



MOTHER TERESA WOMEN'S UNIVERSITY

KODAIKANAL – 624 102

BACHELOR OF SCIENCE
B.Sc. INFORMATION TECHNOLOGY
UNDER CBCS (with effect from 2018-2019)

BACHELOR OF SCIENCE
B.Sc. INFORMATION TECHNOLOGY
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OBJECTIVES

1. To produce employable IT workforce, that will have sound knowledge of IT and business fundamentals that can be applied to develop and customize solutions for Small and Medium Enterprises (SME).
2. To develop academically competent and professionally motivated personnel, equipped with objective, critical thinking, right moral and ethical values that compassionately foster the scientific temper with a sense of social responsibility.
3. To develop skilled manpower in the various areas of information technology like:
Data base management, Software Development, Computer-Languages, Software engineering, Web based applications etc.

PROGRAMME SPECIFIC OUTCOMES FOR B.Sc. INFORMATION TECHNOLOGY

- PSO1: Understanding of the basics of IT.
- PSO2: Apply fundamental principles and methods of Computer Technology to a wide range of applications and mathematical and scientific reasoning to a variety of computational problems.
- PSO3: Students have the opportunity to develop foundational skills to install and maintain computer networks, troubleshoot hardware and software problems.
- PSO4: Design and implement software systems that meet specified design and performance requirements
- PSO5: Apply advanced algorithmic and mathematical concepts to the design and analysis of software.
- PSO6: Adhere to do higher studies or progress as an entrepreneur.
- PSO7: Students gets the confidence to survive and get succeed in IT industry.
- PSO8: Gets proficiency in the practice of computing, and to prepare them for continued professional development.
- PSO9: Apply sound principles to the synthesis and analysis of computer systems
- PSO10: Understands manage databases and develop web pages.

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I SEMESTER

| S.NO. | SUBJECT CODE | SUBJECT NAME | HOURS | CREDITS | CIA | ESE | TOT |
|--------------|--------------|--|-----------|-----------|-----|-----|------------|
| 01. | ULTA11 | Tamil | 6 | 3 | 25 | 75 | 100 |
| 02. | ULEN11 | English | 6 | 3 | 25 | 75 | 100 |
| 03. | UITT11 | Programming in C | 5 | 4 | 25 | 75 | 100 |
| 04. | UITT12 | Digital Principles & Computer Organization | 5 | 4 | 25 | 75 | 100 |
| 05. | UITA11 | Fundamentals of Computer | 5 | 4 | 25 | 75 | 100 |
| 06. | UVAE11 | Value Education | 3 | 3 | 25 | 75 | 100 |
| Total | | | 30 | 21 | | | 600 |

II SEMESTER

| S.NO. | SUBJECT CODE | SUBJECT NAME | HOURS | CREDITS | CIA | ESE | TOT |
|--------------|--------------|------------------------------|-----------|-----------|-----|-----|------------|
| 01. | ULTA22 | Tamil | 6 | 3 | 25 | 75 | 100 |
| 02. | ULEN22 | English | 6 | 3 | 25 | 75 | 100 |
| 03. | UITT21 | Programming in C++ | 6 | 4 | 25 | 75 | 100 |
| 04. | UITP21 | Programming in C and C++ Lab | 5 | 4 | 25 | 75 | 100 |
| 05. | UITA21 | Web Designing Lab | 5 | 4 | 25 | 75 | 100 |
| 06. | UEVS21 | Environmental Studies | 2 | 2 | 25 | 75 | 100 |
| Total | | | 30 | 20 | | | 600 |

III SEMESTER

| S.NO. | SUBJECT CODE | SUBJECT NAME | HOURS | CREDITS | CIA | ESE | TOT |
|-------|--------------|---------------------------------|-----------|-----------|-----|-----|------------|
| 01. | ULTA33 | Tamil | 6 | 3 | 25 | 75 | 100 |
| 02. | ULEN33 | English | 6 | 3 | 25 | 75 | 100 |
| 03. | UITT31 | Fundamentals of Data Structures | 5 | 4 | 25 | 75 | 100 |
| 04. | UITA32 | Operation Research | 5 | 4 | 25 | 75 | 100 |
| 05. | UITE31 | Management Information System | 4 | 3 | 25 | 75 | 100 |
| 06. | UITN31 | NME 1 | 2 | 2 | 25 | 75 | 100 |
| 07. | UITS31 | Office Automation Lab | 2 | 2 | 25 | 75 | 100 |
| | | Total | 30 | 21 | | | 700 |

IV SEMESTER

| S.NO. | SUBJECT CODE | SUBJECT NAME | HOURS | CREDITS | CIA | ESE | TOT |
|-------|--------------|--|-----------|-----------|-----|-----|------------|
| 01. | ULTA44 | Tamil | 6 | 3 | 25 | 75 | 100 |
| 02. | ULEN44 | English | 6 | 3 | 25 | 75 | 100 |
| 03. | UITT41 | Relational Database Management Systems | 4 | 4 | 25 | 75 | 100 |
| 04. | UITP42 | Relational Database Management Systems Lab | 4 | 4 | 25 | 75 | 100 |
| 05. | UITA42 | DTP Lab | 3 | 4 | 25 | 75 | 100 |
| 06. | UITE42 | Numerical Methods | 3 | 3 | 25 | 75 | 100 |
| 07. | UITN42 | NME 2 | 2 | 2 | 25 | 75 | 100 |
| 08. | UITS42 | Linux\Unix Lab | 2 | 2 | 25 | 75 | 100 |
| | | Total | 30 | 25 | | | 800 |

V SEMESTER

| S.NO. | SUBJECT CODE | SUBJECT NAME | HOURS | CREDITS | CIA | ESE | TOT |
|--------------|--------------|----------------------|-----------|-----------|-----|-----|------------|
| 01. | UITT51 | System Software | 5 | 4 | 25 | 75 | 100 |
| 02. | UITT52 | Data Mining | 5 | 4 | 25 | 75 | 100 |
| 03. | UITT53 | Software Engineering | 5 | 4 | 25 | 75 | 100 |
| 04. | UITT54 | Computer Networks | 5 | 4 | 25 | 75 | 100 |
| 05. | UITT55 | Computer Graphics | 5 | 4 | 25 | 75 | 100 |
| 06. | UITE53 | Visual Basic Lab | 3 | 3 | 25 | 75 | 100 |
| 07. | UITS53 | Python Lab | 2 | 2 | | | |
| Total | | | 30 | 25 | | | 700 |

