

Roll No. ....

Printed Pages : 2

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BT-5 / D-17

**COMPUTER ORGANIZATION AND  
ARCHITECTURE**

**Paper-CSE-307N**

Time allowed : 3 hours]

[Maximum marks : 75

Note :- Attempt any five questions, selecting at least one from each unit. All questions carry equal marks.

**Unit-I**

1. (a) Explain the organization and architecture of a computer system. 8
- (b) Discuss fixed point representation of numbers. 7
2. (a) Explain the Booth's algorithm for multiplication by taking suitable example. 8
- (b) Describe Flynn's Classification of computer architecture. 7

**Unit-II**

3. Discuss the following: 15
  - (a) Microprogram sequencer
  - (b) Memory reference instructions
4. (a) Explain the instruction cycle and its phases with an example. 8
- (b) Differentiate between Hardwired control and micro programmed control. 7

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**Unit-III**

5. (a) Explain the immediate and indexed addressing modes. Discuss their advantages and disadvantages. 8
- (b) What are the characteristics of CISC architecture? How it is different from RISC architecture? 7
6. What do you mean by pipelining? How does pipeline processing of instructions improve the performance of the CPU? Explain in detail. 15

**Unit-IV**

7. (a) Write short note on memory asynchronous data transfer in detail. 8
- (b) What is memory hierarchy? Why do we need it? 7
8. Write short note on:
  - (a) DMA controller and transfer 9
  - (b) Priority Interrupts 6

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