BT-5/D-23   45201

COMPUTER ORGANIZATION & ARCHITECTURE
PC-IT-305 A

Time : Three Hours]   [Maximum Marks : 75

Note : Attempt *Five* questions in all by selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) What is computer architecture ? Explain the store program control concept of computer organization ?   9

    (b) Discuss multilevel viewpoint of a computer using suitable example.   6

2. (a) What is instruction cycle ? Explain 3-stage instruction cycle with a suitable example.   7

    (b) Discuss Flynn's classification of computer architectures and its significance in the context of modern computing ?   8

Unit II

3. What is Register Transfer Language ? Explain Bus and Memory transfer operations with suitable example.   15

4. (a) What is **microprogram control unit** ? Explain its working with suitable example.   8

   (b) Explain **arithmetic microoperations** and **logic microoperations** with example.   7

Unit III

5. (a) What is instruction format ? What are different types of instruction formats ?   8

   (b) Differentiate between RISC & CISC.   7

6. What is addressing mode ? What are the advantages of addressing modes ? Explain different types of addressing modes with suitable examples.   15

Unit IV

7. What is direct memory access (DMA) ? What are different modes of DMA transfer ? Explain the working diagram of DMA controller.   15

8. Explain the following : 15
   (a) Associate memory
   (b) Cache memory
   (c) Virtual memory