# Scheme of Examinations

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<td>Non Major Elective II: DTP Programming</td>
<td>1</td>
<td>2</td>
<td>-</td>
<td>50</td>
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<td><strong>TOTAL</strong></td>
<td>30</td>
<td>24</td>
<td>675</td>
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</tr>
</tbody>
</table>

**TOTAL CREDITS:** 139  
**TOTAL MARKS:** 4125  
**NOTE:** Period of Duration for ESE Theory and Practical is 3 hours.
Objective: To equip the students to program well in the programming language COBOL through its basic concepts.

<table>
<thead>
<tr>
<th>Unit: I</th>
<th>10 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to COBOL- History of COBOL- Coding Format for COBOL Programs- Structure of a COBOL Program – Character Set- COBOL words- Data Names and Identifiers- Literals- Figurative Constants-Continuation of Lines. Identification and Environment Division-Data Division-Introduction-Level Structure-Data Description Entries-Picture Clause- Value Clause- File Section- Working Storage Section-Editing.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: II</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: III</th>
<th>12 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>More about Data Movement Verb and Arithmetic Verbs-Elementary and Group Moves- Corresponding Option-Rounded Option- On Size Error Option-Compute Verb-Conditional and Sequence Control Verb-Condition. If statement-GOTO with Depending Phrase- Alter Statement-Perform Statement-Exit Statement-Table Handling-Occurs Clause and Subscripting-Assigning Values to Table Elements-Multidimensional Tables-Perform Verb and Table Handling-Index Tables and Indexing-Set Verb-Search Verb-Occurs Depending Clause-Sorting a Table-Index Data Item-Use of Indexes and Index Data Item.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: IV</th>
<th>10 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit: V</td>
<td>10 Hours</td>
</tr>
<tr>
<td>-------------------------------</td>
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</tr>
</tbody>
</table>

**TEXT BOOK:**


**BOOKS FOR REFERENCE:**

Objective: To provide the fundamental details about the internals of computers.

Unit: I  
10 Hours  
Flowchart and Number Systems: Logic and Flowcharting - Flowcharting-Flowcharting  
Symbols-Program Specification Analysis - Program Specification - Introduction- Input-Output -  
Throughput.  
Number system – Digital Computers and Digital Systems – Binary Numbers – Number Based  
Conversions – Octal and Hexadecimal Numbers – Complements – Binary Codes.

Unit: II  
10 Hours  
Boolean Algebra: Boolean Algebra and Logic Gates-Basic Definition – Axiomatic Definition  
of Boolean Algebra – Basic Theorems and Properties of Boolean Algebra – Boolean Functions – Other  
MDS – ROM – RAM – PROM – EPROM.

Unit: III  
10 Hours  
subtractor - Full Subtractor – Multilevel NAND circuits – Multilevel NOR Circuits – Binary Parallel  

Unit: IV  
10 Hours  
Introduction – Flip Flops – Triggers of Flip Flops – Flip Flops Excitation Table – Design Procedure –  
Design Counters – Registers, Counters and Memory Unit. Registers – Shift Registers – Ripple Counters –  
Synchronous Counters – Timing Sequence.

Unit: V  
12 Hours  
Input-Output Devices: Punched Tape, Tape Readers – Punched Cards – Card Readers –  
Alphanumeric Codes – Character Recognition – MICR – OCR –Output Equipment - Printers – CRT  
Output Devices – Magnetic tape – Output Offline Operation – Error Detecting and Error Correcting Codes  
TEXT BOOKS:


BOOKS FOR REFERENCE:

<table>
<thead>
<tr>
<th>Unit: I:</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: II</th>
<th>11 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>System of Linear Algebraic Equations- Gauss Elimination- Inverse of Matrix using Gauss Elimination- Gauss Jordan – Triangularization-Gauss Jacobi and Gauss Seidal Method</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: III</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: IV</th>
<th>11 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation Analysis-Meaning-Types-Degrees of Correlating-Scatter Diagram-Correlation Graph-Karl Pearson’s Coefficient of Correlation- Rank Correlation- Coefficient of Concurrent Deviations-Methods of Least Squares</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: V</th>
<th>10 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression Analysis-Meaning- Types of Regression – Regression Equations-Regression Equations from Mean-Regression Coefficients-Properties of Regression Coefficients-Correlation and Regression, a Comparison.</td>
<td></td>
</tr>
</tbody>
</table>
TEXT BOOKS:


