

**CCM1 - WEB DESIGN****UNIT I**

Introduction to the Internet : Computers in Business – Networking – Internet – Email – Resource Sharing – Gopher – WWW – Usenet – Telnet – Bulletin Board Service – Wide Area Information Service

**UNIT II**

Introduction to HTML: Designing a home page – HTML document – Anchor tag

**UNIT III**

Hyperlinks – Head and Body sections – Header section – Title – Prologue – links – colorful pages – comments – body section – heading

**UNIT IV**

Horizontal ruler – paragraph – tabs – Images and pictures – lists and their types – nested lists – table handling

**UNIT V**

Frames – frameset definition – frame definition – nested framesets. Forms and form elements

**TEXT BOOK**

“World Wide Web Design with HTML”, C.Xavier, TMH, 2000.

UNIT I: Chapter 1

UNIT II: Chapter 4

UNIT III: Chapter 5

UNIT IV: Chapter 6, 7, 8

UNIT V: Chapter 10, 11, 12

**REFERENCE BOOK**

Programming the World Wide Web – Robert W. Sebesta Fourth Edition Pearson

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

### **CCM2P - WEB DESIGN LAB**

1. Font, Size, Width and Alignment
2. Text, Marquee, Heading and Paragraph
3. Tab Setting
4. Images and Border
5. Ordered and Unordered List.
6. Table

**CCA1 - DIGITAL COMPUTER FUNDAMENTALS****UNIT I**

Number Systems: Decimal - Binary - Octal - Hexadecimal - Conversion From One Another - Binary Addition - Subtraction - Multiplication And Division - Codes - BCD Weighted-Excess - Gray - Error Detection Codes

**UNIT II**

Basic Logic Gates - Boolean Algebra: Laws and Theorems - The Universal Building Blocks - Sum of Products - Product of Sums - Karnaugh Map Simplification

**UNIT III**

Combinational Logic Circuits: Adder - Half and Full Adder - Subtractor - Multiplexers - Demultiplexers - Decoders - Encoders

**UNIT IV**

Flip - Flops: RS - Clocked RS - D Flip - Flop - JK Flip - Flop - T Flip - Flop - Edge Triggered - - Master/Slave Flip - Flop

**UNIT V**

Counters and Registers: Counters - Ripple Counter - Ring Counter - Registers - Shift Registers

**TEXT BOOK**

"Principles Digital Electronics" - K. Meena, PHI.

UNIT I: Chapter 1

UNIT II: Chapter 2(2.1 - 2.7, 2.9), 3(3.1, 3.3, 3.5 - 3.9, 3.13, 3.14)

UNIT III: Chapter 4(4.1 - 4.5, 4.7 - 4.10)

UNIT IV: Chapter 5(5.1 - 5.8)

UNIT V: Chapter 6(6.1 - 6.3, 6.8)

**REFERENCE BOOK**

"Digital Computers Fundamentals", Bartee, Tata McGraw Hill, 1996.

	Part - A Answer all the Questions 10 X 2 = 20 Marks	Part - B Internal Choice Type 5 X 5 = 25 Marks	Part - C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 - I Unit 3,4 - II Unit 5,6 - III Unit 7,8 - IV Unit 9,10 - V Unit	11a (or) 11b - I Unit 12a (or) 12b - II Unit 13a (or) 13b - III Unit 14a (or) 14b - IV Unit 15a (or) 15b - V Unit	16 - I Unit 17 - II Unit 18 - III Unit 19 - IV Unit 20 - V Unit

**EVS - ENVIRONMENTAL STUDIES****UNIT I**

- a) Nature Of Environment And Environmental Studies
- b) Definition. Scope And Importance; Need For Public Awareness
- c) Renewable And Non-Renewable Resources And Their Management
- d) A Preliminary Knowledge on the Following Resources: Forest, Water, Mineral, Food and Energy.

**UNIT II**

- a) Concept Of An Eco System, Structure Of An Eco System, Producers, Consumers And Decomposers
- b) Energy Flow in the Eco System, Food Chains, Food Webs and Ecological Pyramids.

