MAY 2024 **U/ID 46501/UCC1A**

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. What is operating system?
2. What is Binary system?
3. What are the characteristics of computer?
4. What is Truth Table?
5. What is Binary Logic?
6. Define Binary Codes.
7. Define : K Map.
8. What is Tabulation Method?
9. Define Shift Register.
10. What is Counter?
11. What is multiplexer?
12. What is ROM?

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. What are the Generations of Computer? Explain with examples.

14. Explain the postulates of Boolean Algebra with suitable examples.

15. Explain the following:

    (a) Compliments

    (b) Logic gates.

16. Describe about Mc-Chausky Tabulation method.

17. Explain about T flip-flops with examples.

18. Explain full subtractors with neat diagram.

19. Explain about Demultiplexer with necessary diagram.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Briefly explain the following

    (a) Associative Laws

    (b) De Morgan's Theorems.

21. Reduce the following

Equation $f = \Sigma_m(0, 2, 3, 5, 8, 10, 11, 13)$ using McChausky method.

22. Briefly explain RS flip flop with circuit and Truth Table.

23. Briefly explain Ripple counter with examples.

24. Briefly explain about the following

(a) ROM

(b) PLA

(c) ENCODER

(d) Status Register
