**WORKSHEET 2**

**PYTHON**

**Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.**

**1. Which of the following is not a core datatype in python?**

A) list B) struct

C) tuple D) set

**2. Which of the following is an invalid variable name in python?**

A) \_init\_ B) no\_1

C) 1\_no D) \_1

**3. Which one of the following is a keyword in python?**

A) in B) \_init\_

C) on D) foo

**4. In which of the following manner are the operators of the same precedence executed in python?**

A) Left to Right B) BODMAS

C) Right to Left D) None of these

**5. Arrange the following in decreasing order of the precedence when they appear in an expression in python?**

i) Multiplication ii) Division iii) Exponential iv) Parentheses

A) iii – iv – ii – i B) iii – iv – i – ii

C) iv – iii – ii – i D) iii – ii – i – iv

**6. (28//6)\*\*3/3%3 = ?**

A) 7.1111… B) 0

C) 0.3333… D) 1

**7. a = input(“Enter an integer”). What will be the data type of a?**

A) int B) str

C) float D) double

**Q8 and Q10 have multiple correct answers. Choose all the correct options to answer your question.**

**8. Which of the following statements are correct?**

A) Division and multiplication have same precedence in python

B) Python’s operators’ precedence is based on PEDMAS

C) Python’s operators’ precedence is based on VBODMAS

D) In case of operators’ having same precedence, the one on the left side is executed first.

**9. Which of the following is(are) valid statement(s) in python?**

A) abc = 1,000,000 B) a b c = 1000 2000 3000

C) a,b,c = 1000, 2000, 3000 D) a\_b\_c = 1,000,000

**10. Which of the following is not equal to x16 ?**

A) x\*\*4\*\*4 B) x\*\*16

C) x^16 D) (x\*\*4)\*\*4

**Q11 to Q13 are subjective questions, answer them briefly**

**11. Differentiate between a list, tuple, set and dictionary.**

**Ans.**

**12. Are strings mutable in python? Suppose you have a string “I+Love+Python”, write a small code to replace ‘+’ with space in python.**

**Ans.**

In python, the **string** data types are immutable.

**code to replace ‘+’ with space from string “I+Love+Python”:-**

string = "I+Love+Python"

space=string.replace("+", " ")

**Output :- I Love Python**

**13. What does the function ord() do in python? Explain with example. Also, write down the function for getting the datatype of a variable in python.**

**Ans.**

The **ord()** method in **Python** converts a character into its Unicode code value. This method accepts a single character.

For example ord('A') returns 65 which is a unicode code point value of character ‘A’.

**The function for getting the datatype of a variable in python:-**

**x = 5.0**

**print(type(x))**

**Output :-** <class 'float'>

**Q14 and Q15 are programming questions. Answer them in Jupyter Notebook.**

**14. Write a python program to solve a quadratic equation of the form 𝑎𝑥2+𝑏𝑥+𝑐=0. Where a, b and c are to be taken by user input. Handle the erroneous input, such as ‘a’ should not be equal to 0.**

**Ans.**

**# import complex math module**

**import cmath**

a = float(input('Enter the value of a:\t'))

b = float(input('Enter the value of b:\t'))

c = float(input('Enter the value of c:\t'))

# calculate the discriminant

d = (b\*\*2) - (4\*a\*c)

# find two solutions

sol1 = (-b-cmath.sqrt(d))/(2\*a)

sol2 = (-b+cmath.sqrt(d))/(2\*a)

print('The solution are {0} and {1}'.format(sol1,sol2))

print('The solution are {0} and {1}'.format(sol1,sol2))

if d<0:

print('The roots are unreal ')

elif d==0:

print('One is real and one is imaginary ')

elif d>0:

print('Roots are real')

**15. Write a python program to find the sum of first ‘n’ natural numbers without using any loop. Ask user to input the value of ‘n’.**

**Ans.**

n=int(input("Enter a limit : "))

data=list(range(1,n+1))

print("Natural Numbers are -: ",data)

add=sum(data)+n

add