

**DECEMBER 2022**

**P/ID 17602/PCA1B/  
PCATB**

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Time : Three hours

Maximum : 80 marks

SECTION A — ( $10 \times 2 = 20$  marks)

Answer any TEN questions

1. What is meant by Number System?
2. What is tabulation Method?
3. Define the term Boolean algebra.
4. What do you mean by a combinational circuit?
5. What is the job of NAND and NOR gates?
6. Expand the terms ROM and PLA and write a note on them.
7. What is Triggering of flip-flops?
8. What is sequential circuit?
9. Write a note on BUS Organization.
10. What are the responsibilities of ALU?
11. Write the difference between PLA Control and Microprogram Control.
12. What is the role of Accumulator in instruction execution?

SECTION B — ( $5 \times 6 = 30$  marks)

Answer any FIVE questions

13. Write about canonical and standard forms.
14. Describe Logical Operations.
15. Draw the circuit of Binary parallel adder and explain.
16. Write about Magnitude comparator.
17. Give a brief account on design of circuits.
18. Describe design of specific Arithmetic circuits.
19. Write notes on Timing and control and Hardwired control.

SECTION C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions

20. Explain in detail about Flip Flops.
21. Give a detailed notes on properties of XOR and equivalence function.
22. Explain the Design of sequential circuits.
23. Explain in detail about Microprogramming.
24. Discuss on Instruction Data formats and Instruction sets.