ASSIGNMENT WORKSHEET 2 PYTHON

**Q-1 to Q-7 has 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) 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

**Q-8 and Q-10 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 PEMDAS**

C) Python’s operators’ precedence is based on VBODMAS D) In case of operators’ having the 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 in python?

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

**Q-11 to Q-13 are subjective questions, answer them briefly**

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

Ans: In Python, a list, tuple, set, and dictionary are all data structures used to store and manipulate data. However, they differ in their properties and use cases.

1. List: A list is a mutable ordered sequence of elements enclosed in square brackets []. It can contain any type of data, including other lists, and can be modified using various list methods. Lists are commonly used to store and manipulate data that requires dynamic changes.

2. Tuple: A tuple is an immutable ordered sequence of elements enclosed in parentheses (). It can also contain any type of data, but once defined, its elements cannot be modified. Tuples are commonly used to store and manipulate data that should not be changed, like dates, coordinates, and other fixed data.

3. Set: A set is an unordered collection of unique elements enclosed in curly braces {}. It can contain any type of data but each element must be unique. Sets are commonly used to perform mathematical operations like union, intersection, and difference.

4. Dictionary: A dictionary is an unordered collection of key-value pairs enclosed in curly braces {}. It can contain any type of data but is indexed by keys, which must be unique and immutable. Dictionaries are commonly used to store and retrieve data based on key-value pairs.

In summary, a list is a mutable ordered sequence, a tuple is an immutable ordered sequence, a set is an unordered collection of unique elements, and a dictionary is an unordered collection of key-value pairs. Each data structure has its own unique properties and use cases depending on the needs of the program or application.

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, which means once a string is created, it cannot be modified.

To replace '+' with space in the string "I+Love+Python", we can use the replace() method in Python. Here is the code to do so:

String = “I+Love+Python”

New\_string = string.replace(“+”,” ”)

Print(new\_string)

Output: I Love Python

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

Ans: The function ord() in Python returns an integer representing the Unicode character. In other words, it returns the Unicode code point of the character passed as an argument.

Here's an example:

Ord(‘a’)

97

In the above example, the function ord() returns the Unicode code point of the character 'a', which is 97.

To get the data type of a variable in Python, we use the type() function. Here's an example:

a = 10

type(a)

<class ‘int’>

In the above example, the variable a is assigned an integer value of 10. We can use the type() function to get the data type of a, which is 'int'.

**Q-14 and Q-15 are programming questions. Answer them in Jupyter Notebook.**

14. Write a python program to solve a quadratic equation of the form ax^2+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 users to input the value of ‘n’.