**UNIT III**

- a) Bio-Diversity And Its Conservation – Introduction – Definition Genetic – Species And Ecosystem Diversity
- b) Bio-Geographical Classification of India. Value Of Bio-Diversity: Consumptive Use – Productive Use Social – Ethical – Aesthetic And Option Values
- c) Threats To Bio-Diversity : Habitat Loss – Poaching Of Wild Life – Man, Wild Life Conflicts
- d) Endangered And Endemic Species Of India, Conservation Of Bio-Diversity

**UNIT IV**

- a) Environmental Pollution – Definition, Causes, Effects Control Measures Of Air Pollution, Water Pollution And Soil Pollution, Marine Pollution, Noise Pollution, Thermal And Nuclear Pollution
- b) Soil Wastage Management: Causes, Effects And Control Measures Of Urban And Industrial Wastes.

**UNIT V**

- a) Social Issues and Problems from Unsustainable To Sustainable Development, Urban Problems Related To Energy Conservation.
- b) Population Growth, Variation Among Nations
- c) Population Explosion – Family Welfare Programme
- d) Environment and Human Health, Human Rights, Value Education, HIV/Aids, Women Child Welfare.

Question Pattern  
Answer any 5 out of 8 Questions  
5 X 15 = 75 Marks

**SBEC1 - MULTIMEDIA AND ITS APPLICATIONS****UNIT I**

Introduction to Multimedia – CDROM and the Multimedia Highway – Use of Multimedia  
– Introduction to Making Multimedia – Multimedia Skills

**UNIT II**

Multimedia Hardware – Macintosh and Windows Production Platforms - Hardware  
Peripherals – Connections - Memory and Storage Devices

**UNIT III**

Multimedia Software – Media Software Basic Tools - Making Instant Multimedia -  
Multimedia Software and Authoring Tools

**UNIT IV**

Multimedia Building Blocks – Text - Sound

**UNIT V**

Images - Animation and Video

**TEXT BOOK**

Tay Vaughan –“Multimedia Making It Work” Fifth Edition- Tata Mcgraw Hill Edition  
2001.

UNIT I: Chapter 1

UNIT II: Chapter 2

UNIT III: Chapter 3

UNIT IV: Chapter 4(9, 10)

UNIT V: Chapter 4(11, 12, 13)

**REFERENCE BOOK**

“Multimedia Technology and Applications” – David Hillman

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

**CCM3 - PROGRAMMING IN C++****UNIT I**

Principles of Object Oriented Programming –Application of C++ - Structure of C++ - Token, Expression and Control Structure

**UNIT II**

Functions in C++ – Inline Function – Function Overloading – Friend and Virtual Functions - Classes And Objects

**UNIT III**

Constructors and Destructors – Parameterized Constructors – Multiple Constructors in a Class – Constructors with Default Arguments –Operator Overloading and Type Conversions - Defining Operating Overloading - Overloading Unary Operators – Overloading Binary Operators

**UNIT IV**

Inheritance: Introduction – Defining Derived Classes – Single Inheritance – Making a Private Member Inheritable – Multilevel Inheritance – Multiple Inheritance – Hierarchical Inheritance – Hybrid Inheritance – Exception Handling

**UNIT V**

Managing Console I/O Operations – C++ Stream Classes – Unformatted I/O operations – Formatted I/O operations – Basic File Handling

**TEXT BOOK**

Object Oriented Programming With C++ By E. Balagurusamy – 2nd Edition Tata McGraw Hill

UNIT I: Chapter 1, 2, 3

UNIT II: Chapter 4, 5

UNIT III: Chapter 6, 7

UNIT IV: Chapter 8

UNIT V: Chapter 10, 11

**REFERENCE BOOKS**

Herbert Schildt, "Teach Yourself C++", Third edition, Tata Mcgraw Hill, 2000.

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

**CCM4P - PROGRAMMING IN C++ LAB**

1. Class And Objects
2. Constructors And Destructors
3. Operator Overloading
4. Function Overloading
5. Inheritance
6. Exception Handling
7. File Handling

**CCA2 - OPERATION RESEARCH****UNIT I**

Introduction To O.R. – Elementary Treatment Of L.P.P- Methodology Of Or – Mathematical Formulation Of The Problem – Graphical And Solution Method – Un Balanced Graphical And Solution - Slack And Surplus Variables-Matrix Formulation Of L.P.P-Simplex Algorithm –Simplex Method

**UNIT II**

Application Of Transportation Problem- North West Corner – Least Cost Method – Vogel's Approximation Method - Transportation Algorithm - Moving Towards Optimality

**UNIT III**

Assignment Problem- Impossible Assignment Problem – Unbalanced Assignment Problem - The Assignment Algorithm

**UNIT IV**

Network Scheduling: CPM – Introduction – Network and Basic Components – Rules for Network Construction – Time Calculation in Network - Critical Path Method

**UNIT V**

PERT: Introduction - PERT - PERT Calculation – Float and Negative Slack – Advantages of Network: PERT and CPM

**TEXT BOOK**

Operations Research by Kantiswarup, P.K. Gupta And Manmohan.