VI SEMESTER

| S.NO. | SUBJECT CODE | SUBJECT NAME | HOURS | CREDITS | CIA | ESE | TOT |
|--------------|--------------|-----------------------------------|-----------|-----------|-----|-----|------------|
| 01. | UITT61 | Java and Internet Programming | 5 | 4 | 25 | 75 | 100 |
| 02. | UITT62 | Mobile Technology | 5 | 4 | 25 | 75 | 100 |
| 03. | UITT63 | Information Security | 5 | 4 | 25 | 75 | 100 |
| 04. | UITP63 | Java And Internet Programming Lab | 5 | 4 | 25 | 75 | 100 |
| 05. | UITP64 | Mobile Technology Lab | 5 | 4 | 25 | 75 | 100 |
| 06. | UITE64 | Mini Project | 3 | 3 | 25 | 75 | 100 |
| 07. | UITS64 | Multimedia Lab | 2 | 2 | 25 | 75 | 100 |
| 08. | UITS61 | Extension Activities | - | 3 | 25 | 75 | 100 |
| Total | | | 30 | 28 | | | 800 |

| | I | II | III | IV | V | VI | TOTAL |
|----------------------|------------|------------|------------|------------|------------|------------|-------------|
| Total Credits | 21 | 20 | 21 | 25 | 25 | 28 | 140 |
| Total Marks | 600 | 600 | 700 | 800 | 700 | 800 | 4200 |

SCHEME OF EXAMINATION

| | |
|------------------------------------|------|
| Internal (Theory) | - 25 |
| Test | - 15 |
| Attendance | - 5 |
| Assignment / Technical Quiz | - 5 |
| Total | - 25 |
| External (Theory) | - 75 |

QUESTION PATTERN

| | | | |
|-----------|---------------|--|-----------|
| 1. | PART A | 10*1 Marks=10 (Objective Type/Multiple Choice) 2 Question from each Unit | 10 |
| 2. | PART B | 5*4 Marks =20 (From each Unit Either or Choice) | 20 |
| 3. | PART C | 3*15 Marks =45 (Open Choice) (Any three Question out of 5,onequestion from each unit) | 45 |
| | | Total | 75 |

The Internal assessment for Practical : 25

The External assessment for Practical : 75

SEMESTER I
PROGRAMMING IN C

SUBJECT CODE: UITT11

Objective:

OBJ 1: To understand and develop well-structured programs using C language.

OBJ 2: To learn the basic data structures through implementing in C language.

Course Outcomes:

CO1: Describes the complete overview of C Structure

CO2: Describe about Data types, functions and control statements.

CO3: Handling 'Decision making, branching and looping statements'

CO4: Understanding the concept of array and its types.

CO5: Able to allocate the Memory for structure & union.

UNIT I

History of C, Importance of C, Structure of C program, Programming style, Executing a C Program, keywords, identifiers, constants, variables, data types, type conversion, Types of operators and expressions, Managing Input and output operations in C.

UNIT II

Decision making and Branching: Decision Statement –IF-ELSE statement, and nested IF statement break, continue, goto, switch() case. Loop Control Statements –For loop, While loop, Do-while loop and nested loops.

Arrays –Definition, Initialization, characteristics, One, Two, Three and Multidimensional Arrays, Working with Strings & Standard Functions.

UNIT III

Functions –Declaration, Prototype, Types of functions, call by value and reference, Function with operators, function with decision statements, function with Loop statements, Function with Arrays, Types of Storage Classes.

UNIT IV

Structure and Union –Declaration, Initialization, structure within structure, Array of Structure, Enumerated data types, Union of structure, Files – Streams and file types, file operations, File I/O, Read, Write and Other file function

UNIT V

Pointers –Introduction, features, Declaration, Arithmetic operations, pointers and Arrays, Array of pointers, pointers to pointers, pointers and strings, Pointers to structures.

Text Books

1. Programming in ANSI C by E. Balaguruswamy, Tata McGraw Hill Publishing Company, 2002.

Reference Books

1. Programming Techniques through C – A beginners Companion by M.G. Vankatesh Murthy, Pearson education, New Delhi, 2002.
2. Programming in C and C++ by S. Chand & Company Ltd., New Delhi, 2002.

DIGITAL PRINCIPLES & COMPUTER ORGANIZATION

SUBJECT CODE: UITT12

Objective:

OBJ 1: To understand digital circuits and its functions.

OBJ 2: Students will learn the concept of flip flops and number system

Course Outcomes: DIGITAL PRINCIPLES & COMPUTER ORGANIZATION

CO1: Impart the knowledge in the field of digital electronics

CO2: Design and realize the functionality of the computer hardware with basic gates.

CO3: Design digital circuits by simplifying the Boolean functions

CO4: Acquire knowledge about multiprocessor organization and parallel processing

CO5: To know about Half Adder and Full Adder.

CO6: Able to trace the execution sequence of an instruction through the process

UNIT I

Number Representation: Number system – Binary – Hexa Decimal – Octal codes – BCD – Excess 3 – Gray codes – ASCII – EBCDIC – Boolean algebra: Boolean laws – Logic gates – K. Map: sum of products – Product of sum method.

UNIT II

Encoder – Decoder – Multiplexer – Negative Number: 1's & 2's Complement – Half & Full adder.

UNIT III

Flip – Flop: RS, D, JK - Triggering – Registers: Four shift registers - Counters.

UNIT IV

Data & Instructer format fixed print & floating point – Number representation – representation of singed numbers – Alpha numeric representation – Arthimetic and logical Units -, +, *, / with singed number – Floating point arthimetic operation logical operation.

UNIT V

Central Processor unit: Processor bus organization – Instruction format – Addressing modes – data transfer & Manipulation – Memory and I/O units – Main Memory – RAM and ROM address space – Associative – Virtual cache Memory – I/O bus verses memory bus.

Text books

1. Digital Principles and Design By Malvino Leach, Fourth Edition TMH Publications.
2. Digital Principles By Thomas C. Bartee, TMH Publications.
3. Computer systems Architecture by Moris Mano, M. PILL Publications.



FUNDAMENTALS OF COMPUTER

SUBJECT CODE: UITA11

Objective:

OBJ 1: To understand the fundamentals of computer and its organization

OBJ 2: To learn the concept of hardware, software and familiarize the Computer terminologies.

Course Outcomes:

CO1: Describe about Hardware & Software.

CO2: Describe about Input & Output Device.

CO3: Describe about OS, overview of database

CO4: Describes about internet & www with its access to it.

