

Roll No.

Total No. of Pages : 2

BT-4/J07

8631

Computer Architecture and Organization

Paper : CSE-202E

Time : Three Hours]

[Maximum Marks : 100

Note :- Attempt FIVE questions in all, by selecting at least ONE question from each unit.

UNIT-I

1. (a) Discuss the two metrics to measure the performance of a computer system. What are the pros and cons of using these two metrics ? 10
- (b) What are the characteristics of CISC architecture ? How is it different from RISC architecture ? 10
2. (a) Explain immediate and indexed addressing modes. Discuss their advantages and disadvantages. 10
- (b) How do you classify instructions in an instruction set ? Explain any two instructions in each category with suitable examples. 10

UNIT-II

3. (a) Explain the register-based CPU architecture with the help of a suitable diagram. 10
- (b) Explain five-stages instruction cycle with the help of flowchart. 10
4. (a) How does pipeline processing of instructions improve the performance of the CPU ? 10
- (b) Draw the basic structure of a microprogrammed control unit and explain its working. 10

UNIT-III

5. (a) What is memory hierarchy ? Explain the principle of locality of reference. 10
- (b) Distinguish between SRAM and DRAM. 10
6. (a) What are relative advantages and disadvantages of direct and

- associative mapping of cache memory ? 10
- (b) What are LRU and OPT policies of page replacement ? Compare them with suitable example. 10

UNIT-IV

7. (a) What is instruction level parallelism ? Explain the superscalar pipeline processing with a suitable diagram. 10
- (b) Write a short note on Microprogram Sequencer. 10
8. Write short notes on : 10
- (a) DMA 10
- (b) Priority Interrupts. 10