**WORKSHEET 4**

**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 C) 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) for

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. Which of the following is not equal to x16 ?

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

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

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

A) int B) str

C) float D) double

**Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your question.**

9. 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.

10. 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

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

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

Ans: List,tuple,set and dictionary are built in data structures in Python.

Lists:

.List is a collection which is ordered.

.Lists are mutable (changeable) .

.Allows duplicate members

.Brackets used to represent: []

.Lists are like arrays declared in other languages.

Tuples:

.Collection of items which is ordered.

.Tuples are immutable (unchangeable) .

.Brackets used to represent: ()

.Only difference between tuples and lists are that lists can be changed.

.Tuples are faster than lists as they are immutable.

Sets:

.Collection of Unordered and Unindexed items.

.Sets are mutable (changeable).

.Does not take duplicate Values.

.Sets are unordered, so you cannot be sure in which order the items will appear.

.Brackets used to represent: { }.

.Sets are not faster than lists however they have a upper hand when it comes to membership testing.

Dictionaries:

.Key:Value Pair in Python

.A dictionary is a collection which is unordered, changeable and indexed.

.In Python dictionaries are written with curly brackets, and they have keys and values.

.Brackets used to represent: {}.

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: No strings are immutable in python that means we can’t update a string like we do an list or dictionary, yes we can replace the “I+Love+Python” to “I Love You” but the original string remain the same.

Programme

string = "I+love+Python"

print(string.replace("+"," "))

print(string)

Output: I Love Python

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() function in Python returns the number representing the unicode code of a specified character and is used as ord(character)

For Example:

print("The Unicode value of 9 is",ord('9'))

Output: The Unicode value of 9 is 57

We can find datatype of a variable using type() function in python

For Example:

score= 95

average=92.5

print( type(score))

print( type(average))

Output: <class 'int'>

<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.

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’.

As Q14 and Q15 needs coding so I have uploaded a separate .ipynb file for their solutions