BOOKS FOR REFERENCE:

1) Write a program to manipulate two numbers.
2) Write a program to calculate simple interest.
3) Write a program to convert Celsius to Fahrenheit.
4) Write a program to calculate volume of cone and cylinder.
5) Write a program to find greatest of two numbers.
6) Write a program to check whether the given number is odd or even.
7) Write a program to check whether the given year is leap year or not.
8) Write a program to check whether the given number is Armstrong or not.
9) Write a program to calculate the sum of digits
10) Write a program to create a student mark list
11) Write a program to calculate the gross pay of an Employee.
12) Write a program to reverse the given digit.
13) Write a program to generate Fibonacci series.
14) Write a program to find the Factorial of the given number.
15) Write a program to check whether the given number is prime or not.
16) Write a program to print the Armstrong series.
17) Write a program to replace the given string.
18) Write a program to sort a table.
19) Write a program to create Student File using Sequential Mode.
20) Write a program to create Student File using Relative Mode.
21) Write a program to create Student File using Indexed Mode.
22) Write a program to sort the records of the file.
23) Write a program to merge two files.
24) Write a program to create a subroutine.
Objective: To equip the students to program well in the programming language C through its basic concepts

Unit- I:  

Unit: II  

Unit: III  
Arrays-One Dimensional Array-Two Dimensional Arrays-Initializing Two Dimensional Arrays-Multi Dimensional Arrays-Handling of Character Strings-Declaring and Initializing String Variables-Reading Strings from terminal-Writing Strings to Screen-Arithmetic Operations on Characters-Putting Strings Together-Comparison of Two strings-String Handling Functions-Table of Strings-User Defined Functions- Need for User Defined Functions-Need for User Defined Functions- A Multiplication Program-Form of C Functions- Return Values and their Types-Calling a Function-Category of Functions-No Arguments and No Return Types-Argument but No Return Types-Arguments with Return Values-Handling of Non-Integer-Functions- Nesting of Functions-Rehearsal-Function with Arrays-Scope and Life Time of Variables in Functions-ANSI C Functions.
Unit: IV  
10 Hours

Structures and Unions-Structure Definition-Giving Values to Numbers-Structure Initialization-Comparison of Structure Variables-Arrays of Structures-Arrays with Structures-Structures-Structures and Functions-Unions-Size of Structures-Bitwise-Pointers-Understanding Pointers-Accessing the Address of Variables-Declaring and Initializing Pointers- Accessing a Increments and Scale Factor-Pointer and Arrays-Pointer and Character Strings- Pointers and Functions- Pointers and Structures-Points on Pointers.

Unit: V  
10 Hours

File Management in C-Defining and Opening a File-Closing a File-I/O Operation on Files-Error Handling during I/O Operations-Random Accesses Files-File Inclusion- Compiler Control Directives.

TEXT BOOK:


BOOKS FOR REFERENCE:

**Objective:** To know about the architectural view of computers

<table>
<thead>
<tr>
<th>Unit: I:</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: II</th>
<th>10 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU-General Register Organization-Control Word-Examples of Micro Operations-Stack Organization-Instruction Formats-Addressing Modes-Data Transfer and Manipulation-Program Control-RISC.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: III</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: IV</th>
<th>12 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O Organization- Peripheral devices-I/O Interface- Synchronous and Asynchronous Data Transfer-Modes of Transfer-Priority Interrupt-DMA-IOP</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: V</th>
<th>10 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory Organization-Memory Hierarchy-Main Memory-Auxillary Memory-Associative Memory-Cache Memory –Virtual Memory- Memory Management Hardware.</td>
<td></td>
</tr>
</tbody>
</table>
TEXT BOOK:


BOOKS FOR REFERENCE:

Objective: To create awareness about the comprises marketing management and the principles of Management

