

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
D. C. A. (1st SEMESTER) SYLLABUS

Effective From : August – 2006 (L : 4; P : 0)
PAPER NO. : 101
Paper Title : **COMPUTER ORGANIZATION & FUNDAMENTALS OF OPERATING SYSTEMS**
Prerequisite : Nil
Aim & Objective : To teach Computer Fundamentals, internal working & operations of PC.

1. Memory, Number System & Basic Computer Architecture

- 1.1. RAM, ROM, PROM, EPROM etc, Virtual Memory, Cache Memory
- 1.2. Secondary Storage Devices
- 1.3. Binary, Hexadecimal, Octal Number System
- 1.4. Integer & Floating Point representation
- 1.5. Block Diagram of CPU and execution process
- 1.6. Introduction to bus architecture
- 1.7. H/W parts of PC
- 1.8. I/O devices: keyboard, display, pointing devices, modem, scanners, OMR, OCR, CD-ROM, DVD, printers.

2. Operating System Concepts

- 2.1. Evolution of Operating System & History
- 2.2. Need of an Operating System
- 2.3. Single-User & Multi-User Operating System
- 2.4. Elements of an Operating System

3. Single User Operating System

- 3.1. BIOS, POST Operation, Vector Table, Device Drivers, TSR Programs
- 3.2. System Files
- 3.3. Configuration Files
- 3.4. Disk Architecture
- 3.5. Commands
- 3.6. Introduction to Windows

4. Multi-user Operating System

- 4.1. Introduction to Windows-NT, UNIX
- 4.2. LAN Fundamentals
- 4.3. Basic Commands of NETWARE, Windows-NT, UNIX

Reference Books:

1. Operating Systems Concepts - James Peterson- McGraw Hill
2. Inside IBM PC - Peter Norton – PHI
3. Advanced MS-DOS - Ray Duncon - McGraw Hill
4. Advanced UNIX -A Programmer's Guide - Stephen Prata – SAMS
5. User Manual of DOS, Windows-Windows-NT, Netware
6. Netware for dummies - Dummy Series
7. Operating Systems - Stallings – PHI
8. UNIX Concepts And Application - Das – McGrawHill
9. How Computers work - Ron White – Techmedia
10. Introduction to computers :- Peter Norton - TMH

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Effective From : August – 2006 (L : 4; P : 0)
PAPER NO. : 102
Paper Title : **DATA BASE MANAGEMENT SYSTEM (DBMS)**
Prerequisite : Nil
Aim & Objective : To understand Data Base Concepts & develop programming skills on DBMS Package.

1. Basic Concepts of Database Management System

- 1.1. Purpose of Database Systems
- 1.2. Data Models
- 1.3. Data Definition & Manipulation Language
- 1.4. Database Administrator

2. Data Base Package (FoxPro)

- 2.1. Data Base, Records, Fields
- 2.2. Operators
- 2.3. Data Base & Array Handling:
 - 2.3.1. Creation
 - 2.3.2. Modification
 - 2.3.3. Processing
- 2.4. Inbuilt Functions, User defined functions & Procedures
- 2.5. SET Commands
- 2.6. Working On LAN
 - 2.6.1. Exclusive use of Database Files
 - 2.6.2. Working with shared Database Files
 - 2.6.3. Locking Records & Files

Reference Books:

- 1. Database Concepts & Systems, 2/ed – Bayross, O'Reilly, Shroff Publishers & Distributors Pvt. Ltd.
- 2. FoxPro 2.5 made Simple; R. K. Taxali, BPB Pub.
- 3. Mastering FOXPRO - 2.5 - Charles Siegel
- 4. Programmer's guide to FOXPRO 2.5 - Howard Pickler, BPB Pub.

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Effective From : August – 2006 (L : 4; P : 0)
PAPER NO. : 103
Paper Title : **COMPUTER PROGRAMMING & PROGRAMMING
METHODOLOGY**
Prerequisite : Nil
Aim & Objective : To teach the concept of programming methodology & to develop
programming skills for writing efficient programs in high level language.

1. Algorithm & Flowcharting

2. Constants & Variables

- 2.1. Character Set
- 2.2. Constants - needs & definition
- 2.3. Variables - needs & definition
- 2.4. Storage Class
- 2.5. Scope of Variables

3. Expressions & Operations

- 3.1. Operators: Assignment, Arithmetic, Increment, Decrement, Relational, Logical, Bitwise, Conditional
- 3.2. Expression
- 3.3. Evaluation & Assignment of Expression

4. Basic Input & Output Functions

5. Jumping, Branching & Looping Statements

6. Array

7. Built-in Functions: Arithmetic functions, Data Conversion functions, String functions, Character Classification functions

8. Structure Union & Enumerated data types

9. User Defined Functions

- 9.1. Call by value
- 9.2. Passing Structures & Array
- 9.3. Recursion

10. Pointers

11. Program Bugs & Testing

- 11.1. Program Bugs
- 11.2. Preparing Test data
- 11.3. Functional & Structural Testing

Reference Books:

1. Structured programming concepts - La Budde - (Mc.Graw Hill)
2. C Programming Language - Karnighan & Ritchie – TMH
3. 'C' Odyssey (6 Volumes) - Vijay Mukhi – PHI
4. Programming in 'C' - Stephan Kochan - CBS
5. Mastering Turbo C - Kelly & Bootle - BPB
6. C Language Programming - Byron Gottfried - TMH
7. Mastering Turbo C - Stan Kelly – BPB
8. The Complete Reference - C - Herbert Schildt, Tata Mc Graw Hill
9. Let Us 'C', Yashwant Kanetkar, BPB Publication
10. Practical C Programming – Steve Oualline, O'Reilly, Shroff Publishers & Distributors Pvt. Ltd.
11. Algorithms With C – Kyle Loudon, O'Reilly, Shroff Publishers & Distributors Pvt. Ltd.

