

Roll No.

Total Pages : 3

8401

BT-4/M-12

**COMPUTER ARCHITECTURE &
ORGANISATION**

Paper–CSE-202E

Time Allowed : 3 Hours]

[Maximum Marks : 100

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit.

UNIT-I

1. (a) Discuss the multilevel view of a Computer system. 10
(b) Compare the characteristics of SIMD and MIMD architectures. 10
2. (a) Differentiate among direct, indirect and register indirect addressing modes. 10
(b) What is Instruction Format ? Discuss different types of Instruction Format. 10

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UNIT-II

3. (a) Explain Stack-based architecture of a CPU with the help of a diagram. 10
- (b) List registers of a non-pipelined CPU. Explain the purpose of each register. 10
4. (a) What is Hardwired CU ? Explain any one method to design it. 10
- (b) Discuss the relative advantages and disadvantages of Hard-wired and micro programmed CUs. 10

UNIT-III

5. (a) What is Memory hierarchy ? Why do we need it ? 10
- (b) What is RAM ? Explain 2D organization of RAM. 10
6. (a) What is Cache ? Discuss associative mapped cache organization. 10
- (b) What is Virtual Memory ? Explain different page replacement policies. 10

UNIT-IV

7. (a) What is Processor-level Parallelism ? Compare and contrast a multiprocessor and multicomputer system. 10
- (b) What is Speedup factor of a pipelined architecture ? State Amdahl's law. 10
8. Explain the following with respect to 80×86 processors : 10
- (a) Instruction cycle. 10
- (b) Micro instruction formats. 10