Unit: I: 10 Hours

Unit: II 10 Hours

Unit: III 10 Hours

Unit: IV 12 Hours

Unit: V 10 Hours
**TEXT BOOKS:**


**BOOKS FOR REFERENCE:**

1. Write a C program to check to whether the given number is Armstrong number or not.
2. Write a C program to find whether the given number is prime or not.
3. Write a C program to check the greatest among three numbers using the `conditional operator`.
4. Write a C program to count the number of words, characters and lines in a given text.
5. Write a C program to calculate the NCR value of the given number using functions.
6. Write a C program to sort the numbers in ascending order using arrays.
7. Write a C program to generate the fibonacci series for the given number.
8. Write a C program to calculate the factorial value for the given number using recursion.
9. Write a C program using switch statement for the arithmetic operations.
10. Write a C program to find the roots of Quadratic equation.
11. Write a C program to find the median of n numbers.
12. Write a C program to print the Floyd’s triangle.
13. Write a C program to print the following

   \[
   \begin{array}{|c|c|}
   \hline
   1 \\
   0 & 1 \\
   1 & 0 & 1 \\
   \hline
   \end{array}
   \]

14. Write a C program to find the reverse of a given number.
15. Write a C program to find the given string is palindrome or not.
16. Write a C program to find the addition of matrix.
17. Write a C program to find the matrix multiplication of the given number.
18. Write a C program to sort the strings in alphabetical order.
19. Write a C program to count the number of vowels in a given string.
20. Write a C program to convert upper case to lower case and lower case to upper case.
21. Write a C program to create a student file.

22. Write a C program to create a railway reservation details with trainno, train name, source, destination, date, class.

23. Write a C program to create a student file with regno, name, mark1, mark2.

24. Write a C program to create an employee file with the fields empno, empname, basic salary, designation.

25. Write a C program to process a student detail using structures

26. Write a C program to count the number of words, characters and lines in a text.
Objective: To impart knowledge in object oriented concepts

Unit: I 10 Hours

Procedure Oriented Programming-Object Oriented Programming Paradigm-Basic Concepts of Object-Oriented Programming-Benefits of OOP-Object Oriented Languages-Applications of OOP-Steps in Object Oriented Analysis-Steps in Object Oriented Design

Unit: II 12 Hours

Tokens-Keywords-Identifiers and Constants-Data Types-Reference Variables-Operators in C++-Scope Resolution Operator-Member Dereferencing Operator-Memory Management Operators-Manipulators-Type Cast Operators-Expression and their Types-Control Structures

Unit: III 10 Hours

Functions: Function Prototype-Call By Reference-Return By Reference-Inline Functions-Default and Constant Arguments-Function Overloading-Friend and Virtual Functions-Classes and Objects.

Unit: IV 10 Hours

Constructors and Destructors-Operator Overloading-Inheritance-Pointers-Virtual Functions and Polymorphism.

Unit: V 10 Hours

**TEXT BOOK:**


**BOOKS FOR REFERENCE:**

Objective: To impart knowledge on the architecture of RDBMS and improve the programming skill through visual basic.

Unit: I

10 Hours


Unit: II

10 Hours

Creating and Using Standard Controls- Text Box, Command Button, Check Box, Combo Box, List Box, Option Box, Timer, Frame, Label, Shape & Line Control, Picture Box, Image Control, Scroll Bar Controls - DB Grids – Dialog Boxes – Control Arrays - Single Document Interface(SDI) – Multiple Document Interface(MDI) – Menus. DAO – RDO-ADO

Unit: III

12 Hours

Unit: IV

Hours


ORACLE SQL Functions- Single Row Functions- Date, Number, Miscellaneous, Conversion, Character Functions- Group Functions- SQL Operators- Arithmetic, Comparison and Logical Operators- Set Operators- Joins- Sub Queries- Views.

Unit: V

10 hours

PL/SQL Introduction- Advantages of PL/SQL- Architecture of PL/SQL- Introduction to PL/SQL Block- Data Types- Control Structure- Concept Of Error Handling- Cursors Procedures Functions- Triggers- Types of Triggers. SQL * Forms- Basic concepts- Components of ORACLE Form- SQL * Forms System Variables- Creating a Form- Generating and Running a Form- Reports.

TEXT BOOKS:


BOOKS FOR REFERENCE:


Objective: To instill knowledge on computer algorithms thereby enable the students to develop efficient program

Unit: I 10 Hours
Introduction-How to Create Program –How to Analysis Program-Sparse Matrices-Representation of Arrays-Stacks and Queues-Evaluation of Expressions-Multiple Stacks and Queues.

