

IT110-Computer Organizations

Important topics chapter-wise

CHAPTER 3: Number Systems

- Number System Conversions
- Binary Arithmetic

CHAPTER 5: Representing Numerical Data

- Signed Integer representation
- Signed Binary addition and subtraction
- Floating point calculations

CHAPTER-6: The Little Man Computer

- different stages in Execution of the Little Man Computer
- LMC Instruction set

CHAPTER-7: Assembly Language

- Generations of Programming Language
- language translation process

CHAPTER: Instruction Set Architecture

- 0-Address machine architecture
- 1-Address machine architecture
- 2-Address machine architecture
- 3-Address machine architecture

CHAPTER-8: CPU and Memory

- Concepts of registers
- VLIW and EPIC Architectures
- Fetch-Execute Cycle Timing Issues
- Pipelining
- Cache Memory
- Multiprocessing

CHAPTER-9: Input/Output

- Programmed I/O
- Servicing Interrupts
- Multiple Interrupts and Prioritization
- Direct Memory Access

CHAPTER-10: Computer Peripherals

- The Hierarchy of Storage

- Magnetic Disks
- Disk Arrays
- Optical Disk Storage
- Magnetic Tape
- Display
- Printers

CHAPTER-12: Network and Communications

- Packet Routing
- The TCP/IP Network Model
- The OSI Network Model
- Network Topology

CHAPTER-13: Ethernet and TCP/IP

- Domain Names and DNS Services
- The Network Layer, IP Addresses, and ARP
- Dynamic Host Configuration Protocol (DHCP)
- The Operation of IP
- Hub-Based Ethernet
- Switched Ethernet
- Network Security