

**1) How can you compute range for the following data types?****a. Unsigned char****Solv :**

Number of bit = 8 bit

number of probitiy =  $2^n$  , n number of bitNumber of probiiltiy =  $2^8 = 256$ Rang of number =  $2^n - 1$ 

Rang of number = 0 ---- 256

**b. Signed int****Solv :**

Number of bits = 16

Number of probitiy =  $2^{16-1} = 2^{15} = 32768$ Postive rang = 0 ....  $2^{16-1} - 1$ Negative rang = -1 ....  $-2^{15-1}$ 

Intervale rang = -32768 ... +32768

**2) Solve the following:**

**a.**  $7 \& 5 = 5$

$7 = 0111 \quad 5 = 0101$

**b.**  $11 | 8 = 11$

$13 = 1011 \quad 8 = 1000$

**c.**  $13 \wedge 12 = 1$

$13 = 1101 \quad 12 = 1100$

**d.**  $3 > 10 \&\& 5 < 18 = 0$

$F \&\& T = F = 0$

**3) a=4, c=10****solv :**

what are the values of a= 5    b= - 5    c= 9 after operation of:

b= ++a - c—

**a= 5**

**c= 9**

**b = -5**

4)What is the correct output for the program given below?

```
#include<stdio.h> int
main()
{
int a=100,b=200,c;

c= (a == 100 || b > 200)
; printf("c = %d\n", c);
return 0;

}
```

Solv :

a == 100 ➔ 0

b > 200 ➔ 1

0 or 1 = 1

The correcte value c =1