APRIL 2026 **52504/125C2A**

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Convert the binary number 101110 to decimal.

2. Define: Floating-point representation.

3. What are character codes? Give an example.

4. What is meant by 2's complement?

5. Define: Microcomputer.

6. What is meant by instruction format?

7. State the function of the Accumulator in 8085.

8. Mention any two features of 8085 microprocessor.

9. What is RIM instruction used for?

10. Write the difference between SIM and RIM instructions.

11. Define: Program Control.

12. What is pipelining in RISC architecture?

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Convert the decimal number 156 to binary and hexadecimal.

14. Explain 9's and 10's complement methods for decimal subtraction with examples.

15. Compare BCD and Binary representation.

16. Write a simple assembly program to add two 8-bit numbers using 8085 instructions.

17. Describe the pinout diagram of the 8085 microprocessor.

18. Explain the working of the 8259 Programmable Interrupt Controller.

19. Write short notes on RISC pipelining with a neat sketch.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Illustrate the conversion between binary, octal, and hexadecimal with suitable examples.

21. Explain the functional block diagram of the 8085 Microprocessor in detail.

22. Describe the various addressing modes of 8085 with examples.

23. Discuss the block diagram and working of the 8257 DMA controller.

24. Explain vector processing and array processors with applications.

———————