MAY 2023 **P/ID 16302/PIT1B**

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Define microprogram.

2. Mention about EX segment.

3. List the three categories of computer instruction.

4. Define operand forwarding.

5. State the use of SC (sequence counter).

6. Mention about divide overflow flip-flop.

7. Describe *dshl A*.

8. Expand HDLC.

9. What is mean by processor status word?

10. What is the use of data communication processor?

11. State the functionality of match register.

12. Mention the procedure for write-back method.

PART B — ($5 \times 6 = 30$ marks)

Answer any FIVE questions.

13. State the applications of vector processing.

14. Explain in detail about symbolic microinstructions.

15. Outline on three major types of interrupts.

16. Write the sequence of steps on instructions used in computer.

17. Summarize on character oriented protocol.

18. Explain about data transparency.

19. Draw a neat sketch on memory table for mapping a virtual address.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

20. Explain in detail about integer representation with an example.

21. Draw a neat diagram for microprogram sequencer for a control memory and explain its components.

22. Elucidate arithmetic pipeline with neat diagram.

23. Elaborate bit-oriented protocol with frame format.

24. Describe in detail about segmented page mapping.