Unit I:

Exploring computers and their uses: Overview-The computer defined-Computers for Individual Users-Computers for Organization –Computers in Society.

Looking inside the computer system: The parts of a computer system – The information processing cycle –Essential computer hardware, software bring the machine to life

Unit II:

Hardware: The Keyboard-The Mouse- Devices for the Hand-Optical Input Devices-audio visual Input Devices-Monitors-Sound systems-Commonly used Printers-High Quality Printers- magnetic Storage Devices-Optical Storage Devices-Solid State- Storage Devices.

Unit III:

CPU: How computers process Data-Factors affecting processing speed- The bus- Micro Computer Processors OS: The purpose of operating system –Types of operating systems-providing a user Interface- PC Operating Systems.

Unit IV:

Networks: The overview- Uses of a network- common types of network –Hybrid networks-How networks are structured –Network Topologies and protocols. Data communications: Overview-data communications with Standard Telephone Lines and Modems-Using Digital Data connections-Wireless Networks.

Unit V:

Internet: Overview –History-Major Services-Understanding WWW-Navigating the web-Searching the web-E-Mail: Overview-using E-mail-more features of the Internet – Connecting to the Internet through wires-How PC applications access the internet-Connecting to the Internet wirelessly.

Text Book:

1. **Introduction to Computers** by Peter Norton, Sixth edition, Tata McGraw-Hill Publishing Company Limited, New Delhi.

SEMESTER-II
PROGRAMMING IN C++

SUBJECT CODE: UITT21

Objective:

OBJ 1: To develop students' knowledge and understanding of the fundamental principles of data structures.

OBJ 2: To build up students' capacity to evaluate different algorithmic techniques and to write programs for developing simple applications using C++.

Course Outcomes:

CO1: Describes complete overview of Data types, functions, control statements, pointers.

CO2: Learning Object Oriented Programming Concepts.

CO3: Demonstrate the use of virtual functions to implement polymorphism.

CO4: Managing Console I/O Operations.

CO5: Understanding Function Overloading & Operator Overloading

CO6: Understanding about Templates, Files and Exception Handling.

UNIT I

Principles of object Oriented Programming : Software Evolution – Basic concepts of object Oriented Programming – Benefits of OOPS – Object Oriented Language – Application of OOPS – Beginning with C++

UNIT II

Token, Expressions and Control Structure Functions : Token – Keyword – Identifier and constant – Basic Data Types – User defined data type- Derived data type – Operators in C++ - Scope Resolution Operator – Member dereferencing Operator – Manipulators – Type cast Operators –Expression and their types – Implicit conversion – Control structures.

UNIT III

Classes and Objects – Constructor and Destructors – Operator overloading and Type conversions.

UNIT IV

Inheritance: Extending Classes – Pointers, Virtual Function and Polymorphism – Managing consoles I/O operations.

UNIT V

Working with Files – Templates – Exception Handling.

Text Book

1. Object oriented Programming with C++ by E. Balagurusamy Tatta McGraw Hill Publishing Company Limited 1998 Chapter: 1 to 11.
2. C++, the Complete Reference Herbert Schilitz, 1997.

PROGRAMMING IN C and C++ LAB

SUBJECT CODE: UITP21

Course Outcome:

Students are able to understand and develop own source code in the following concepts.,

Using C

CO1. Programs using I/O Statements.

CO 2. Programs using Control Structure.

CO 3. Programs using Arrays and Strings.

CO 4. Program using Functions:

- a) Call by value b) Call by Reference c) User Defined d) Built-in

CO 5. Pointers

- a) Operators & Expressions b) Pointers and Arrays c) Pointers & Strings d) Pointers & Structures e) Pointers & Functions.

CO 6. Structure & Unions

CO 7. File Handling.

Exercise:

1. Simple Programs
2. Arrays
3. Strings
4. Functions
5. Recursion
6. Structures
7. Pointers
8. Arrays with Structures
9. Arrays with Pointers
10. Files

Using C++

CO 1. Inline Functions

CO 2. Function with default arguments

CO 3. Function Overloading

CO 4. Constructor, Friend Function

CO 6. Operator Overloading

CO 7. Single Inheritance, Multiple Inheritance, Multilevel Inheritance, Hierarchical Inheritance

Exercise:

1. Simple Programs
2. Arrays
3. Strings
4. Functions
5. Recursion
6. Structures
7. Pointers
8. Arrays with Structures
9. Arrays with Pointers
10. Files
11. Call by value & call by reference method
12. Inline function in C++
13. Function overloading
14. Default Arguments
15. Operator overloading
16. Program using Inheritance
17. Program using polymorphism and virtual functions
18. File concepts

WEB DESIGN LAB

SUBJECT CODE: UITA21

Course Outcome:

Students are able to understand and develop own source code in the following concepts.,

Using Web Design Lab

CO 1. Ordered list

CO 2. Marquee creation

Exercise:

HTML

1. Web page creation using head, title, body, h1 – h6.
2. Web page creation using formatting tags (bold, italic, underline etc)
3. Ordered list
4. Unordered list
5. Definition list
6. Marquee creation
7. Web page with images
8. Web page creation with various font styles and body colors.
9. Hyper link
10. Tables
11. Frames
12. Forms

XML

13. Simple XML Programs
14. XML and CSS
15. XML and XSLT
16. Parsing XML and the XML DOM
17. XML Output from a Server

SEMESTER – III
FUNDAMENTALS OF DATA STRUCTURES

SUBJECT CODE: UITT31

Objective:

OBJ 1: To understand computer knowledge of data structures.

OBJ 2: Students will learn the concept arrays and Linked List.

Course Outcomes:

CO1: Describes overview of array and its representations.

CO2: Understanding about Stack & Queue.

CO3: Understanding about Linked List and storage management.

CO4: Understanding about tree & its traversal techniques.

CO5: Understanding about Graphs and its components.

UNIT I

ARRAY: Axiomatization – Ordered Lists – Sparse Matrices – Representation of Arrays.

UNIT II

STACKS AND QUEUES: Fundamentals – Amazing Problem – Evaluation of expressions – Multiple Stack and Queues.

UNIT III

LINKED LIST: Singly Linked List, Linked Stacks and Queues – The Storage Pool - Polynomial Addition – Doubly Linked list and Dynamic Storage Management – Garbage Collection and Compaction.

