM organization, Magnetic Disk, Optical memory, Magnetic tap.

UNIT III

Machine Instruction Characteristics, Types of Operand, Type of Operations, Addressing, Instruction formats. CPU Structure & function : Process Organization, register organization, The Instruction Cycle, Instruction Pipelining.

UNIT IV

Micro Operations, control of the CPU, Hardwired implementation, Basic Concepts of Micro programmed control, microinstruction sequencing, and microinstruction execution, applications of micro programming

UNIT V

External Devices, I/O modules, Programmed I/O Interrupt-Driven I/O, Direct Memory Access, I/O Channels and processors, parallel processor, RAID, Introduction to Assembly Language.

TEXT BOOK

1.Computer Organization and Architecture by William Stallings, Fifth Edition 1999 PHI (Text).

REFERENCE BOOK :

1. Computer Architecture and Organisation, Nicholas carter, Scaum Series TMH Adaptation, 2nd Ed. 2010
 2. Computer Organization and Architecture by Hayes (Tata McGraw Hill)
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CS-3603 Visual Basic .NET
Commencing from 2013-14 onwards

UNIT 1

Introduction to VB.NET, Event Driven Programming, NET as better, Programming Platform NET Framework, NET Architecture, CLR, The Just-In-Time Compiler, Garbage Collection, .NET Framework class library introduction VB.NET Development Environment, Creating Applications, Visual development & event drive Programming -Methods and events.

UNIT-2

The VB.NET Language- Variables -Declaring variables, Data Type of Variables, Arrays, Handling and Using Interfaces, Control flow statements: conditional statement, loop statement. Message box & Input box, Function creation.

UNIT 3

VB.NET Language Controls: Text Boxes, Buttons, Labels, Check Boxes, and Radio Buttons. List Boxes, Combo Boxes. Picture Boxes, Scrollbars, Splitters, Timer, Menus, Built-in Dialogs Image List, Tree Views, List Views, Toolbars, Status Bar and Progress bars, OpenFileDialog, SaveFileDialog, Font Dialog,

UNIT -4

Understanding Delegates. Class Library Overview. Creating a Class Library. Working with the Class Library Understanding Built-In Classes. Creating User-Defined Classes. Understanding Constructors and Instance Variables., Introduction to Error Types: Understanding Syntax Errors, Understanding Runtime Errors and Using Exception Handling, Understanding Logical Errors and Using Break Points.

UNIT 5

Database : Connections, Data adapters, and datasets, Data Reader, Connection to database with server explorer Multiple Table Connection Data binding with controls like Text Boxes, List Boxes, Data grid etc. Navigating data source Data Grid View, Data form wizard Data validation Connection Objects, Command Objects, Data Adapters, and Dataset Class.

REFERENCE BOOKS

1. Mastering VB.NET by Evangelos petroustos- BPB publications
 2. Introduction to .NET -Worx publication
 3. Introduction to .NET –Unleashed
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CS-3602P Practical on VB.Net

1. Create a window application for simple Calculator.
 2. Create a window application to compare b/w two no, compare b/w 3 no.
 3. Create a login form for a user. .
 4. Create a program with a textbox and one button control to check no is even or odd.
 5. Create a program with a textbox and one button control check the year is leap year or Not.
 6. Create a windows application to calculate simple interest.
 7. Create a windows application to calculate factorial of a number.
 8. Create a windows application to calculate for storing and displaying 10 numbers in an Array.
 9. Create a windows application to display your name scrolling using timer..
 10. Create a windows application to calculate to generate Fibonacci series.
 11. Create a windows application to display same menu as in MS-WORD 2003.
 12. Create a windows application to calculate Sum and Average of 10 numbers stored in an array.
 13. Create a program to determine whether a given angle forms a valid triangle.
 14. Create a program which allow user to select gender using checkbox control
 15. Create a program to change the case of text box according to selected radio button.
 16. Create a program to add a record in SQL-SERVER Database.
 17. Create a program with a textbox and two button control to set the buttons to open a file and to save a file dialogbox.
 18. Create a windows application that contains text boxes and a button. The click event of the button displays the percentage of student on the basis of marks entered in the text boxes.
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