

**BT-4/M-12**  
**COMPUTER ARCHITECTURE &**  
**ORGANISATION**  
**Paper-CSE-202E**

Time Allowed: 3 Hours]  
100

[Maximum Marks:

**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 CPD 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 CD? Explain anyone method to design it.                              | 10 |
| (b) Discuss the relative advantages and disadvantages of Hard-wired and micro programmed CDs. | 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 80x86 processors:  |    |
| (a) Instruction cycle.  | 10 |
| (b) Micro instruction formats.  | 10 |