



ADITYA DEGREE COLLEGES

ANDHRA PRADESH

II SEMESTER - MID -1 EXAMINATIONS

I – B.Sc CS MAJOR

DIGITAL LOGIC DESIGN

Max. Marks : 60

Time :2 Hr

Date:

SECTION – A

I. Answer any FIVE of the following:

5 x 4 = 20 M

1. Convert $(10011110)_2$ to decimal, octal and hexadecimal.
2. Write about addition and subtraction of signed numbers
3. Write about BCD code.
4. Explain about unweighted codes.
5. Explain about dual and complement of a logic function.
6. Write about canonical and standard form of SOP and POS forms.
7. Explain how to realize two level logic functions using NAND and NOR gates.
8. Write about don't care conditions in K-map.

SECTION – B

II. Answer all the following questions:

4 x 10 = 40 M

9. a) Explain about number systems with suitable examples.
(or)
b) Explain how to convert the numbers from one number system to another number system.
10. a) Explain about r 's and $(r-1)$'s complements.
(or)
b) Explain about different methods to represent the signed binary numbers.
11. a) Define logic gate? Explain different types of logic gates with their truth tables.
(or)
b) Explain about Boolean laws.
12. a) Explain about K- map (2,3 and 4 variables).
(or)
b) Implement the logic diagrams using NAND & NOR gates
(i) $Y = AB + CD + E$ (ii) $Y = (A+B). (C +D). E$

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