UNIT I: Chapter 1(1.1 - 1.9), 2(2.1 – 2.3, 2.5, 2.6), 3(3.1 – 3.5)

UNIT II: Chapter 6(6.1 – 6.9)

UNIT III: Chapter 7(7.1 – 7.4)

UNIT IV: Chapter 21(21.1 – 21.5)

UNIT V: Chapter 21(21.6 – 21.9)

**REFERENCE BOOK**

Operations Research by P. Mariapan

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit



**VE - VALUE EDUCATION****UNIT I**

Meaning and Nature of Value Education: Meaning And Concepts of Education: Meaning and Concepts of Value Education – Origin – Nature – Classification of Value – View of Eminent Thinkers – Meaning Of Value Education – Need for Value Education

**UNIT II**

Objectives and Development of Human Value: Role of School and College in the Development of Human Values – Objectives of Value Oriented Education. Ethical and Social Values – Gandhiji's Non Violence – Gokak Committee

**UNIT III**

Strategies And Approaches To Value Education: Role of Education School , Family, Teacher For The Personal Value Development – Conceptual Frame Work – Strategy Suggested By J R Frankel – Ncert Approach To Value Education – Role Play Technique In Value Education – Value Based Curriculum – Teachers Role

**UNIT IV**

Sources Of Values : Sources Of Values – Traditional Indian Values, Sources Of Values – Culture, Education, Religion – Hinduism, Christianity, Islam, Buddhism – Indian Constitutions As Source For Democratic Values – Equality – Secularism, Democracy – Research And Resources In Value Education

**UNIT V**

Methods of Teaching and Documents on Human Value Education: Methods of Teaching Value Education – Guidelines for Developing Value among Students. Problems on Promoting Value Education – Documents of Value Education – Recommendation of the Committee Appointed By the Central Advisory Board of Education – Recommendation of the University Education Commission 1964 -1966 - National Policy on Education 1986-1992

**TEXT BOOKS**

1. J C Aggarwal , Education For Values Environment And Human Rights , Shipra Publications , New Delhi 2005.
2. Dube S.C Modernization and Development, the Search for an Alternative Paradigm, Zee Books Ltd. London: 1988.
3. Mansell R and When U, Knowledge Societies: Information Technology For Sustainable Development, Oxford University Press, New York.
4. World Bank Knowledge for Development World Development Report, Oxford Unit Press, New York.

**Question Pattern**

Answer any 5 out of 8 Questions

5 X 15 = 75 Marks

**CCM5 - PROGRAMMING IN JAVA****UNIT I**

Fundamentals Of Object Oriented Programming – Java Evolution – Overview Of Java Language – Data Types , Variables , Arrays – Operators – Control Statements

**UNIT II**

Introduction to Classes – Class Fundamentals – Declaring Objects – Constructors – Methods – Overloading Methods – Nested and Inner Classes - String Handling

**UNIT III**

Inheritance – Method Overriding – Abstract Class - Packages – Interfaces - Exception Handling – Types Of Exception – Try And Catch – Nested Try Statements

**UNIT IV**

Multithreaded Programming - Stream I/O And Files: Java I/O Classes And Interfaces – File – The Stream Classes – The Byte Streams – Character Streams – Using Stream I/O – Serialization – Stream Benefits

**UNIT V**

Applets and Graphics: Fundamentals of Applets – Graphics. AWT and Event Handling: AWT Components and Event Handlers – AWT Controls and Event Handling Types and Examples

**TEXT BOOK**

The Complete Reference Java 2 5/E Herbert Schildt

UNIT I: Chapter 1 to 5

UNIT II: Chapter 6, 7

UNIT III: Chapter 8 to 11

UNIT IV: Chapter 11, 12

UNIT V: Chapter 19, 20, 21

**REFERENCE BOOKS**

1. Programming With Java - C. Muthu
2. Programming With Java A Primer 3/E E. Balaguruswamy

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

## **CCM6P - PROGRAMMING IN JAVA LAB**

1. Classes and Objects
2. Control Statement
3. Constructors
4. Method Overloading
5. String Handling
6. Inheritance
7. Method Overriding
8. Packages and Interfaces
9. Exception Handling
10. Threads
11. File Processing
12. Graphics Methods
13. AWT controls
14. AWT Event Handling

