

SARDAR PATEL UNIVERSITY
Bachelor of Computer Application
Semester – I
US01CBCA25 : Fundamental of Computer Organization
(w.e.f June 2018)

Credits : 4
All units carry equal weightage.

Lectures per week : 4

Unit 1	<p>Introduction to Computer Systems and Number Systems</p> <p>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</p>
Unit 2	<p>Representation of Information and Processor Organization</p> <p>Representation of integers Character codes (ASCII, Unicode) Error detection and correction codes Instruction execution cycle CPU organization</p>
Unit 3	<p>Parallel Instruction Execution , Memory Organization and Introduction to parallel instruction execution</p> <p>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.</p>
Unit 4	<p>Addressing Techniques and I/O Devices</p> <p>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</p>
<p>Reference Books:</p> <ol style="list-style-type: none"> 1. Tanenbaum A.S: Structured Computer Organization, Prentice-Hall of India Pvt Ltd 5th edition 2. Rajaraman V: Computer Fundamentals, Prentice-Hall of India Pvt Ltd(4th Edition) 3. Computer Fundamentals 6th Edition P.K. Sinha, Priti Sinha. 	