BRAIN INTERNATIONAL SCHOOL

Computer Science Assignment   **Class: XI**   **June'21**

CH-2.DATA REPRESENTATION AND BOOLEAN LOGIC

1. Draw the equivalent logic circuit for the following Boolean expression:

   (A.B)+C

2. Correct the following Boolean statements:

   $X+1 = X$

   $(A')'=A'$

   $A+A'=0$

   $(A+B)' = A.B$

3. Convert the following

   (i) $(1100000)2 = (?) 10$

   (ii) $(634)10 = (?)8$

   (iii) $(2444)8 = (?)16$

   (iv) $(A5)16 = (?)10$

   (v) $(543)8 = (?)2$

4. Convert the following-
   (i) $(97)10$ to binary
   (ii) $(63.25) 10$ to binary
   (iii) $(110.01) 2$ to decimal
   (iv) $(111011110101)2$ to hexadecimal
   (v) $(5B7D)16$ to binary
   (vi) $(5A9)16$ to decimal
   (vii) $(510)10$ to hexadecimal
   (viii) $(11001101110)2$ to octal
   (ix) $(5371)8$ to binary
   (x) $(5737)8$ to decimal
   (xi) $(257)10$ to octal

1. Write any four features of Python.

2. Write any four application areas of Python.

3. What is a text editor? Name any two text editors.

4. What is an interpreter?

5. What is IDLE? What are the two modes of working with IDLE?

6. What is print() in Python?

7. Name the keyword arguments of print() function.

8. What is a data type? What are the fundamental data types in Python?

9. Identify the data types of the following:

>   (i) 7 (ii) '7' (iii) "7" (iv) 7.0 (v) '''7''' (vi) 7.0 (vii) -29 (viii) -15.38

>   (ix) "29 acres" (x) ". & #"

10. Find outputs of the following commands in Python:

>   (i) print("Hello")   (ii) print(2+3,34-67)   (iii) print("2+3",2+3)

>   (iv) print ('2+3',2+3,sep="=")   (v) print(2**3,3**2,sep='*')

>   (vi) print(2**3, 2**-3, -2**3, (-2)**3, sep=" and ")

11. Find error(s), if any, in the following statements:

>   (i) print("three')   (ii) Print(3)   (iii) print(44'+'56)   (iv) print(3,2 sep=': ')

>   (v) print "wisdom"   (vi) print['33+44']   (vii) PRINT("15 August 1947")

12. What are unary operators and binary operators? Give two examples of each.

13. What is the operator precedence of arithmetic operators in Python?

14. Evaluate the following expressions manually:

>   (i) (2 + 3) ** 3 - 6 / 2   (ii) (2 + 3) * 5//4+(4 + 6)/ 2   (iii) 12 + (3 * 4 – 6) / 3

>   (iv) 12 + (3 * *4 – 6)// 2   (v) 12 * 3 % 5 + 2 * 6//4   (vi) 12 % 5 *3 +(2*6)//4

15. Write Python command to display your name.

16. Write Python command to display your name, class, and section, separated by "-".