Unit: II 10 Hours
Linked Lists-Singly Linked Lists-Linked Stacks-and Queues-Polynomial Addition-Doubly Linked Lists and Dynamic Storage Management- Strings

Unit: III 10 Hours

Unit: IV 12 Hours

Unit: V 10 Hours
Internal Sorting: Insertion Sort-Quick Sort-2 Way Merge Sort-Heap Sort-External Sorting: Storage Devices-Sorting with Disks-Sorting with Tapes
TEXT BOOK:


BOOKS FOR REFERENCE:

Objective: To provide the basic concepts of accounting management so as to enable the students to carry out the financial management effectively.

Unit: I
13 Hours

Unit: II
13 Hours

Unit: III
13 Hours

Unit: IV
13 Hours
Fund Flow Statement & Cash Flow Statement [Simple problems only]

Unit: V
13 Hours
Budgets – Budgetary Control – Objectives – Advantages and Limitations – Preparation of Cash Budget – Flexible Budget – Production Budget – Sales Budget [Simple problems only]

TEXT BOOK:
1. N. Vinayagam, Introduction to Accountancy, Eurasia Publishing House(P) Ltd., 2004

BOOK FOR REFERENCE:
1) Write a program to find the given number is odd or even.
2) Write a program to find the given number is Armstrong or not.
3) Write a program to find the given number is prime or not.
4) Write a program to find the factorial of the given number.
5) Write a program to generate Fibonacci series for the given number.
6) Write a program to perform the addition of two matrices.
7) Write a program to find the multiplication of two matrices.
8) Write a program to find the roots of quadratic equation for the given numbers.
9) Write a program for sorting the strings in alphabetical order.
10) Write a program to display the Floyds triangle.
11) Write a program to implement command line arguments.
12) Write a program to implement files (reading and writing the file).
13) Write a program to implement the virtual function.
14) Write a program to implement formatted input output functions.
15) Write a program to implement the stack operations.
16) Write a program to perform arithmetic operation using inline functions.
17) Write a program to sort the given numbers in ascending order.
18) Write a program using the single inheritance concept.
19) Write a program to implement the multilevel inheritance.
20) Write a program to implement the multiple inheritances.
21) Write a program to implement the hybrid inheritance.
22) Write a program using function overloading concept.
23) Write a program to implement operator overloading.
24) Write a program to implement the default arguments.
25) Write a program using friend function.
26) Write a program to implement unformatted input output functions.
27) Write a program to implement the constructors.
28) Write a program to implement the destructors.
29) Write a program to implement the virtual base class.
1. Write Oracle Queries in Data Definition Language.
2. Write Oracle Queries in Data Manipulation Language.
3. Write Oracle Queries in Transaction Control Language.
4. Write Oracle Queries in Data Control Language.
5. Write Oracle Queries using Data Constraints.
8. Generate Operators in SQL plus.
10. Generate View.
11. Generate Index functions.
12. Generate Join functions.
13. Write PL/SQL to find whether the given number is Even or Odd.
14. Write PL/SQL to find whether the given number is Amstrong or Not.
15. Write PL/SQL to Display ten numbers.
16. Write PL/SQL to reverse of given number.
17. Write PL/SQL to find whether the given number is Prime number or not.
18. Write Oracle Query to Update Trigger.
19. Write PL/SQL to Access Restriction Trigger.
20. Write Oracle Queries to Display Department Name.
21. Develop a VB program to process the Arithmetic Operation.
22. Develop a VB program to generate timer control.
23. Develop a VB program to design a scientific calculator.
24. Develop a VB program for Railway Reservation using menus.
25. Develop a VB program to use MDI Form using menus.
26. Develop a VB program to perform string handling functions.
27. Develop a VB program to perform list box operations.
28. Develop a VB program to illustrate the line event.
29. Develop a VB program to control the working of ADO Control.
30. Develop a VB program to control the working of Common Dialog Control.
### ELECTIVE – I
**SOFTWARE ANALYSIS AND DESIGN**

**Objective:** To impart knowledge about the process of analysis, design and object orientation through providing a framework of the activities involved in designing software.