UNIT IV

TREES: Basic Terminology – Binary Trees – Binary Tree Representations – Binary Trees Traversal – More on Binary Trees – Threaded Binary trees – Binary Trees Representation of Trees

UNIT V

GRAPHS: Terminology and Representations: Introduction – Definitions and Terminology – Graph representations – Traversal, Connected components and Spanning Trees.

Text Book

1. Fundamentals of Data Structure by Ellis Horowitz Sartaj Sahnja Galgotia Publications, 1998.
2. Reference: Sam Series (Dynamic Storage Management)
3. Data Structure, Algorithms and Applications in C++ Sartaj Sahni McGraw Hill 1998.
4. Data Structure, Algorithms and Applications in C++, Sartaj Sahni, TMH 1988.

OPERATIONAL RESEARCH

SUBJECT CODE: UITA32

Objective:

OBJ 1: To understand problem solving methods.

OBJ 2: Students will learn the concept operation research.

Course Outcomes:

CO1: Describes AND Development of OR.

CO2: Handling Mathematical Formation of L.P.P.

CO3: Understanding Simplex Method & Artificial Variables.

CO4: Understanding transportation Problem.

CO5: Understanding Assignment Problem.

UNIT I

Development of OR – Definition OR – General methods for solving OR models – main characteristics and Phases of OR study – tools, techniques and methods – scientific methods in OR – Scope of OR.

UNIT II

Linear Programming Problem – Mathematical formation of L.P.P. – Slack and surplus variables – graphical solution of L.P.P.

UNIT III

Simplex method – computational procedure – Artificial Variables technique - two phase method – Duality in linear programming.

UNIT IV

Mathematical formulation of transportation problem – optimal solution of T.P. – Methods for obtaining an initial feasible solution – Optimal solution – Degeneracy in T. Unbalance T.P.

UNIT V

Mathematical Formulation of Assignment Problem- Assignment Algorithm – Optimal Solution of Assignment Problem- -Unbalance Assignment Solution – Balanced Assignment Solution.

Text Books:

1. Operations Research – S.D. Sharma (Kedarnath Ramanath & COBOL) chapter 1 to 6 (all section).

Reference Books:

1. Operations Research- KantiSwarup, P.K Gupta &Manmohan, Sultan Chand &Sons publications, Sixteenth Revised Edition 2009.

2. Resource Management Techniques – Prof.V.Sundaresan, K.S.Ganapathy Subramanian, K.Ganesan, AR Publications Revised Edition 2010.

MANAGEMENT INFORMATION SYSTEM

SUBJECT CODE: UITE31

Objective:

OBJ 1: To understand the concepts of information system.

OBJ 2: Students will learn the concept of decision making , DSS etc

Course Outcomes:

CO1: Describes overview Management Information System.

CO2: Overview Of Organization Structure.

CO3: Understanding Decision Making Concepts.

CO4: Understanding Decision Support System.

CO5: Design Data Base Requirements.

Unit I

Management Information System: Introduction to Management Information System – Management Information Systems – Role and Importance of Management.

Unit II

Structure of MIS – operating elements of Information system – Organization structure and theory.

Unit III

Basic of Information systems – Management System and decision making concepts.

Unit IV

MIS and Decision Making Concepts: Decision Making – Decision support system.

Unit V

Information System Requirements: Strategies for the determination of Information Requirements – Database Requirements – User Interface Requirements.

Text Books:

1. Management Information System – Gorgon Davis & Margret he H.D.Dlaon, McGraw Hill International Editions, 1994.
2. MIS – Jawadekar Chapter – 1, 2,3,4,6,7,8,14.

Reference Books:

1. Information System for Modern Management – RoberG.Murdick, Joel E.Ross and R.Clasggett, PHI, 1990.

2. MIS – Jawadekar – TMH – 1997.
3. Management Information System. The Manager View – R.Schultheis TMH.

OFFICE AUTOMATION

SUBJECT CODE: UITS31

Course Outcome:

Students are able to understand and develop own source code in the following concepts.,

Using Office Automation

CO 1. Mail Merge

CO 2. Power Point

Exercise:

MS-WORD

1. Preparing Documents Using Formatting options.
2. Table preparation
3. Find and Replace
4. Mail merge
5. Header and Footer
6. Drop cap

MS-EXCEL

1. Payroll calculation
2. Mark sheet preparation using mathematic function
3. Chart preparation

MS –ACCESS

1. Table creation
2. Query processing
3. Form
4. Report generation

MS-POWER POINT

1. Slide show animation

SEMESTER – IV

RELATIONAL DATA BASE MANAGEMENT SYSTEMS

SUBJECT CODE: UITT41

Objective:

OBJ1: Learn and practice data modeling using the entity-relationship and developing database Designs.

OBJ2: Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access.

Course Outcomes:

CO1: Describes overview of Data Base systems & Data Models.

CO2: Handling Relationship Model.

CO3: Understanding Algebra Operation.

CO4: Understanding back tracking System.

CO5: Design Relational Languages & Integrity Constraints

CO6: Understanding PLSQL / SQL.

UNIT I

Introduction: Purpose of data base systems – View of data – Data models – Database languages – Transaction management – Storage management – Database Administrator – Database users – Overall system structure.

UNIT II

Entity – Relationship Model-Basic concepts – Design issues – Mapping cardinalities – Keys – E-R Diagrams – Weak entity sets – Extended E-R features – Design of an E-R Database scheme – Reduction of an E-R scheme to table.

UNIT III

Relational Model: Structure of relational databases – Relational algebra – The tuple relational calculus – The domain relational calculus – Extended relational – Algebra operations – Modification of the database – Views.

UNIT IV

Other Relational Languages & Integrity Constraints:

Query by Example – Quel – Datalog – Domain constraints – Referential Integrity – Assertions – Triggers – Functional dependencies.

UNIT V

PL/SQL – Relationships between SQL & PL/SQL –Advantages of PL/SQL – arithmetic & expressions in PL/SQL – Loops and conditional statements in PL/SQL – Exceptions Handling – Cursor management – Triggers – Functions & Procedures.

Text Book

Data base system concepts(third edition)- abraham silberschtz, henry f.korth
l.sudershan, mcg hill international editions, 1997.

Reference books

1. S.AT'RE-DS Techniques for Design, Performance& Management-John Wiley&sons.
2. James W Martin n-principles of database management-prentice hall,1979.
3. C.I.DATE an Introduction to DBS-addition Wesley,1981.