**CCA3 - FINANCIAL ACCOUNTING****UNIT I**

Fundamentals of Book - Keeping, Accounting Concepts – Conventions – Rules Of Single and Double Entry – Journal – Ledgers

**UNIT II**

Subsidiary Books and Various Methods - Trial Balance – Rectification of Errors - Bank Reconciliation Statement

**UNIT III**

Trading Account - Profit And Loss Account - Balance Sheet - Preparation of Final Account - Final Account with Adjustment

**UNIT IV**

Depreciation and Various Methods of Straight Line Method - Written Down Value Method - Annuity Method – Sinking Fund Method

**UNIT V**

Difference Between Capital - Revenue And Deferred Revenue Expenses - Fund Flow – Cash Flow Analysis - Ratio Analysis And Their Methods Of Current Ratio – Quick Ratio – Liquid Ratio

**TEXT BOOKS**

1. Financial Account – T.S Reddy and A. Murthy – Margham Publications.
2. Advanced Accounting - Volume I & II [Financial Accounting] – Dr. S. Peer Mohamed, Dr. S.A. N. Shazuli Ibrahim. – Pass Publications.

UNIT I: Chapter 1.01 – S2.40

UNIT II: Chapter 3.01 - 5.29

UNIT III: Chapter 6.01 - 7.64

UNIT IV: Chapter 10.01 - 10.47

UNIT V: Chapter 11.01 - Vol –II

**REFERENCE BOOK**

Advance Accounting – M.C Shukla , T.S. Grewal & S.C. Gupta – S. Chand And Co.,

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – 1 Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

### **CCA4P - ACCOUNTING SOFTWARE LAB**

1. Company Creations
2. Vouchers Types Journal
3. Ledger Creation – Editing and Deleting.
4. Trial Balance
5. Trading Account -Gross Profit or Gross Loss
6. Profit And Loss Account – Net Profit or Net Loss
7. Balance Sheet for Final Account, Identify the Items of Liabilities and Assets
8. Final Account with Adjustment
9. Final with Adjustment Calculation – Depreciation

## **NMEC1 - MANAGEMENT INFORMATION SYSTEMS**

### **UNIT I**

Foundations of Information Systems in Business: Foundation Concepts – Components of Information Systems

### **UNIT II**

Competing with Information Technology: Fundamentals of Strategic Advantage – Using Information Technology for Strategic Advantage

### **UNIT III**

Data Resource Management: Technical Foundations of Database Management – Managing Data Resources.

### **UNIT IV**

Telecommunications and Networks: The Networked Enterprise – Telecommunications Network Alternatives

### **UNIT V**

Decision Support Systems: Decision Support in Business – Artificial Intelligence Technology in Business – Developing Business / IT Solutions

### **TEXT BOOK**

“Management Information Systems”, James A. O’Brien, Fourth Edition, Galgotia Publications, 1999.

UNIT I: Chapter 1

UNIT II: Chapter 2

UNIT III: Chapter 5

UNIT IV: Chapter 6

UNIT V: Chapter 9, 10

### **REFERENCE BOOK**

“Management Information Systems”, Gordon B. Davis Margrethe H. Olson, 2nd Edition, McGraw Hill.

### **Question Pattern**

Answer any 5 out of 8 Questions

5 X 15 = 75 Marks

**CCM7 - RELATIONAL DATABASE MANAGEMENT SYSTEMS****UNIT I**

Introduction – File and Database System – Data Abstraction – Instances and Schemas – Database Languages – Database System Structure – Database Administrator

**UNIT II**

Data Models – E-R- Diagram – Key Constraints – Extended ER Features – ER Diagram with Relationships – Aggregate Functions – Relational Algebra: Fundamental Operations

**UNIT III**

SQL – Data Definition – Queries in SQL – Nested Sub Queries – Modification of the Database - Views – Joined Relations – Data Definition Language - Embedded SQL

**UNIT IV**

Normalization – Types of Normalization – File Organization – Organization of Records in Files – Storage Structure of Object Oriented Database – Hashing Techniques: Static Hashing – Dynamic Hashing

**UNIT V**

Concurrency Control - Lock Based Protocols - Time Stamp Based Protocols - Validation-Based Protocols - Multiple Granularity - Deadlock Handling - Object Oriented Database – Object Oriented Data Model – Inheritance

**TEXT Book**

Henry F. Korth Abraham Silberschatz , Database System Concepts , Fourth Edition McGraw Hill International Editions 2002

UNIT I: Chapter 1

UNIT II: Chapter 2, 3

UNIT III: Chapter 4

UNIT IV: Chapter 7, 10, 11

UNIT V: Chapter 14, 8

**REFERENCE Books**

1. James Martin , “Computer Data Base Organization” , Second Edition Prentice Hall
2. C.J. Date, “An Introduction to Database System”, Seventh Edition, Pearson Education, New Delhi, 2002.