<table>
<thead>
<tr>
<th>Unit 1:</th>
<th>12 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data and Information</strong></td>
<td></td>
</tr>
<tr>
<td>Information: - kinds of information-firm-user staff-work flow-origin of information-information gathering tools- review-onsite-observation-interviews and questionairres.</td>
<td></td>
</tr>
<tr>
<td><strong>System Analysis and Analyst</strong></td>
<td></td>
</tr>
<tr>
<td>System development life cycle:-recognition-feasibility study-analysis-design-implementation-maintenance- Role of systems analyst –qualification-multifaceted role of the analyst- analyst interface:-behavioural issues-conflict resolution.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit 2:</th>
<th>10 Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>Feasibility Analysis</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit 3:</th>
<th>10 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input output and forms design</strong></td>
<td></td>
</tr>
<tr>
<td>Input design-Input data-input media and devices-output design-forms design-classification of forms-requirements of forms design-types of forms-layout considerations-forms control.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit 4:</th>
<th>10 Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>Object oriented systems modeling</strong></td>
<td></td>
</tr>
<tr>
<td>Object oriented concepts:-classes and objects-attributes-operations-,methods and services-messages-design for object oriented systems:-conventional vs OO approaches – design issues-object design process –design patterns - object oriented testing:-unit-integration-validation testing in th OO context.</td>
<td></td>
</tr>
</tbody>
</table>
Unit 5:
Security system:

Security definition- Threat to system security:- Personal computer and system integrity-

TEXT BOOK:


BOOKS FOR REFERENCE:

### Objective
To enable the students to acquire knowledge on electronic commerce.

<table>
<thead>
<tr>
<th>Unit: I</th>
<th>10 Hours</th>
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</table>

<table>
<thead>
<tr>
<th>Unit: II</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: III</th>
<th>10 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unit: IV</th>
<th>11 Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Online Banking-Electronic Delivery Channels-ATM-Telebanking-Electronic Money Transfer (EMT)-E Cheque-E-Banking-Components-Advantages and Limitations of Online Banking.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit: V</th>
<th>11 Hours</th>
</tr>
</thead>
</table>
### TEXT BOOK:


### BOOKS FOR REFERENCE:

2. Marketing and E-Commerce, Roger Leroy Miller, West Thomson Learning Australia
Objective: To provide knowledge about the candidate of the operating system and the functions performed by it.

Unit: I


Unit: II


Unit: III


Unit: IV

Unit: V

TEXT BOOK:

BOOKS FOR REFERENCE:
Objective: To create familiarity about the internals of internet and the tools used in web designing

Unit-I:

Introduction to Internet – Resources of internet – Hardware and Software requirements of Internet - Internet services-Protocol Concepts – Internet Addressing – IRC.

Unit-II:


Unit-III:


Unit-IV:


Unit-V:

Introduction to ASP –Active Server Objects – Active Server Components – Emerging and alternative web technologies – Active X Controls for the WWW.
TEXT BOOK:


BOOK FOR REFERENCE:

Objective: To make the students familiarize with
- Real time applications in banks and the operations of banks.
- Basic strategies of Insurance and some applications related to that.
- Core concepts of Textile industry & Computer Integrated manufacturing.

Unit: I


Unit: II

Banking – BFS Standards- Commercial Banking Software Application – Iflex

Unit: III

Application in Insurance – Underwriting, Claims and Transactions

Unit: IV


Unit: V

Websites for Reference:

www.inventors.about.com  www.economywatch.com
www.scribd.com  www.indiantextilejournal.com
www.atmbanking.net  www.apparelsearch.com
www.banknetindia.com  www.itaaonline.org
Objective: To impact knowledge on the ways of determining the optimal usage of resources and thereby increasing the efficiency.

Unit: I

Linear Programming Problem: Graphical Solution Method- General Linear Programming Problem (Definition alone) - Canonical and Standard forms of LPP.

Simplex Method: Basic Solution and Degenerate Solutions to Linear Equation- Simplex Method-BigM Method (Only Simple Problems).

Unit: II


Assignment Problem: Definition- Assignment Algorithm-Hungarian Assignment Method-Unbalanced AP.

Unit: III

Inventory Control: Introduction- Types of Inventory- Inventory Decision- Economical Order Quantity (EOQ) - Deterministic Inventory Problems.

Unit: IV

Sequencing Problems: Introduction- Problems with n Jobs and 2 Machines- Problems with n Jobs and k Machines- Problems with 2 Jobs and k Machines ( Simple Problems).

