Register Number :

Name of the Candidate :

1 2 9 6

B.Sc. DEGREE EXAMINATION, 2010

(INFORMATION TECHNOLOGY)

(FIRST YEAR)

(PART - III)

(PAPER - III)

550 / 150. FUNDAMENTALS OF DIGITAL COMPUTERS

(Common with New Regulations & Revised Regulations, B.Sc. Visual Communication New Regulations)

May]   [Time : 3 Hours

Maximum : 100 Marks

SECTION - A $(8 \times 5 = 40)$

Answer any EIGHT questions.
All questions carry equal marks.

1. Convert SOP to equivalent POS

$\overline{A}\,\overline{B}\,C \,+\, \overline{A}\,\overline{B}\,C \,+\, \overline{A}\,B\,C \,+\, A\,\overline{B}\,C \,+\, A\,B\,C.$

Turn over

2

2. Define maxterms and minterms. Give examples.

3. Give full subtractor equation and draw the circuits.

4. Write Truth Table for half adder, derive Boolean equation and draw the circuits.

5. Explain the functions of a control unit.

6. Explain how instruction are classified for 8085 microprocessor.

7. Sketch the flag register of 8085, state their uses.

8. Compare ROM, RAM and EPROM.

9. Explain about memory organizations.

10. Write a note on printers.

SECTION - B $(3 \times 20 = 60)$

Answer any THREE questions.
All questions carry equal marks.

11. Explain how the NAND and NOR gates can act as Universal building blocks.   (20)

12. Discuss the various addressing modes of 8085 with suitable illustrations.   (20)

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13. Explain the following :

   (a) Instruction formats.   (10)

   (b) Register transfer language.   (10)

14. Name a few secondary storage devices and explain their functions.

15. Explain the following :

   (a) CRT.   (10)

   (b) Teleprinters.   (10)