

ST. ANN'S COLLEGE OF ENGINEERING & TECHNOLOGY: CHIRALA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN

Subject: Computer Organization
Name :Dr. A.Tirupathaiah

Academic Year: 2019-20
Year & Sem/Section(s): II-II / A ,B & C

Unit/ Topic No.	Topics Planned to be Covered	No. of classes required
I	Basic Structure Of Computers: Functional unit, Basic Operational concepts, Bus structures, System Software, Performance, The history of computer development.	10
II	Machine Instruction and Programs: Instruction and Instruction Sequencing: Register Transfer Notation, Assembly Language Notation, Basic Instruction Types, Addressing Modes, Basic Input/output Operations, The role of Stacks and Queues in computer programming equation. Component of Instructions: Logic Instructions, shift and Rotate Instructions.	12
III	Types of Instructions: Arithmetic and Logic Instructions, Branch Instructions, Addressing Modes, Input/output Operations.	10
IV	INPUT/OUTPUT ORGANIZATION: Accessing I/O Devices, Interrupts: Interrupt Hardware, Enabling and Disabling Interrupts, Handling Multiple Devices, Direct Memory Access, Buses: Synchronous Bus, Asynchronous Bus, Interface Circuits, Standard I/O Interface: Peripheral Component Interconnect (PCI) Bus, Universal Serial Bus (USB).	10
V	The MEMORY SYSTEMS: Basic memory circuits, Memory System Consideration, Read-Only Memory: ROM, PROM, EPROM, EEPROM, Flash Memory, And Cache Memories: Mapping Functions, INTERLEAVING Secondary Storage: Magnetic Hard Disks, Optical Disks,	10
VI	Processing Unit: Fundamental Concepts: Register Transfers, Performing An Arithmetic Or Logic Operation, Fetching A Word From Memory, Execution of Complete Instruction, Hardwired Control, Micro programmed Control: Microinstructions, Micro program Sequencing, Wide Branch Addressing Microinstructions with next –Address Field.	10
	Total Number of Classes	62

TEXT BOOKS:

1. Computer Organization, Carl Hamacher, Zvonks Vranesic, Safea Zaky, 5th Edition, McGraw Hill.
2. Computer Architecture and Organization , John P. Hayes ,3rd Edition, McGraw Hill.

REFERENCE BOOKS:

1. Computer Organization and Architecture – William Stallings Sixth Edition, Pearson/PHI
2. Structured Computer Organization – Andrew S. Tanenbaum, 4th Edition PHI/Pearson
3. Fundamentals or Computer Organization and Design, - Sivaraama Dandamudi Springer Int. Edition.
4. “Computer Organization and Design: The Hardware/Software Interface” by David A. Patterson and John L. Hennessy.
5. J .P. Hayes, "Computer Architecture and Organization", McGraw-Hill, 1998.

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