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

## **CCM8P - RDBMS LAB**

### 1. To Implement Data Definition Language

1.1. Create, Alter, Drop, Truncate

1.2. To Implement Constraints.

1.2.1. (A) Primary Key, (B) Foreign Key, (C) Check, (D) Unique, (E) Null, (F) Not Null, (G) Default, (H).Enable Constraints, (I) Disable Constraints, (J) Drop Constraints

### 2. To Implementation On DML, TCL And DRL

2.1. (A) Insert, (B) Select, (C) Update, (D) Delete, (E) Commit, (F) Rollback, (G) Save Point, (I) Like'%', (J) Relational Operator

### 3. To Implement Nested Queries & Join Queries

3.1. (A) To Implementation of Nested Queries

3.2. (B) (A) Inner Join, (B) Left Join, (C) Right Join (D) Full Join

### 4. To Implement Views

4.1. (A) View, (B) Joint View, (C) Force View, (D) View With Check Option

### 5. Control Structure

5.1. To Write a PL/SQL Block for Addition of Two Numbers

5.2. To Write a PL/SQL Block for If Condition

5.3. To Write a PL/SQL Block for If and Else Condition

5.4. To Write a PL/SQL Block for Greatest of Three Numbers Using If and Elseif

5.5. To Write a PL/SQL Block for Summation of Odd Numbers Using For Loop



**SBEC2 - CLIENT / SERVER SCRIPTING LANGUAGE****UNIT I**

Introduction To Client/Server Computing - What Is Client/Server Computing –Benefits Of Client/Server Computing –Evaluation Of Client/Server Computing - Hardware And Software Trends – Categories Of Client/Server Computing

**UNIT II**

JavaScript: JavaScript Variables and Data Types - Declaring Variables - Data Types Statements and Operators - Control Structures - Conditional Statements - Loop Statements Object

**UNIT III**

Based Programming- Functions - Executing Deferred Scripts - Objects Message Box In JavaScript- Dialog Boxes - Alert Boxes - Confirm Boxes

**UNIT IV**

VBScript: What Is VBScript Adding- Script Code To An HTML Page- VBScript Basics - VBScript Data Types - VBScript Variables - VBScript Constants - VBScript Operators

**UNIT V**

Using Conditional Statements- Looping Through Code -VBScript Procedures - VBScript Coding Conventions - Dictionary Object in VBScript

**TEXT BOOKS**

1. Teach Yourself VBScript in 21 Days By Keith Brophy, Timothy Koets
2. Teach Yourself JavaScript in 21 Days By Keith Brophy, Timothy Koets

**REFERENCE BOOK**

Programming the World Wide Web – Robert W. Sebesta Fourth Edition Pearson

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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**CCM9 – PROGRAMMING IN C#****UNIT I**

Introduction to C # : Evolution of C# - Characteristics of C# - Application of C# - Difference Between C++ and C# - Difference Between Java and C# - The C# Environment - Overview of C#

**UNIT II**

Literal, Variables and Data Types : Literals - Variables- Data Types - Value Types - Reference Type - Declaration of Variables - Initialization Of Variables - Default Values - Constant Variables - Scope Of Variables - Boxing And Unboxing. Operators and Expression: Various Operators

**UNIT III**

Decision Making And Branching: If Statement - - Switch Statement – The ?: Operator. Decision Making And Looping: While Statement - Do Statement - For Statement - Jumps In Loops

**UNIT IV**

Methods in C#: Declaring Methods - The Main Method - Methods Parameters - Pass by Value - Pass by Reference - Variable Arguments List - Method Overloading. Handling Arrays: Arrays – Manipulating String: Strings - Classes And Objects: Class – Objects – Constructors – Destructors

**UNIT V**

Inheritance and Polymorphism: Classical Inheritance - Overriding Methods - Polymorphism. Interfaces: Multiple Inheritances - Interface. Operator Overloading: Overloading Operators

