

OCTOBER 2013

**P/ID 17454/
RCD/PCAG**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

All questions carry equal marks.

1. (a) What do you mean by 'Min' and 'Max' terms?
Discuss with examples.

Or

- (b) What is Boolean Algebra? Compare Boolean Algebra and ordinary algebra.

2. (a) With necessary diagrams explain the function of a half subtractor.

Or

- (b) Write a short note on Read only Memories.

3. (a) Discuss the function of a Basic flip-flop circuit.

Or

- (b) List the steps involved in the design of clocked sequential circuits.

4. (a) What is microprogramming? List the advantages and disadvantages of microprogramming.

Or

- (b) What is a bus? Write a short note on Bus organization.

5. (a) Define Instruction and Data formats. Discuss Data formats with examples.

Or

- (b) With examples discuss on Register-reference instructions.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

All questions carry equal marks.

6. With an example discuss tabulation method.

7. Write short notes on the following :

- (a) Integrated circuits.
(b) Logic gates.

8. Design a combinational circuit that converts a decimal digit from 2, 4, 2, 1 code to excess-3 code.

9. With necessary diagrams discuss the function of a binary parallel adder.

10. Write a short note on the following :
 - (a) Excitation tables
 - (b) Shift Registers.
11. What is ALU? Discuss the design of arithmetic circuit.
12. Write a short note on H/W control.
13. Discuss on the following :
 - (a) Timing and control
 - (b) Accumulator.
