SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Computer Science)
Semester: III
Syllabus with Effect from: June-2012

Paper Code: US03CCSC02	Total Credit: 3
Title Of Paper: Computer Organization	

Unit	Description in detail	Weighting (%)
I	**Introduction to Computers & Number systems** **Introduction to Computers** Block diagram of a simple computer and significance of different functional units Evolution of computers Definitions of the terms : hardware, software Applications of computers **Number Systems** 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 & Processor and its Functions** **Representation of Information** Representation of integers Character codes (ASCII, Unicode) Error detection and correction codes **Processor and its Functions** Instruction execution cycle CPU organization Parallel instruction execution Array processors, Multiprocessors Multiple functional units Pipelining	25%
III	**Memory** 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	**I/O Devices and Addressing Techniques** Common types of Input/Output devices, such as Monitors, keyboard, mouse Printers (Line, Dot Matrix, Inkjet, Laser) Scanners Addressing techniques like Immediate, Direct, Indirect, Register, Indexing and Stack	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.
- Computer Fundamentals 4th Edition, P.K. Sinha, Priti Sinha.