**TEXT BOOK**

E. Balagurusamy, "Programming in C#", Tata McGraw Hill, 2004.

UNIT I: Chapter 1, 2, 3

UNIT II: Chapter 4, 5

UNIT III: Chapter 6, 7

UNIT IV: Chapter 8, 9, 10, 12(12.1 – 12.15)

UNIT V: Chapter 13, 14, 15

**REFERENCE BOOK**

Fundamentals of Computer Programming with C# - Svetlin Nakov, Kindle Edition

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

## **CCM10P - PROGRAMMING IN C# LAB**

1. Simple Programs
2. Command Line Arguments
3. Boxing And Unboxing
4. Control Structure
5. Branching And Looping
6. Methods
7. Arrays
8. String Handling
9. Class And Objects
10. Constructors And Destructors
11. Inheritance
12. Polymorphism
13. Operator Overloading
14. Implementing Interface

**CCM11- DATA STRUCTURES****UNIT I**

Basic Terminology – Data Structure Operations – Algorithms: Complexity, Time Space Tradeoff – Arrays: Linear Array – Representation – Inserting and Deleting – Bubble Sort – Linear Search- Binary Search

**UNIT II**

Linked List: Representation – Traversing – searching – Insertion – Deletion- Two Way List

**UNIT III**

Stack: Array Representation – Linked Representation – Arithmetic Expression – Quick Sort – Queue - Linked Representation

**UNIT IV**

Trees: Binary Tree Representation – Traversing – Traversal Algorithms Using Stack – Threads - Binary Search Trees - Insertion – Deletion in Binary Search Trees – Heap Sort

**UNIT V**

Graph: Terminology – Sequential Representation of Graph – Linked Representation of Graph- Operations on Graphs – Sorting: Insertion Sort – Selection Sort – Merge Sort

**TEXT BOOK**

Data Structures – Lipschuta, Tata Mcgraw Hill, Schaum's Outline Series.

UNIT I: Chapter 1, 4

UNIT II: Chapter 5

UNIT III: Chapter 6

UNIT IV: Chapter 7

UNIT V: Chapter 8, 9

**REFERENCE BOOK**

Fundamentals Of Data Structure – Ellis Horowitz And Sartaj Sahini

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

**CCE1 - OPERATING SYSTEMS****UNIT I**

Evolution of Operating Systems – Types of Operating System – Different Views of OS – Design and Implementation Of Operating Systems – I/O Programming Concepts

**UNIT II**

Memory Management – Single Contiguous Allocation- Partitioned Allocation – Relocatable Partitions Allocations – Paged and Demand Paged Memory Management – Segmented Memory Management – Segmented and Demand Paged Memory Management – Overlay Techniques - Swapping

**UNIT III**

Processor Management – Job Scheduling – Process Scheduling – Functions And Policies – Evolution Of Round Robin Multiprogramming Performance – Process Synchronisation – Race Condition – Synchronization Mechanism – Deadly Embrace – Synchronisation Performance Considerations

**UNIT IV**

Device Management: Techniques For Device Management – Device Characteristics – I/O Traffic Controller, I/O Scheduler, I/O Device Handlers – Virtual Devices – Spooling

**UNIT V**

File Management: Simple File System - General Model of a File System - Physical and Logical File System

**TEXT BOOK**

“Operating Systems” – E. Madnick & John J. Donovan, Tata McGraw Hill Publishing Co., Limited.

UNIT I: Chapter 1, 2(Page 54)

UNIT II: Chapter 3

UNIT III: Chapter 4

UNIT IV: Chapter 5

UNIT V: Chapter 6

**REFERENCE BOOK**

“System Programming And Operating Systems” – D.M. Dhamdhare, Tata Mcgraw Hill Publishing Co., Limited.

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

## **NMEC2 - COMMUNICATION SKILLS AND PERSONALITY DEVELOPMENT**

### **UNIT I**

Attitude and Altitude

### **UNIT II**

Inter-Personal Skills - Presentation Skills

### **UNIT III**

Business Communication - Business Correspondence

### **UNIT IV**

Interview - Group Dynamics

### **UNIT V**

Internet for Job Seekers

### **TEXT BOOK**

Prof. G. Ravindran, Dr. S.P. Benjamin Elango and Dr. L. Arockiam, "Success through Soft Skills", ICT, 2009.

