MAY 2025 **P/ID 16302/PIT1B**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Define decimal number system.

2. What is gray code?

3. What is register transfer language?

4. Distinguish microprocessor and micro program.

5. What are the components of CPU?

6. State the need of addressing modes.

7. What is divide overflow?

8. Define partial reminder in division algorithm.

9. List the functionality of polling.

10. What is FIFO buffer?

11. What is meant by virtual memory?

12. Define loosely coupled microprocessor.

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. Write short notes on alphanumeric representation.

14. Discuss 4-bit binary adder with neat sketch.

15. Elaborate various types of data transfer instructions with an example.

16. Discuss SIMD array processor in detail.

17. Explain the flowchart for multiplication of floating-point numbers in detail.

18. Elaborate Daisy-Chaining priority in detail.

19. Discuss system bus structure for multiprocessors.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Elaborate logic microoperation with neat sketch.

21. Discuss vector processing in detail.

22. Elaborate Booth multiplication algorithm in detail.

23. Elucidate the data transfer modes in detail.

24. Explain address mapping using pages in detail.

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