



INDIAN SCHOOL DARSAIT DEPARTMENT OF ICT



Subject: Computer Science

Topic: Data Representation

Worksheet No.: 1

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Date: _____

Name of the Student : _____

Class & Div: XI A

Roll Number : _____

1. **Do as directed :**

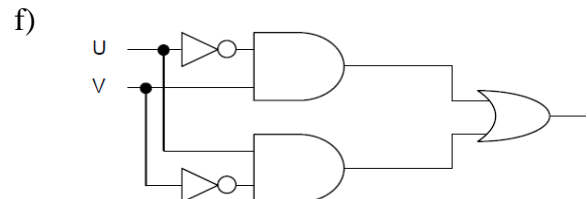
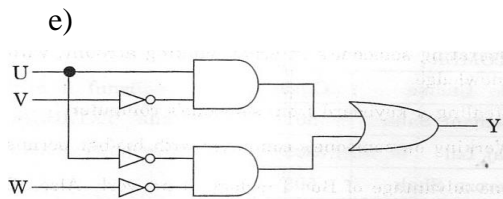
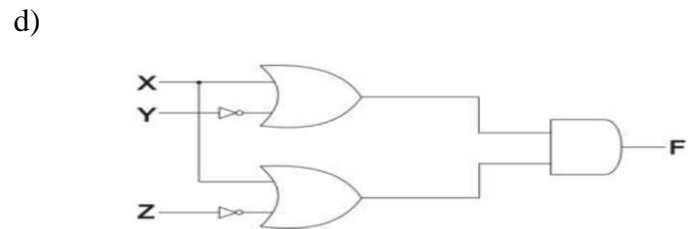
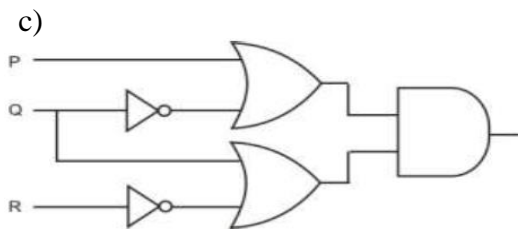
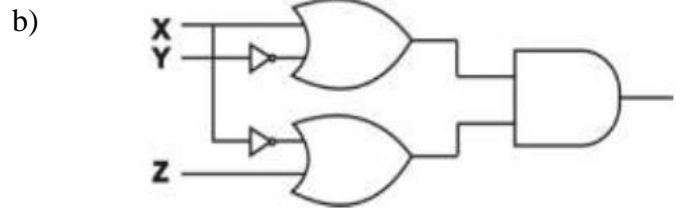
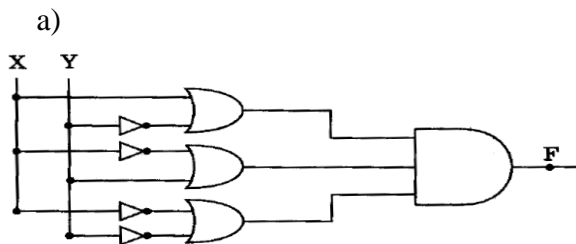
- a) Convert the Decimal number 781 to its Binary equivalent.
- b) Convert Binary number 101101.001 to its decimal equivalent
- c) Convert Octal number 321.7 into its Binary equivalent
- d) Convert the Hexadecimal number 3BC into its Binary equivalent
- e) Convert the Binary number 10011010.010101 to its Hexadecimal equivalent
- f) Convert the Hexadecimal number ABF.C into Octal number.
- g) Convert the Octal number 576 to Decimal.
- h) Convert 0101110.1010110 to Hexadecimal

2. Find x and y for: $(x)_{10} \rightarrow (1100.100)_2 \rightarrow (y)_8$

3. Verify using truth table:

- i) $X'Y + X.Y' + X'.Y' = (X'+Y')$
- ii) $U.(U' + V) = (U+V)$
- iii) $X.X' = 0$ and $X+1 = 1$
- iv) $X+(Y+Z) = (X+Y)+Z$

4. Write the equivalent Boolean expression for the following Logic Circuit :



5. Draw a logical Circuit Diagram for the following Boolean Expression:

- i) $A.(B+C')$
- ii) $F=AB' + CD'$
- iii) $(A+B).(C+D)$
- iv) $A+B.C'$