Unit: V

TEXT BOOK:


BOOK FOR REFERENCE:

1. Work with utility commands.
2. Work with directory commands.
3. Work with handling file commands.
4. Work with file access commands.
5. Work with pipes and filters.
6. Work with VI editors.
7. Create a program to find simple interest.
8. Create a program to find factorial value.
9. Create a program to find fibonacci series.
10. Create a program to find sum of N numbers.
11. Write a program with case condition.
12. Create a program to find divisibility of numbers.
13. Create a program to find greatest of three numbers.
14. Create a program to find Armstrong number.
15. Create a program to find prime or not.
16. Create a program to find reverse the digit.
17. Create a program to find sum of individual digit.
18. Create a program to find odd or even.
19. Create a program to swap any two numbers.
20. Create a program for sorting of N numbers.
1. Write a program to create Student timetable
2. Write a program to create External style sheet
3. Write a program to create Embedded style sheet
4. Write a program to create Inline style sheet
5. Write a program to create Horizontal frames
6. Write a program to create Vertical frames
7. Write a program to create Horizontal and vertical frames
8. Write a program to create Frameset
9. Write a program to create I Frame
10. Write a program to create Image positioning
11. Write a program to create Z-Index
12. Write a program to create Webpage
13. Write a program to create Submit and reset button
14. Write a program to create Password control
15. Write a program to create Confirmation dialogue box
16. Write a program to create Date and time
17. Write a program to create Changing the text in status bar
18. Write a program to create Scrolling the text
Objective: To impart knowledge about the process of software development through providing a framework of all the activities involved in developing software.

Unit: I


Unit: II


Unit: III


Unit: IV

Unit: V


TEXT BOOK:


BOOKS FOR REFERENCE:

Objective: To learn the basic elements in Multimedia and to implement it in the real time environment.

Unit: I


Unit: II


Unit: III


Unit: IV

Unit: V


TEXT BOOK:

1. Design the Wedding Invitation using the associated tools in Photoshop.
2. Apply special art effects for the image using various options from the Filter Gallery.
3. Design the Banner.
4. Implement the Usage of different modes in a Single Image.
5. Design the College Profile.
6. Work with different images to implement Sharpen tool and Smudge Tool.
7. Design the Calendar.
8. Edit the image using Blur tool.
10. Edit the image using Burn and Sponge tool.
11. Edit the image using Clone tool.
**Objective:** To impart knowledge on the features and syntax of the programming language, Java in order to improve the programming skill.

**Unit: I**

Java Evolution – Overview of Java language, Constants, Variables and Data types – Operators and Expressions.

**Unit: II**

Decision Making and Branching – Decision Making and Looping – Classes, Objects and Methods – Arrays, Strings and Vectors.

**Unit: III**

Interfaces – Multiple Inheritance – Package: Putting Classes Together Multi-Thread Programming.

**Unit: IV**


**Unit: V**

TEXT BOOK:

BOOKS FOR REFERENCE:
Objective: To learn the basic concepts in networks and to implement it in the real time environment.

Unit: I


Unit: II


Unit: III


Unit: IV


Unit: V

Application Layer: Electronic Mail: User Agent (Sending and Receiving E-mail)- Message Formats- MIME- Message Transfer – SMTP – E-mail Gateways.WWW: Client side-Server side- HTTP.
TEXT BOOK:


BOOKS FOR REFERENCE:

Objective: To enable the students to learn the various aspects of .NET tools and controls to create windows and web applications

Unit: I
Introduction to .Net: .net framework- difference between VB6 and VB.Net-Object-Oriented programming and VB.Net-Data types-Variables-Operators-Arrays-Conditional logic.

Unit: II

Unit: III

Unit: IV

Unit: V
Web Services: Introduction- Infrastructure- SOAP-Building web services- Deploying and publishing web services- Finding and consuming web services.

TEXT BOOKS:

BOOKS FOR REFERENCE:

Objective: To enable the students to learn the various aspects of Software quality assurance, Quality Control Testing in special emphasis to win runner.

Unit: I


Unit: II


Unit: III


Unit: IV

Unit: V


WEB REFERENCES:
Manual Testing References:
www.softwareqatest.com
www.aptest.com
www.stickyminds.com
www.bettersoftware.com
www.testing.com
www.wikipedia.com

Automation Tools References:
www.aptest.com
www.automatedqa.com

TEXT BOOKS:
Course Material prepared by the Department of Computer Science based on the above web references.