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Effective From : August – 2006 (L : 4; P : 0)
PAPER NO. : 104
Paper Title : **ACCOUNTING & FINANCIAL MANAGEMENT**
Prerequisite : Nil
Aim & Objective : To introduce the concepts of financial accounting system

1. Accounting

- 1.1. Principles, concepts and conventions
- 1.2. Double entry system of accounting, ledger & preparation of Trial balance
- 1.3. Subsidiary Books

2. Final Accounts

- 2.1. Trading, profit and loss accounts
- 2.2. Balance sheet of sole proprietary concern with normal closing entries
- 2.3. Introduction to manufacturing account
- 2.4. Limited company - Schedule VI
- 2.5. Accounts of Non-profit organization

3. Financial Management

- 3.1. Meaning and role
- 3.2. Working Capital Requirements
- 3.3. Capital Budgeting
- 3.4. Source of Finance

4. Ratio Analysis

- 4.1. Meaning
- 4.2. Advantages
- 4.3. Limitations
- 4.4. Types of ratios and their usefulness.

5. Fund Flow Statement

- 5.1. Meaning of the terms - fund, flow and fund, working capital cycle
- 5.2. Preparation and interpretation of the fund flow statement.

6. Costing

- 6.1. Nature, importance, basic principles and Cost sheet

7. Introduction to computerised accounting system

- 7.1. Coding
- 7.2. Logic and codes required
- 7.3. Master files, transaction files
- 7.4. Introduction to documents used for data collection
- 7.5. Processing of different files and output obtained.

Reference Books:

1. Kellock, J. : Elements of Accounting, Heinemann, 1978.
2. Van Home, James, C. : Financial Management & Policy, prentice Inc.
3. R.L.Gupta : Advanced Accountancy
4. Shukla & Grewal : Advanced Accounts
5. S.N.Maheshwari : Management Accounting and Financial Control
6. S.N.Maheshwari : Problems & Solutions in Management Accounting & Financial Management
7. A. Raman : Advanced Accountancy, Himalaya Pub. House
8. Mukharji Hanif : Modern Accountancy, Vol. I and II, THM Pub.
9. S. M. Maheshwari : Cost and Management Accounting, Sultan Chand & Sons Pub.

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Effective From : August – 2006 (L : 4, P : 0)
PAPER NO. : 105
Paper Title : **OFFICE AUTOMATION & WEB DESIGNING TOOLS**
Prerequisite : Nil
Aim & Objective : To familiarize the students with office automation tools & web designing tools

1. WINWORD

- 1.1. Typing, Editing, Proofing & Reviewing
- 1.2. Formatting Text & Paragraphs
- 1.3. Automatic Formatting And Styles
- 1.4. Working With Tables
- 1.5. Graphics And Frames
- 1.6. Mail Merge
- 1.7. Automating Your Work & printing Documents

2. EXCEL

- 2.1. Working & Editing In Workbooks
- 2.2. Creating Formats & Links
- 2.3. Formatting A Worksheet & creating graphic objects
- 2.4. Creating Charts (Graphs),formatting and analyzing data
- 2.5. Organizing Data In A List (Data Management)
- 2.6. Sharing & Importing Data
- 2.7. Printing

3. PowerPoint

- 3.1. Getting started in PowerPoint
- 3.2. Creating a presentation
- 3.3. Creating & editing slides
- 3.4. Previewing a slide show
- 3.5. Adding picture & graph
- 3.6. Adding sound & video
- 3.7. Adding auto shape
- 3.8. Animating objects

4. Introduction to Internet

- 4.1. Internet Protocols http, ftp, TCP/IP etc
- 4.2. Internet Utilities e-mail, chat, searching etc.

5. Web Browsers

6. Web Server

7. HTML

7.1. HTML Tags

8. JavaScript

- 8.1. Fundamentals of JavaScript
- 8.2. Syntax of JavaScript
- 8.3. Use of JavaScript in HTML
- 8.4. Validation using JavaScript

9. CSS

- 9.1. What is CSS?
- 9.2. Advantage & Disadvantage of CSS
- 9.3. Creating CSS
- 9.4. Use of CSS in HTML
- 9.5. Formatting HTML page using CSS

Reference Books:

1. WORD 6 for Windows Quick & easy Reference - Mansfield – BPB
2. Mastering WORD 6 for Windows - Mansfield – BPB
3. Mastering EXCEL 4 for Windows - Townsend - BPB
4. Mastering EXCEL 4 for Windows - Chester - BPB
5. EXCEL 5 for Windows Quick & Easy - Jones - TECH
6. SAMS Teach Yourself JavaScript in 24 Hours – Michael G Moncus – Sams Publication
7. JavaScript for the World Wide Web – Tom Negrino, Dori Smith – Peachpit Press
8. Beginning JavaScript – Wilton, Apress, Shroff Publishers & Distributors Pvt. Ltd.
9. Speed up Your Site: Website Optimization – Andrew B King – New Riders
10. Absolute Beginner’s Guide to Microsoft 2003 – Jim Boyce – QUE Publishing
11. Microsoft Office XP Comprehensive Course – Favro, Labyrinth, Shroff Publishers & Distributors Pvt. Ltd.

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Effective From : August – 2006 (L : 0; P : 10)
PAPER NO. : 106
Paper Title : **PRACTICALS (BASED ON PAPER NOS. 101 TO 105)**

Practical shall be conducted as mentioned in the Teaching Scheme for Papers 102, 103 and 105.

Separate journals for Paper No. 102, 103 & 105 should be prepared.
