

**D 276**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2003.

Fourth Semester

Computer Science and Engineering

CS 238 — COMPUTER ARCHITECTURE — I

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Absolute Addressing.
2. What are the different addressing modes?
3. Define underflow.
4. What is meant by bit sliced processor?
5. Define microinstruction.
6. What is Pipelining?
7. How Cache memory is used in reducing the execution time?
8. Define memory interleaving.
9. What is DMA?
10. Define dumb terminal.

PART B — (5 × 16 = 80 marks)

11. Describe Von Neuman Architecture in detail. (16)
12. (a) Explain the bit slice processor and its internal structure of the ALU.

Or

- (b) How Floating point addition is implemented? Explain briefly with neat diagram.

13. (a) Describe the Microprogrammed control unit based on Wilke's original design.

Or

- (b) Explain the different Hard wired controllers.

14. (a) How Cache blocks are mapped to main memory module using direct mapping method and Associate Mapping Method.

Or

- (b) What is Virtual Memory? Explain the Virtual-memory address translation.

15. (a) Write short notes on programmed I/O and memory mapped I/O.

Or

- (b) What is DMA? Describe how DMA is used to transfer Data from peripherals.
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