Department of Computer Science & Information Technology
National Institute of Technology, Srinagar

First Semester B.Tech Minor-II Examination, Nov-09

Computer Fundamentals

ime: 1 hr **Max. Marks: 20**

Q.No.1 a) Find out the decimal equivalent of the following binary numbers

a) 10101 b) 11010 c) 110.101 d) 0.1011 (02)

b) Convert the following Hexadecimal numbers to their binary equivalent

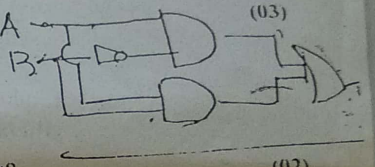
a) 2AC b) FAB c) D6C1 d) ABC (02)

c) Convert the following decimal to their Hexadecimal equivalent

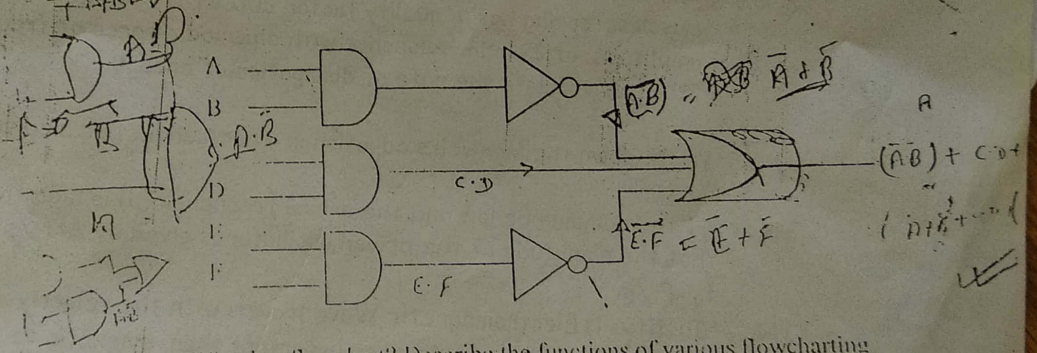
a) 23 b) 0.3 (01)

Q.No.2 a) Construct logic circuit diagram for the following Boolean expressions using AND, OR & NOT gates (03)

1. $\overline{A}.B + A.\overline{B} = X$
2. $(A+B).(A+C).\overline{(A+B)} = Y$
3. $(A+B).(C.D) + (A+B).\overline{(C.D)} = Z$



b) What will be the output of following logic circuit? (02)



Q.No.3 a) What is a flowchart? Describe the functions of various flowcharting symbols. (03)

b) Draw a flowchart to find the largest of 3 numbers. (02)

Q.No.4 a) What is an algorithm? What are the different steps involved? (03)

b) Give an algorithm for calculating simple interest if principal (P), rate(R) & time (T) are given (02)

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