

SARDAR PATEL UNIVERSITY
Programme: BCA
Semester: I
Syllabus with effect from: JUNE 2011

Paper Code: US01CBCA02	Total Credit: 3
Title Of Paper: Computer Organization	

Unit	Description in detail	Weighting (%)
I	Introduction to Computer Systems and Number Systems Block diagram of a simple computer and significance of different functional units Evolution of computers Definitions of the terms : hardware, software Applications of computers Binary, octal, decimal, and hexadecimal number systems Conversion of numbers among binary, octal, decimal, and hexadecimal number systems Addition and subtraction of binary numbers	25%
II	Representation of Information and Processor Organization Representation of integers Character codes (ASCII, Unicode) Error detection and correction codes Instruction execution cycle CPU organization	25%
III	Parallel Instruction Execution and Memory Organization Introduction to parallel instruction execution Array processors Multiprocessors Multiple functional units Pipelining Primary memory – Introduction to RAM, ROM, Cache, Registers Secondary memory Various types and organization of secondary storage devices such as magnetic disks, optical disks, flash memories.	25%
IV	Addressing Techniques and I/O Devices Addressing techniques like Immediate, Direct, Indirect, Register, Indexing and Stack Common types of Input/Output devices, such as Monitors, keyboard, mouse Printers (Line, Dot Matrix, Inkjet, Laser) Scanners	25%

Basic Text & Reference Books :-

- Tanenbaum A.S. : Structured Computer Organization, Prentice-Hall of India Pvt. Ltd.
- Rajaraman V. : Computer Fundamentals, Prentice-Hall of India Pvt. Ltd.