UNIT I: Chapter 1

UNIT II: Chapter 6, 8

UNIT III: Chapter 7, 9

UNIT IV: Chapter 10, 11

UNIT V: Chapter 12

### **Question Pattern**

Answer any 5 out of 8 Questions

5 X 15 = 75 Marks

**SBEC3 – INTRODUCTION TO OFFICE MANAGEMENT****UNIT I**

Office Management – Meaning – Elements of Office Management – Functions of Office Management

**UNIT II**

Office Organization – Definition, Characteristics and Steps – Types of Organizations – Functions of an Office Administrator

**UNIT III**

Office Record Management - Importance –Filing Essentials - Classification and Arrangement of Files – Modern Methods of Filing – Modern Filing Devices

**UNIT IV**

Office Communication –Correspondence and Report Writing – Meaning of Office Communication and Mailing

**UNIT V**

Form Letters – Meaning, Principles and Factors to be considered in Designing Office Forms – Types of Report Writing

**TEXT BOOKS**

1. Fundamentals of Office Management – by J.P. Mahajan
2. Office Management by S.P. Arrora
3. Office Management - R.S.N. Pillai and Bagavathi –S. Chand

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

**CCM12 – PROGRAMMING IN VB.NET****UNIT I**

Introduction to Microsoft.Net Framework: Introduction – Start Page – IDE Main Window – Class View Window – Object Browser – Code Window – Compiling the Code – Code Debugging - Developing a Simple VB.NET Console Application – Developing Simple VB.NET Project through Visual Studio IDE

**UNIT II**

Variables Constants and Expressions: Value Types and Reference Types – variable Declaration and Initialization – Value Data Types – Reference Data Types - Boxing and Unboxing – Arithmetic Operators and expressions - Text Box Control - Label Control - Button Control – Control Statements – IF Statement - Radio Buttons - Check Box – Group Box - List Box – Checked Listbox - Combo Box Control – Select ... Case – While – Do – For Statements

**UNIT III**

Methods and Arrays - Types of Methods - Arrays – One Dimensional – Multidimensional Arrays – Jagged Arrays - Classes Properties and Indexes: Definition and Usage of Class - Constructor Overloading - Copy Constructor – Instance and Shared Class Members – Shared Constructor - Properties - Indexes Inheritance and Polymorphism

**UNIT IV**

Definition and Usage of Interfaces – Namespaces - Delegates – Events – Default Exception Handling Mechanism – User Defined Exception Handling Mechanism – Back Tracking – Throw Statement - Custom Exception – Usage of Thread – Thread Class – Start() , Abort(), Join(), Sleep(), Suspend() and Resume Methods

**UNIT V**

Database Connectivity: Advantages of ADO.NET – Managed Data Providers – Developing Simple Application – Creation of a Data Table – Retrieving Data from Tables – Table Updating

**TEXT BOOK**

Visual Basic. Net, C. Muthu, Vijay Nicole Imprints Private Limited

UNIT I: Chapter 2

UNIT II: Chapter 3, 4

UNIT III: Chapter 5, 6, 7

UNIT IV: Chapter 8, 9, 10, 11

UNIT V: Chapter 12, 15

**REFERENCE BOOK**

The Complete Reference – Visual Basic . NET – Jeffrey R. Shapiro , Tata McGraw Hill, 2002.

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit



## **CCM13P - PROGRAMMING IN VB.NET LAB**

1. Console Applications.
2. Boxing and Unboxing
3. Control Structure
4. Controls
5. Arrays
6. Constructor
7. Inheritance
8. Polymorphism.
9. Events
10. Exception Handling
11. Thread
12. Database Connectivity

**CCM14 - DATA COMMUNICATION AND COMPUTER NETWORKS****UNIT I**

Data Communication – Networks – Protocols And Standard – Line Configuration – Topology – Transmission Mode – Categories Of Networks – Internet Works

**UNIT II**

The OSI Model – Functions Of The Layers – TCP/IP Protocols Suite – Signals – Analog And Digital Signal – Data Transmission – Data Terminal Equipment – Data Circuit Terminals Equipment – Modems

**UNIT III**

Transmission Of 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**

Switching – Circuit Switching – Packet Switching – Message Switching - Networking And Internetworking Devices – Repeaters – Bridges – Routers – Gateways. Routing Algorithm – Distance Vector Routing – Link State Routing

**UNIT V**

Internet Working: TCP/IP Protocol Suite – Client Server Model – Domain Name System – File Transfer Protocol (FTP) – Simple Mail Transfer Protocol (SMTP) – World Wide Web (WWW) – Hyper Text Transfer Protocol (HTTP)

**TEXT BOOK**

“Data Communications and Networking” –2<sup>nd</sup> Edition- Behrouz A Forouzan.

