

Roll No.

Total No. of Pages : 2

BT4/M06

8631

✓ Computer Architecture & Organisation

Paper : CSE-202-E

Time : Three Hours]

[Maximum Marks : 100

Note :- Attempt any FIVE questions.

1. (a) Discuss Flynn's classification of computers. 10
(b) What is multilevel computer architecture ? Discuss. 10
2. (a) Explain the different types of instruction formats used in a computer system. Discuss merits and demerits of each type. 10
(b) What is the difference between an immediate, a direct and an indirect address instruction ? How many references are needed for each type of instruction to bring an operand into a processor register ? 10
3. (a) Define each of the following terms associated with micro programmed control unit :
Micro-operation, micro-instruction, micro program, control store, address sequencing. 10
(b) What do you mean by "Next Address Generator" present in a microprogrammed control unit ? Explain briefly along with its block diagram. 10
4. (a) What is the control logic design ? Discuss any one hardwired control design method. 10
(b) Discuss the principle of pipeline processing of instructions. How does it improve the performance of a computer system ? 10
5. (a) What is Memory Hierarchy ? Discuss its characteristics. 10

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Contd.

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- (b) Distinguish between Paging and Segmentation schemes of virtual memory. 10
6.
 - (a) How does Cache memory improve the performance of a computer system ? Explain associative mapping scheme of cache. 10
 - (b) Discuss various cache block replacement policies. 10
7. Distinguish between :
 - (a) Scalar and Superscalar pipelines 10
 - (b) Multiprocessors and Multicomputers MIMD architectures. 10
8.
 - (a) What is DMA ? Draw the block diagram of DMA used in 80X86. 10
 - (b) What are general purpose and special purpose registers ? Discuss registers of any 80X86 microprocessor. 10