RELATIONAL DATA BASE MANAGEMENT SYSTEMS LAB

SUBJECT CODE: UITP42

Course Outcome :

Students are able to understand and develop own source code in the following concepts.,

USING Linux / UNIX

- CO1. PL/SQL tables & records & database triggers
- CO2. excepting handling & explicit cursors & implicit cursors
- CO3. ADO, DAO & RDO connectivity
- CO4. Design procedures using In, Out, Parameter
- CO5. Packages & Functions.

Exercise:

PL/SQL

1. Program using conditional control, interactive controls & sequential controls.
2. Program using excepting handling
3. Programs using explicit cursors & implicit cursors
4. Program using PL/SQL tables & records
5. Programs using database triggers
6. Program to design procedures using In, Out, Parameter
7. Program to design procedures using functions
8. Program to design procedures using packages
9. Program using ADO, DAO & RDO connectivity.

DESK TOP PUBLISHING LAB (DTP)

SUBJECT CODE: UITA42

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.

Page Maker

CO1: Visiting Card in English

CO2: Advertisement

CO3: Certificate

Coral Draw

CO3: India Map

CO4: Cartoon

CO5: Rangoli

CO6: Logos in Tamil

PhotoShop

CO7:Album

Exercise:

Page Maker

1. Visiting Card in English
2. Advertisement
3. Certificate
4. Wedding Invitation card in English
5. Greeting Card
6. Prospectus
7. Flow Chart
8. Calendar

Corel Draw

1. India Map
2. Cartoon
3. Rangoli
4. Logos in Tamil
5. Fashion Designing
6. Jewel Designing
7. Greeting card

PhotoShop

1. Flex Designing
2. Photo Editing

NUMERICAL METHODS

SUBJECT CODE: UITE42

Objective:

OBJ1: To have the versatility to work effectively in a broad range of numerical computations.

OBJ2: To have a broad background in Mathematics

Course Outcomes:

CO1: Describes about Numerical Computations.

CO2: Describes comparison of direct and iterative method

CO3: Understanding about Newton's Formulae.

CO4: Understanding Gaussian Quadrature.

CO5: Understanding Euler's method.

UNIT I

Algebraic and transcendental equations : Errors in numerical computations – iteration methods – bisection methods – regular false methods – Newton Rap son method.

UNIT II

Simultaneous equations – back substitutions – gauss elimination method – gauss serial iteration method – comparison of direct and iterative method.

UNIT III

Interpolation – Newton's Formulae – gauss interpolation formulae Lagrange's Interpolation formula – inverse interpolation.

UNIT IV

Numerical Differentiation: Newton's formulae – Numerical integration – Simpson's Rule – Gaussian Quadrature.

UNIT V

Numerical solution of differential equations: Euler's method - Taylor series method – Range Kati methods – Predictor Corrector methods.

Text books:

1. Numerical methods by S.Arumugam and S.Thangapandi Issac, A.Somasundaram, Scitech publications, Chennai -2002

LINUX / UNIX LAB

SUBJECT CODE: UITS42

Course Outcome:

Students are able to understand and develop own source code in the following concepts.,

USING Linux / UNIX

CO1. IPC using pipes, Message Queues.

CO 2. Demonstration of process synchronization using signal,semaphores

CO 3. Deadlock

CO4. Creation of a child, orphan and Zombie process.

Exercise:

1. Creation of a child, orphan and Zombie process.
2. IPC using pipes.
3. IPC using message queues.
4. Simulation of FCFS process scheduling.
5. Simulation of ROUND ROBIN process scheduling.
6. Simulation of SJF process scheduling.
7. Demonstration of process synchronization using signals.
8. Demonstration of process synchronization using semaphores.
9. Deadlock avoidance using banker's algorithm.

SEMESTER – V

SYSTEM SOFTWARE

SUBJECT CODE: UITT51

Objective:

OBJ1: Review historical development of system software

OBJ2: Identify design levels for microcomputer structure

Course Outcomes:

CO1: Describes about Microcomputer Structure.

CO2: Learning Object 8086 Instruction.

CO3: Managing about Loader.

CO4: Demonstrate about objectives & functions.

CO5: Describe about Memory management requirements.

Unit – I

Overview of Microcomputer Structure and Operation-Execution of a Three-Instruction and Operation-Microprocessor Evolution and types-The 8086 Microprocessor Family-Overview-8086 Internal Architecture.

Unit- II

Family Assembly Language Programming:-Program Development Steps-Costructing the Machine Codes for 8086 Instructions-Writing Programs for Use with an Assembler-Assembly Language Program Development Tools.

Unit-III

System Software: Evolution Components of Programming System-Evolution of Operating System-Operating System User View Pont: Functions, Facilities, Macro Instructions & Features of Macro Facility.

Loader : Loader Schemes-Design of Absolute Loader, Direct Linking Loader-Recognizing Basic Elements-Recognizing Syntactic units and Interpreting Meaning-Intermediate Form-Storage Allocation-Code Generation.

Unit- IV

Operating system Introduction : Definition operating system objectives and functions – operating system as resource manager, operating system as a user/computer interface – Evolution of operating system – Serial processing, batch processing, Multiprogramming, time sharing system.

Semaphore- dead lock – Principles – Prevention – Avoidance – Detection.

Unit-V

Memory Management : Memory management requirements – Relocation, protection, sharing, Logical organization, Physical organization – Virtual memory – Locating and virtual memory, paging, segmentation, combined paging and segmentation – protection and sharing – operating system software – fetch policy , placement & replacement policy.

Text books

1. “MicroProcessor and Interfacing”-Douglas.Hall Second Edition.
2. “System Programming by John J.Donovan-McGram Hill Publication.

3. Operating system by William Stallings.

DATA MINING

SUBJECT CODE: UITT52

Objective:

OBJ1: Understand the basic knowledge of all the functionalities and classification.

OBJ2: Understand the basic functions of the mining.

Course Outcomes:

CO1: Aware of the Functionalities, patterns, of operating system

CO2: Design and deploy appropriate classification techniques

CO3: Use association rule mining for handling large data set.

CO4: Understand the concept of classification for the retrieval purposes

CO5: Understands OLAP, various kinds of association rule and applications of data mining

UNIT-I

Introduction - What is Data mining, Data mining – On kind of data - Data mining Functionalities –Classification of Data mining Systems -Data mining Task Primitives - Integration of Data Mining System - Major issues in Data Mining?

UNIT-II

Data Preprocessing : Why Preprocess the Data - Descriptive Data Summarization – Data Cleaning - Data Integration and Transformation - Data Reduction-Data Discretization and Concept Hierarchy Generation

UNIT- III

Data Warehouse and OLAP Technology An overview : Data Warehouse –A Multidimensional Data Model - Data Warehouse Architecture - Data Warehouse Implementation – From Data warehousing to Data Mining.