UNIT I: Chapter 1, 2(2.1 To 2.4)

UNIT I: Chapter 3(3.1to3.3), 4(4.1 To 4.6)

UNIT III: Chapter 7(7.1 To 7.3), 8(8.1 To 8.3), 9(9.1 To 9.7)

UNIT IV: Chapter 14(14.1 To 14.3), 21(21.1 To 21.8)

UNIT V: Chapter 25(25.1, 25.3, 25.5, 25.7, 25.9, 25.10)

**REFERENCE BOOK**

1. Computer Networks- Tanenbaum
2. Computer Networks –William Stallings

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

**CCE2 - SOFTWARE ENGINEERING****UNIT I**

Introduction – Definitions – Size Factors – Quality and Productivity Factors – Managerial Issues - Planning A Software Project – Introduction – Defining The Problem – Developing A Solution Strategy – Planning The Development Process – Planning An Organizational Structure – Other Planning Activities.

**UNIT II**

Software Cost Estimation: Software – Cost Factors – Software Cost Estimation Techniques – Specification Techniques Staffing – Level Estimation: Estimating Maintenance Costs.

**UNIT III**

Software Requirements Definition – Software Requirement Specification – Formal Specification Techniques – Languages and Processors for Requirements

**UNIT IV**

Software Design – Fundamental Design Concepts – Modules And Modularization Criteria – Design Notations – Design Techniques – Detailed Design Considerations – Real Time And Distributed System Design – Test Plans – Milestones, Walkthroughs And Inspections – Design Guidelines.

**UNIT V**

Verification and Validation Techniques – Quality Assurance – Walkthroughs and Inspections – Static Analysis – Symbolic Execution – Unit Testing and Debugging – System Testing – Formal Verification

**TEXT BOOK**

“Software Engineering Concepts” – Richard Fairley.

UNIT I: Chapter 1, 2

UNIT II: Chapter 3

UNIT III: Chapter 4

UNIT IV: Chapter 5

UNIT V: Chapter 7

**REFERENCE BOOK**

“Software Engineering: A Practitioners Approach” by Roger, S. Pressman McGraw Hill International Book Company.

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit

**CCE3 - E - COMMERCE AND ITS APPLICATIONS****UNIT I**

Introduction: Electronic Commerce Frame Work: The Anatomy of E-Commerce Applications- Electronic Commerce Consumer Applications – Electronic Commerce Organisation Applications – The Network Infrastructure for E-Commerce: Components of Highway – Network Access Equipment – Global Information Distribution Networks

**UNIT II**

The Internet as Network Infrastructure: The Internet Terminology/Chronological History Of The Internet- The Business Of Internet Commercialization: Telco/Cable/Online Companies –National Independents ISPs – Regional Level ISPs – Local Level ISPs

**UNIT III**

Network Security And Firewalls: Client Server Network Security – Firewalls And Network Security – Data And Message Security – Challenge Response System – Encrypted Documents And Electronic Mail – Electronic Commerce And World Wide Web: Architectural Framework For E-Commerce- Technology Behind The Web – Security And The Web

**UNIT IV**

Inter Organisational Commerce and Edi: Electronic Data Interchange – Edi Application in Business – EDI Implementation, Mime and Value Added Networks: EDI Software Implementation – EDI Envelope for Message Transport- Value-Added Networks (VANs) –Internet – Based EDI

**UNIT V**

Advertising And Marketing On The Internet: The New Age Of Information Based Marketing – Advertising On The Internet – Charting The Online Marketing Process – Software Agents – Characteristics And Properties Of Agents – The Technology Behind Software Agents – Applets, Browsers And Software Agents

**TEXT BOOK**

Ravikalakola & Andrew Whinston, "Frontiers of Electronic Commerce", Addison Wesley, 2000.

UNIT I: Chapter 1, 2

UNIT II: Chapter 3, 4

UNIT III: Chapter 5, 6

UNIT IV: Chapter 9, 10

UNIT V: Chapter 13, 16

**REFERENCE BOOK**

Electronic Commerce – Rary P. Schneider and James T. Parry.

	Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question	1,2 – I Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – I Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit