

2123  
B.E. (Information Technology)  
Third Semester  
PC-IT-302: Computer Architecture and Organization

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Explain the following terms:-

- a) Addressing modes
- b) Microinstruction
- c) Opcode
- d) Locality of Reference
- e) Multiprocessor
- f) Hit Ratio
- g) Instruction format
- h) Address Space
- i) Memory Hierarchy

(10)

**UNIT - I**

II. a) Differentiate between Hardwired and Microprogrammed Control unit.

b) Compare RISC and CISC characteristics.

(5,5)

III. a) Define the term Instruction format. Explain the various organization for instruction.

b) What is the need of common bus system? Discuss with example how computer Register can be connected to Common Bus.

(5,5)

IV. Explain the various addressing modes with suitable examples.

(10)

**UNIT - II**

V. a) What is Associative memory? Explain in detail with suitable diagram.

b) Explain the three types of mapping in cache organization.

(5,5)

P.T.O.



(2)

- VI. a) What is the need of Input-output Interface? Explain the Connection of I/O Devices to I/O Bus & the communication of peripherals with processor.
- b) Explain the Block diagram of DMA controller. (5,5)
- VII. a) Explain the concept of daisy Chain Priority with the help of example.
- b) Explain any two Interconnection structure multiprocessors. (5,5)

x-x-x