UNIT-IV

Mining – Frequent Patterns ,Associations Correlations : Basic Concepts - Efficient Scalable - Frequent Item set Mining methods - Mining Various Kinds of Association rules.

UNIT-V

Applications and Trends in Data mining : Data mining Applications –Data Mining System Products and Research Prototypes - Additional Themes on Data Mining - Social impact of Data mining - Trends in Data mining .

Text Book :

1. Data Mining (Concepts and Techniques) Second Ed

Author : Jiawei Han and Micheline Kamber Publishers : Morgan Kaufmann Publishers (An imprint of Elsevier)

Reference Books :

1 Data Mining (Next Generation Challenges and Future Directions)

Author : Karguta, Joshi, Sivakumar & Yesha Publishers : Printice Hall of India (2007)

2. Data Mining (Practical Machine Learning Tools and Techniques (II Edition)

Author : Ian H. Witten & Eibe Frank Publishers : Morgan Kaufmann Publishers (An imprint of Elsevier]

3. Data Warehousing, Data mining & OLAP (Edition 2004)

Author: Alex Benson, Stephen V. Smith Publishers: Tata McGraw – Hill

SOFTWARE ENGINEERING

SUBJECT CODE: UITT53

Objective:

OBJ1: It seeks to complement this with a detailed knowledge of techniques for the analysis and design of complex software intensive systems.

OBJ2: Be successful professional in the field with solid fundamental knowledge of Software Engineering.

Course Outcomes:

CO1: Describe the processes of software development

CO2: Develop software design and modules for real time system

CO3: Analyze verification & validation techniques

CO4: Enhancing the software maintenance from the plan to implementation

CO5: Describe configuration management & source code

UNIT I

Introduction to Software engineering some definitions – some size factors – quality to productivity factors – managerial Issue.

Planning a software project: defining the problems developing a solution strategy – planning on organization structure – other planning activities.

UNIT II

Software cost estimation: Software cost factors – Software cost estimation techniques – staffing – level estimation – estimative software maintenance costs.

UNIT III

Software requirements, definition: the software requirements specifications – formal specification techniques – language and processors for requirements specification.

UNIT IV

Software Design: fundamentals Descartes concepts – Modules and Modularizing criteria -Design techniques – detailed design considerations – real time and distributed system design – test plan – mile – stones walk through and inspection – design guide line.

UNIT V

Verification and validation techniques: Quality Assurance – static analysis – symbolic execution – unit testing and debugging system - testing formal verification.

Software maintenance: enhancing maintainability during developments managerial aspects of software maintenance – configuration management – sources code metrics – other maintenance tools and techniques.

Text book:

Software Engineering Concepts, 1985 Mc Graw Hill Book company by Richard E.Fairy, chapters 1-5, 8,9

References books:

1. Software Engineering: A practical Approach by Foger S.Pressman Mc Graw Hill International Books Company 1987 Edition.
2. Software Engineering-Mathur
3. Software Engineering-James

COMPUTER NETWORKS

SUBJECT CODE: UITT54

Objective:

OBJ1: Build an understanding of the fundamental concepts of computer networking.

OBJ2: Familiarize the student with the basic taxonomy and terminology of the computer networking area.

Course Outcomes:

CO1: Understand networking concepts and basic communication model.

CO2: Understand network architectures and components required for data communication

CO3: Identify the components required to build different types of networks

CO4: Understand the working principles of various application protocols

CO5: Working with routing algorithms.

CO6: Describe about TCP/UDP/SNMP.

CO7: Understanding Domain Name System.

UNIT I

Introduction: User - Hardware – Software – Reference Models – Example Network – Example Data Communication service – Network Standardization.

UNIT II

Physical Layer: Transmission Media – Wireless Transmission – The Telephone system – Cellular radio – Communication satellites.\

UNIT III

Data Link Layer & Medium Access Layer – D.L.L.Design Issues – Elementary Data link protocols – Multiple Access Protocols – Ethernet, Token bus, Token ring standards.

UNIT IV

Networks Layer & Transport Layer: N.W.L. Design Issues – Routing - Algorithms – T.P.L. Design Issues – Elements of T.P.L.Protocol.

UNIT V

Application Layer: Network Security: Cryptography – Digital Signature - E-Mail Security – Web Security – Social Issues.

Text Book

1. Computer Networks by Andrew S.Tenenbaum, PHI, Third edition, 1996.

Reference Book

2. Computer Networks - Fourouzan

COMPUTER GRAPHICS

SUBJECT CODE: UITT55

Objectives:

OBJ1: Know and be able to discuss hardware system architecture for computer graphics. This includes, but is not limited to: graphics pipeline, frame buffers, and graphic accelerators/co-processors.

OBJ2: Know and be able to use a current 3D graphics API .

Course Outcomes:

CO1: Understand computational development of graphics

CO3: Analyze the Line attribute & curve attribute

CO4: Design animation with rotation, translation and scaling

CO5: Working with Multimedia Developers & Text, Graphics.

CO6: Understanding Digital Audio & Video.

UNIT I: Overview of graphics systems: Video display devices – Raster-scan systems – Random-scan systems – Graphics monitors and workstation – Input devices – Hard-copy devices – Graphics software.

UNIT II: Output primitives: Points and lines – Line-drawing algorithms – DDA algorithm – Bresenham's line algorithm – Attributes of output primitives: Line attributes – Area-fill attributes – Character attributes – Bundled attributes.

UNIT III: Two-dimensional Geometric transformations: Basic transformations – Matrix representations – Composite transformations – Other transformations.

UNIT IV: Windowing and Clipping – Windowing concepts – Clipping Algorithms – Window to view port Transformations – segments – Interactive input methods – Physical input devices – logical classification of input devices – interactive picture construction techniques – input functions.

UNIT V: Three dimensional concepts – 3D Display Techniques – 3D representation – polygon and curved surface – 3D transformations.

Text books:

1. Computer Graphics C Version Second Edition, Donald Hearn and M.Pauline Baker, Pearson Education, 2006.
2. Donald Hearn and M.Pualine Baker "Computer Graphics", PHI , 2nd Edition.

Reference books:

1. William M. Neuman and Robert F Sproul "Principles of Interactive computer Graphics" , McGraw Hill International Edition, 2nd Edition.

