

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