THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

Class: XI	Department: Computer Science	Date of submission:
Worksheet -2	Topic: Boolean Algebra	Note: for practice

1. Prove the Boolean Laws shown below using Truth Table.

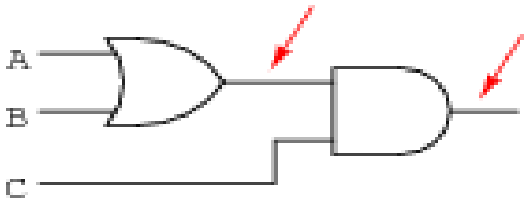
   a) X+ X'Y = X + Y
   b) X + XY = X
   c) X+ Y Z = (X + Y) (X + Z)

2. Write a short note on Boolean Algebra explaining all the gates.

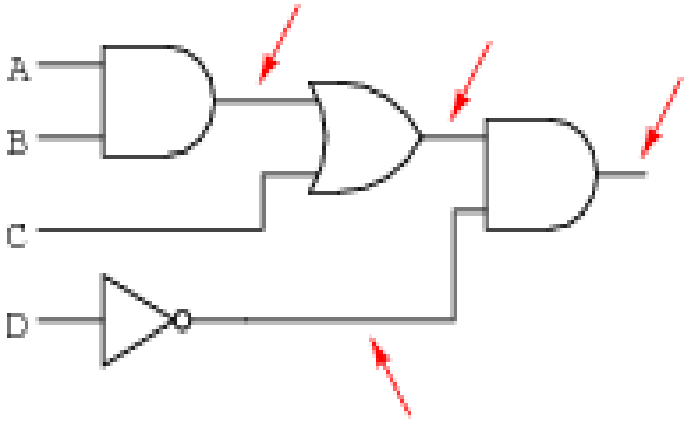
3. State and prove De Morgan's Theorems using truth table

4. Convert the following logic gate circuit into a Boolean expression. (Write the Boolean expressionfor the given circuits)

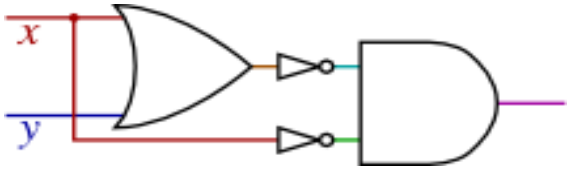
   a)



   b)



c)



5. Draw a circuit diagram and truth table for the given Boolean Expressions:

a) y = A+C. B+C'. A'+B+C

b) F = A'.B.C.(A+D)'

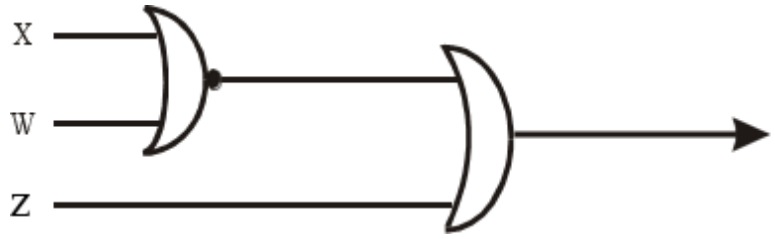
c) F = A.B'+C'.D

d) F = (U.V')+(U'.W')

e) F = A.B + A.C' + B'.A'.C

f) F = (X+Y).(X'+Z').(Y+Z)

6. Obtain logic expression for the following logic circuit:



7. Write the Boolean expression for the given below logic circuit.