2. Foley, van Dam, Feiner, and Hughes. Computer Graphics: Principles and Practice, 3rd edition in C.
3. Computer Graphics, Steven Harrington, McGraw-Hill

VISUAL BASIC LAB

SUBJECT CODE: UITE53

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.,

Course outcomes are

CO1:Simple Arithmetic Operators(+,-,*,/) Using text command boxes.

CO2:Manipulation of string and data functions.

CO3:Designing Using file.

CO4: RDO, ODBC.

CO5: Game.

Exercise:

1. Simple Arithmetic Operators(+,-,*,/) Using text command boxes.
2. Manipulation of string and data functions.
3. Designing in calculator.
4. Magic square.
5. Number Puzzle, Picture Puzzle.
6. Using file, directory and drive list boxes o load a text file into a rich text box.
7. Function of Command Dialog Box(open, save color font, printer, help options)
8. Design a text editor using Rich Text Box.
9. Design a Screen Saver.
10. Animation of Picture.
11. Use list box, combo box to change the font, font size of the given text.
12. Display a popup menu in the form when you click the right mouse button.
13. Use graphical function to draw a picture and save it.
14. Data base Access using DAO, RDO, ODBC.
15. Compare the Scores of two cricket teams, by the use of graphics.
16. Design a Game(like solitaire).

PYTHON LAB

SUBJECT CODE: UITS53

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.

CO1. Print the text & Add to Numbers.

CO2. SQUARE Root & Calculate Triangle

CO3. Multiplication Table, Fibonacci Series.

Exercise:

1. Python Program to Print the Text.
2. Python Program to Add Two Numbers.
3. Python Program to find the square root.
4. Python Program to calculate the area of the triangle.
5. Python Program to convert Celsius to Fahrenheit.
6. Python Program to check prime number.
7. Python Program to check leap year
8. Python Program to display multiplication table.
9. Python Program to display Fibonacci series
10. Python Program to display factorial.

SEMESTER VI

JAVA AND INTERNET PROGRAMMING

SUBJECT CODE: UITT61

Objective:

OBJ1: knowledge of object-oriented paradigm in the Java programming language.

OBJ2: the use of Java in a variety of technologies and on different platforms.

Course Outcomes:

CO1: Describes Object Oriented fundamentals

CO2: Describe about Package and Interfaces.

CO3: Handling 'Exception handling'

CO4: Handling of looping statements.

CO5: Understanding Applets.

CO6: Understanding the controlling windows..

UNIT I

Fundamentals of Object Oriented Programming - Java Evolution – overview of Java Language - Constants, Variables and Data types.

UNIT II

Operators and Expressions – Decision Making and Looping - Classes , Objects and Methods – Arrays, Strings and Vectors.

UNIT III

Interfaces : Multiple Inheritance – Packages :Putting classes together – Multithreaded Programming – Managing errors and Exception.

UNIT IV

Applet Programming – Graphics Programming – Introduction to AWT packages – Introduction to Swings - Managing Input Output in Files in Java.

UNIT V

Introduction to Java script – Data types – Variables – Operators, expressions – statements – functions, date month & type related objects, controlling windows.

Text Books

1. Introduction to Java Programming by E. Balagurusamy – Fifth Edition – McGrawHill Education Private Limited.
2. Java Complete Reference.

Reference Book

3. Krishnamoorthy & Prabu, New Age Intl Publications

MOBILE TECHNOLOGY

SUBJECT CODE: UITT62

Objective:

OBJ1: To able to know the mobile technology concepts.

OBJ2: To develop advanced mobile applications that accesses the databases and the web.

Course Outcomes:

CO1:To design and implement the user interfaces for mobile applications.

CO2: To design the mobile applications that is aware of the resource constraints of mobile devices.

CO3: To develop useful mobile applications in the current scenario using Google Android and Eclipse simulator.

UNIT I :INTRODUCTION - Mobile Applications – Characteristics and Benefits – Application Model – Infrastructure and Managing Resources – Mobile Software Engineering – Frameworks and Tools – Mobile devices Profiles.

UNIT II : USER INTERFACE - Generic UI Development – VUIs and Mobile Applications – Text to Speech techniques – Designing the right UI – Multimodal and Multichannel UI – Gesture based UIs – Screen Elements and Layouts – Voice XML – Java API.

UNIT III :APPLICATION DESIGN - Memory Management – Design patterns for limited memory – Work flow for Application Development – Techniques for composing Applications – Dynamic Linking – Plug ins and rules of thumb for using DLLs – Concurrency and Resource Management – Look and feel.

UNIT IV :APPLICATION DEVELOPMENT- Intents and Services – Storing and Retrieving data – Communication via the Web – Notification and Alarms – Graphics and Multimedia – Telephony – Location based services – Packaging and Deployment – Security and Hacking.

UNIT V:TOOLS- Google Android Platform – Eclipse Simulator – Android Application Architecture – Event based programming – Apple iPhone Platform – UI tool kit interfaces – Event handling and Graphics services – Layer Animation.

TEXT BOOKS:

1. Share Conder, Lauren Darcey, "Android Wireless Application Development" Pearson 3rd Edition.
2. ZigurdMednieks, Laird Dornin, G, Blake Meike and Masumi Nakamura, —Programming Androidll, O'Reilly, 2011.

REFERENCES:

1. Professional mobile Application Development paperback,2012 Jeff Mcherter (Author),Scott Gowell (Author), Wiley India Private Limited
2. Reto Meier, Wrox Wiley, —Professional Android 2 Application Developmentll, 2010.
3. Alasdair Allan, —iPhone Programmingll, O'Reilly, 2010.

INFORMATION SECURITY

SUBJECT CODE: UITT63

Objective:

OBJ1: To able to know the IT security concepts.

OBJ2: To able to know about the database security concepts etc.

Course Outcomes:

CO1: Describes about Information Security.

CO2: Describe about Cryptography Ciphers.

CO3: Discuss about program security.

CO4: Discuss about Database Security.

CO5: Understanding Networks security controls.

UNIT I

Introduction: Security, Attacks, Computer Criminals, Security Services, Security Mechanisms.

UNIT II

Cryptography: Substitution ciphers, Transposition ciphers, Confusion, Diffusion, Symmetric, Asymmetric, Encryption, DES, Uses of Encryption, Hash Function, Key exchange, Digital Signatures, Digital Certificates.

UNIT III

Program Security: Secure Programs, Non malicious program errors, malicious codes virus, Trap doors, Salami attacks, covert channels, Control against program.

