MAY 2025

P/ID 17602/PCA1B/ PCATB

Time : Three hours Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Convert $(180)_{10}$, and $(1073)_{10}$ to Binary.

2. Define Complements

3. Define Boolean function.

4. Define Full adder.

5. Define PLA.

6. What is Triggering?

7. Why state reduction is necessary in Sequential circuits?

8. Define Cache memory

9. What is meant by PCB?

10. Mention the uses of Accumulator

11. Define Data formats.

12. What are called instructions'?

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. How do you convert numbers from one base to another'? Give Examples.

14. Write short notes on Binary number systems with examples.

15. Explain briefly about the working of decoders with its types.

16. Discuss about the Components of PLA with its advantages and disadvantages.

17. What are called Counters? Discuss about its types.

18. Write a brief notes on memory management in computers.

19. What are called instruction sets? Discuss about its types.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Discuss in detail about Number systems in a Digital Computer with examples.

21. What are the different types of code converters? Explain any two with examples.

22. What are called Flip Flops? Discuss in detail with its types.

23. Give a detailed notes on Bus organization with its architecture and types with a neat structure.

24. Describe in detail about Timing and Control unit in Digital computer systems.

———————