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

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 contras 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 :

(a) Instruction cycle.

10

(b) Micro instruction formats.

10