UNIT IV

Database Security: Requirements, Reliability, Integrity, Sensitive data, Inference, Multilevel Security.

UNIT V

Security in Networks: Threats in Networks vs. Networks security controls, Firewalls, Intusion detection systems, Secure e-mails.

Text Books:

1. Fourozan

Reference Books:

1. W.Stallings – Network Security Essentials Applications and Standars, 4/E,2010.

JAVA AND INTERNET PROGRAMMING LAB

SUBJECT CODE: UITP63

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.,

Course outcomes are,

CO1: Multi- Threading.

CO2: Manipulation of Event Handling.

CO3: Designing Java Streams.

CO4: Arithmetic Operation Using Java Script

CO5: Animation and Images

Exercise:

1. Arrays and flow control statements.
2. Run time exception And I/O exception.
3. Multi- Threading.
4. Layout Management.
5. GUI Components (Labels, Check box, Menus, Text, etc.)
6. Event Handling (Focus Events, Key Events, Paint Events, Text Events, Mouse Events, Window Events, Etc.)
7. Animation and Images.
8. Java Applet.
9. Java files management methods.
10. Java Streams.
11. JDBC (Java Database Connectivity).
12. Arithmetic Operation Using Java Script
13. Prime Number Using Java Script
14. Find Largest Number in Array Using Java Script
15. Palindrome Using Java Script

MOBILE TECHNOLOGY LAB

SUBJECT CODE: UITP64

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.,

Course outcomes are,

CO1: Multi- Threading.

CO2:Uses GPS location information

CO3:Makes use of database.

CO4: Creates an alert upon receiving a message

CO5: Creates alarm clock

Exercise:

1. Develop an application that uses GUI components, Font and Colors.
2. Develop an application that uses Layout Managers and event listeners.
3. Develop a native calculator application.
4. Write an application that draws basic graphical primitives on the screen.
5. Develop an application that makes use of database.
6. Develop an application that makes use of RSS Feed.
7. Implement an application that implements Multi threading.
8. Develop a native application that uses GPS location information.
9. Implement an application that writes data to the SD card.
10. Implement an application that creates an alert upon receiving a message.
11. Write a mobile application that creates alarm clock.

Multimedia LAB

SUBJECT CODE: UITS64

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.,

Course outcomes are,

CO1: Motion and Shape Tweening

CO2: Drawing Tools

CO3: Transparency

CO4: Modeling

CO5: Lighting

Exercise:

Flash

1. Animation (with Motion and Shape Tweening)
2. Flash Drawing Tools to Create Shapes
3. Transparency
4. Actions and Buttons

Maya

General

- A Short Tour of Maya's UI
- Camera Controls
- Basic Selection
- Basic Manipulation
- Hierarchy

Modeling

- Polygon Selection
- Polygon Editing
- Image Planes
- Subdivision Modeling

Shading

- Basic Shading
- UV Editing
- Shading Networks

Lighting

- Basic Lighting
- Advanced Lighting

Animation

- Basic Animation
- Graph Editor
- Animation Principles

Rendering

- Production Rendering
- Occlusion

NON MAJOR ELECTIVE (OFFERED BY PARENT DEPARTMENT)
HTML LAB

Course Outcomes:

Students are able to understand and develop own source code for the following concepts.,

Course outcomes are,

CO1: Heading Tag

CO2: Order and Unordered List

CO3: Creating Tables

HTML LAB

1. Heading Tag
2. Formatting Tag
3. Ordered List
4. Unordered List
5. Definition List
6. Image
7. Anchor
8. Table
9. Frame
10. Forms

NON MAJOR ELECTIVE (OFFERED BY PARENT DEPARTMENT)

PHOTOSHOP LAB

Course Outcomes: Photoshop Lab

Students are able to understand and develop own source code for the following concepts.,

Course outcomes are,

CO1: Album preparation

. CO2: Invitation

Exercises :

1. Album preparation
2. Invitation Preparation
3. Wall Papers
4. Visiting Card
5. Background Changing and Removing
6. Wedding invitation Card
7. Cloning an Image
8. Flex Designing
9. Photo Editing
10. Book Cover

NON MAJOR ELECTIVE (OFFERED BY PARENT DEPARTMENT)

Objective:

OBJ 1: To understand the basics of computer.

Course Outcomes: Students are able to understand the basics of computer.

FUNDAMENTALS OF COMPUTER

UNIT I

Introduction to computers – Generation of Computers – Types of Computers
Comparison of Micro, Mini and mainframe computers – Advantages of Computer –
characteristics of Computer – limitations of computer.

UNIT II

Block diagram of a Computer – input devices – output devices – storage devices –
RAM – ROM – comparison b/w RAM and ROM – Secondary storage devices.

UNIT III

Types of Software – Operating systems – Need for an operating systems – functions of
OS – popular operating systems – five generation of programming languages – packages.

UNIT IV

Binary number system – Binary Arithmetic operations (Addition, Subtraction,
Multiplication, Division) – ASCII codes _ Algorithms – Flow chart – Pseudo codes – steps in
programming.

UNIT V

Definition – Features of networks – Network Topologies –LAN – WAN – MAN –
Comparison between LAN and WAN – Introduction to Internet – History of internet uses of
Internet – working with windows.

Text Book:

1. Fundamentals of IT – Alexis, Mathews Leon.

NON MAJOR ELECTIVE (OFFERED BY PARENT DEPARTMENT)

PRINCIPLES OF INFORMATION TECHNOLOGY

Objective:

OBJ 1: To understand the principles of information technology

Course Outcomes: Students are able to understand the principles and technology of computer.

UNIT I

Introduction – history of Information – Quality of Information – Information processing – Database – Characteristics of Data in a Database – DBMS – Types of DBMS – Data Normalization.

UNIT II

Internet and world wide web : Introduction – getting information on the internet – providing information on the internet – compiling information from the internet – internet access – basis – protocols – internet addressing – WWW – HTML – Web browsers – searching the web.

UNIT III

Multimedia Tools: Introduction – graphics effects and techniques – sound & music – video – multimedia authoring tools – virtual reality.

UNIT IV

Data warehouse & Data Mining: Introduction – advantages of data ware house – components – structure – uses – data mining introduction – advantages of data mining – technologies used in data mining.

UNIT V

Application of information technology: Computers in business and industry – computers in home – educations and training – entertainment science and engineering and medicine.

Text books:

1. Fundamentals of information technology – Alexis Leon, Mathews Leon

Reference Book:

1. Advanced information technology – S. Jaiswal