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? | | |  |
|  | Ans- | B) struct | |  |
|  |  |  |  |  |
| 2. | Which of the following is an invalid variable name in python? | | |  |
|  |  |  |  |  |
|  | Ans-C) 1\_no |  |  |  |
| 3. | Which one of the following is a keyword in python? | | |  |
|  | Ans -A) in |  | |  |
|  |  |  |  |  |
| 4. | In which of the following manner are the operators of the same precedence executed in python? | | | |
|  | Ans-A) Left to Right |  | |  |
|  |  |  | |  |
| 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 |
|  |  |  | |  |
|  | Ans-C) iv – iii – ii – i |  | |  |
| 6. | (28//6)\*\*3/3%3 = ? |  |  |  |
|  |  |  |  |  |
|  | Ans-C) 0.3333… |  |  |  |
| 7. | Which of the following is not equal to x16 ? | |  |  |
|  | Ans-A) x\*\*4\*\*4 |  | |  |
|  |  |  | |  |

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

Ans-B) str

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

1. 9.Which of the following statements are correct?
   1. Division and multiplication have same precedence in python
   2. Python’s operators’ precedence is based on PEDMAS
   3. In case of operators’ having same precedence, the one on the left side is executed first.
2. 10.Which of the following is(are) valid statement(s) in python?

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

Q11 to Q13 are subjective questions, answer them briefly

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

Ans- list is a mutable, ordered sequence of items.It can be indexed, sliced, and changed. Each element can be accessed using its position in the list.List are heterogenous

Tuples are heterogenous data type which is similar to list but it is immutable.

It is declared using () paranthesis. he indexing in the tuple starts from 0 and goes to length(tuple)

A dictionary is a key:value pair. The key must be unique . Dictionary key must be of a type that is immutable. There are no restrictions on dictionary values.

A set is a collection which is unordered and unindexed. In Python sets are written with curly brackets.A set is immutubale except that object can be appended to the set.

1. 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-Mutable means we can change the contents of the object without changing their identity. But in python we cannot change an existing string. So, strings are not mutable. They are immutable.

Program: #replace + with space in string I+Love+Python

string= "I+Love+Python"

new\_string=string.replace('+'," ")

print(new\_string)

1. 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-Function allows us to not have to write the code over and over. We can write the code inside a function and call it. It executes the same code a number of times as per our requirement which prevent us to write the same code to that number of times.

Program: #getting the datatype of a variable in python

def data\_type(a):

print(type(a))

a=10

data\_type(a)

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

1. 14.Write a python program to solve a quadratic equation of the form 2 + + = 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 cmath

a =int(input("enter the value of a:"))

b = int(input("enter the value of b:"))

c = int(input("enter the value of c:"))

if(a==0):

print("value of a can't be zero")

if(a!=0):

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

# find two solutions

root1 = (-b-cmath.sqrt(d))/(2\*a)

root2 = (-b+cmath.sqrt(d))/(2\*a)

print('The solution are {0} and {1}'.format(root1,root2))

1. 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 number:"))

if n<0:

print("enter a positive number")

else:

temp=n\*(n+1)

sum=temp/2

print("the sum is:",sum)