ASSIGNMENT on Data. For practice.

1. Convert the following binary numbers to a decimal value:

   a) $(011011)_2 = (\ )_{10}$ b) $(101001)_2 = (\ )_{10}$

2. Convert the following decimal numbers to binary:

   a) $(257)_{10} = (\ )_2$ b) $(2048)_{10} = (\ )_2$ c) $(87)_{10} = ?$ d) $(-1)_{10} = ?$ e) $(-45)_{10} = (\ )_2$

3. What will be the equivalent in hexadecimal for the given binary data:

   a) 11101101101 b) 0100010010111

4. Convert the following hexadecimal numbers to a binary number:

   a). 0XABCD b). 0X0F1

5. Convert the following octal num to a binary number :

   a) 0111 b) 0777 c)074

6. Convert the following binary number to a octal num :

   a) 100111010 b) 010000001

7. Convert the following hexadecimal number to a octal number :

   a) 0X1BC b)0XFFFF

8. if the variable is declared as given below, then what will be the exact binary presentation in memory, when the program is being executed?

   ```
   char ch1='6', ch2='a', ch3='*', ch4=' ',ch5=98;
   char v1=127,v2=128;
   unsigned char u1=127,u2=128,u3=255,u4=256;
   ```

9. if the following integer variables are declared, then what will be exact picture of memory occupied .

   ```
   short int s1=50, s2=-5, s3=32767,s4=32768;
   ```

   a) 0XFF01 b) 0X100FF

10. If the integer variables are declared as given below, then predict the binary presentation in memory.

    ```
    int i='1', j=520, k=65536, l=-2, m=-50;
    ```