

DECEMBER 2014

P/ID 17502/PCASB

Time : Three hours

Maximum : 100 marks

PART A — (6 × 5 = 30 marks)

Answer any SIX questions.

1. Write a note on complements.
2. What is minterm and maxterm? Explain with examples.
3. What is code conversion? Give examples.
4. Explain the design and function of DFF.
5. Design a shift register and explain.
6. What is scratch pad memory? Explain.
7. Explain the meaning of microprogram.
8. List and explain the steps in the design of hardwired control unit.

PART B — (7 × 10 = 70 marks)

Answer any SEVEN questions.

9. List down the common postulates of Boolean algebra and explain.
10. What is the use of don't care conditions in Karnaugh map? Explain with examples.

11. Explain any four combinational circuits.
 12. Discuss the working of 'Magnitude comparator and decoder'.
 13. What is state reduction? Discuss.
 14. How is a sequential circuit designed with state equations? Explain.
 15. What are the effects of output carry? Explain.
 16. Explain the steps in the procedure of designing an accumulator.
 17. What is control organisation? Write down and explain the different ways of implementing it.
 18. Discuss in detail 'Micro programmed control'.
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