BOOKS FOR REFERENCE:
1. Write a Java program to check the Armstrong number
2. Write a Java program to generate Fibonacci series
3. Write a Java program to print the Floyd's triangle using for loops.
4. Write a program in Java using multiple catch statements.
5. Write a program in Java for method overloading to draw circle, triangle, rectangle..
6. Write a Java program to sort the given numbers in ascending order.
7. Write a Java program to find the prime numbers between 1 to 200.
8. Write a program in Java for method overriding.
9. Write a program in Java to sort the strings in alphabetical order.
10. Write a Java program for employee details using single inheritance concept.
11. Write a Java program to check if the given string is palindrome or not.
12. Write a program to find the roots of a quadratic equation.
13. Write a Java program for multithreading concept.
14. Write a program in Java to read and write using random access file.
15. Write a Java program to draw lines and rectangles using applets.
16. Write a Java program to draw ellipses and circles using applets.
17. Write a program in Java for method overriding.
18. Write a program in Java to copy bytes from one file to another.
19. Write a program in Java to copy characters from one file to another.
20. Write a program in Java using the concept of interface.
21. Write a program in Java to multiply two matrices.
22. Write a program to add two numbers using applets.
23. Write a program to reverse a number using applets.
24. Write a program in Java to find the trace of a matrix.
25. Write a program to create two packages and implement it.
26. Write a program for package implementation.
Console Applications
- Create a Program to implement the concepts of Object oriented programming techniques.
- Create a program to implement multiple inheritances using interface.
- Create a program to validate the data members in the class using property.
- Create a program to catch the exceptions.
- Create a program to implement multithreading.
- Write a program to implement stack operations using array.
- Write a program to implement Queue using array.
- Write a program to perform file operations.

Windows Applications
- Create a directory list using tree view control.
- Create a calculator using basic controls.
- Create a notepad editor using Context menu strip and menu controls.
- Create an application to illustrate the use of dialog boxes.
- Create an application for students Proctorial report.
- Create an application for library management system.
- Create an application for Pay roll processing system.
- Create a program To generate electricity Bill.

Web Applications
- Create a web page to generate a photo gallery.
- Create an application for encryption and decryption.
- Create an Alumni registration form.
- Create a website for online Quiz.
- Create your own portal which describes yourself and your skills.
- Create a portal for online purchasing system.
- Create a portal and validate the web page using validation controls.
- Create a web page and validate that page using client side scripting.
- Create a crystal report for Alumni registration portal.
<table>
<thead>
<tr>
<th>Units</th>
<th>Content</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit I</td>
<td><strong>The Importance of Green IT:</strong> The Growing Significance of Green IT and Green Data Centers - All Companies Can Take Basic Steps Toward Green IT. <strong>The Basics of Green IT:</strong> Important Steps for Green IT - Tools for IT Energy Measurement, Monitoring, and Management.</td>
<td>3</td>
</tr>
<tr>
<td>Unit III</td>
<td><strong>The Role of Electric Utilities:</strong> The Significant Role of Electric Utilities and IT Energy Ratings in Green IT - Energy Utility Rate Case Incentives - Using Utility Rebates to Minimize Energy Costs in the Data Center - Power Company Incentives for Companies to Go Green - Energy - Efficiency Ratings for IT - IT Vendors Help Lead the Charge. <strong>Virtualization.</strong></td>
<td>2</td>
</tr>
<tr>
<td>Unit IV</td>
<td><strong>Chillers, Cooling Tower Fans and Cooling Equipments:</strong> Starting with the Data Center Cooling Basics - Data Center Stored Energy Including Stored Cooling - Back to the Future - Water-Cooled Servers - Strategies for Increasing Data Center Cooling Efficiency - Fuel Cells for Data Center Electricity - Other Emerging Technologies for Data Centers.</td>
<td>2</td>
</tr>
<tr>
<td>Unit V</td>
<td><strong>Green IT Case Studies:</strong> Energy Utilities - Universities and a Large Company - Worldwide Green IT.</td>
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</tr>
</tbody>
</table>

**Total Contact Hrs** 13

**Text Books:**
Objective: To instill good working knowledge in the advanced concepts of Server side Programming.

Unit: I

Unit: II
Servlet Basics: Life cycle of a Servlet- A Basic Servlet-Basic Servlet Source-Building and Installing the Basic Servlet- The HTML Required to Invoke the Servlet- Dissecting the Basic Servlet.

