

**VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT**  
**D. C. A. (PART TIME) (1<sup>st</sup> SEMESTER) SYLLABUS**

Effective From : August – 2006 (L : 3; 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 : 3; 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 : 3; 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 : 3; 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 : 0; T : 0; P : 6)  
PAPER NO. : 106  
Paper Title : **PRACTICALS (BASED ON PAPER NOS. 101 TO 104)**

Practical shall be conducted as mentioned in the Teaching Scheme for Papers 102 & 103.

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

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