Unit: III
Servlet chaining: What is Servlet Chains-Invoking a Servlet Chain-Servlet Alias-HTTP Request- A Practical Example using Servlet Chaining

Unit: IV

Unit : V
TEXT BOOK:


BOOKS FOR REFERENCE:

Objective: To impart knowledge in cloud computing concepts

Unit: I


Unit: II


Unit: III


Unit: IV


Unit: V


TEXT BOOK:

Objective: To know about the features and applications of data mining

Unit: I

Introduction to Data Mining: Definition-Information as a Production Factor- Data Mining Vs Query Tools-Data Mining in Marketing-Practical Applications of Data Mining- Learning, Self-Learning, Computer Systems, Machine Learning and Methodologies of Science- Concept Learning-Issues of Learning Algorithm.

Unit: II

Data Mining and Data Warehousing: Data Warehouse-Need-Designing Decision Support Systems-Integration with Data Mining-Client Server and Data Warehousing- Multiprocessing Machines- Cost Justification.

Unit: III


Unit: IV


Unit: V

Some Formal aspects of Learning: Learning of Comprehension of Data Sets-Contents of a Message-Noise and Redundancy-Significance of Noise-Fuzzy Database-Traditional Theory of Relational Database from Relations of Tables- From Keys of Statistical Dependencies- Denormalization- Data Mining Primitives.
TEXT BOOK:


BOOKS FOR REFERENCE:


Objectives:
1. To develop the knowledge in personality, perception, attitudes and motivation.
2. To learn about stress management, communication, leadership, organization structure and organization culture.

Unit: I

Unit:II

Unit:III

Unit:IV

Unit:V
TEXT BOOK:

BOOKS FOR REFERENCE:
1. Write a program to implement the concept of JTextField.
2. Write a program to implement the concept of JLabel.
3. Write a program to implement the concept of JCheckBox.
4. Write a program to implement the concept of JRadioButton.
5. Write a program to implement the concept of JComboBox.
6. Write a program to implement the concept of JMenu, JMenuBar, JMenuItem.
7. Write a program to implement the concept of JTabbedPane.
8. Write a program to implement the concept of JTree.
9. Write a program to make use of Generic Servlet.
10. Write a program to find the request method that is fetched using Servlet.
11. Write a program to develop simple servlet using Generic servlet.
12. Write a program to display the employee details using servlets.
13. Write a program to illustrate servlet chaining.
14. Write a program to develop simple servlet using HTTP tags.
15. Write a program to develop simple servlet to count the number of times an applet being accessed.
16. Write a program to implement the concept of JDBC-ODBC Connectivity.
17. Write a program to to count the number of times an JSP is accessed.
18. Write a program to generate Fibonacci series using JSP.
19. Write a program to create java beans to make use of juggler beans.
20. Write a program to create java beans to make use of molecular beans.
21. Write a program to create java beans to make use of sorter beans.
22. Write a program to implement the concept of simple property
PHOTOSHOP

1. Designing a Visiting card using needed tools in Photoshop
2. Designing an Invitation card using needed tools in Photoshop
3. Creating a Magic light effect using needed tools, filters, and effects.
4. Converting a damaged skin of a girl to a beautiful skin using needed tools and effects in Photoshop
5. Converting a black and white image to new coloured image
6. Creating a Wallpaper using all the tools, filters, styles, and effects

FLASH

7. Setting motion for a butterfly
8. Digital clock
9. Rain effect
10. Create a solar eclipse using masking and motion effect
11. Creating a Race of Tortoise and Rabbit

GRAPHICS USING C

12. Project an image in 3d using C
13. Adjust the RGB values of an image with key control
15. Create a game using key control
1. Design the Wedding Invitation using the associated tools in Photoshop.
2. Apply special art effects for the image using various options from the Filter Gallery.
3. Design the Banner.
4. Implement the Usage of different modes in a Single Image.
5. Design the College Profile.
6. Work with different images to implement Sharpen tool and Smudge Tool
7. Design the Calendar.
8. Edit the image using Blur tool.
10. Edit the image using Burn and Sponge tool.
11. Edit the image using Clone tool.
Image segmentation and pattern recognition is the important process in the digital image processing. Thus, edge detection makes these jobs easier and aids for object recognition. The dominant operators are Canny, Laplacian of Gaussian (LoG), prewitt, Robert's and Sobel. Each algorithm