INDIAN SCHOOL AL WADI AL KABIR
Worksheet, 2020-21

Class: XI	**SUB: Computer Science**	**Date of Completion:** **10-12-2020**
Worksheet No:9	**TOPIC : Python Modules**	**Note:Write in practical record book (FS2QR)**

1.What is module?Why do we write import math in some some python programs?

2. Use math library functions to calculate the value of X.Where $X = P^4 + \sqrt{(P-Q)^3}$. Read the values of P and Q from the user and display the result on screen.

3. Guess the output of the following(*Write them in a python expression*):
   i)ceil(45.2345)　　　ii)floor(3.908)　　　iii)ceil(10.99)　　　iv)floor(-9.600)
   v)Euler's number value vi)pi　　　　　　vii)e^4　　　　　　viii)floor(e)

4.Write valid python expressions to get the answers of
   i)sin(30)　　　ii)cos(45)　　iii)tan(60)　　　　　iv)radians of 30

5.Guess the output:
   i) import statistics
   spiList = [5.55, 5.72, 7.3, 7.75, 8.4, 9, 8.8, 8.2]
   print(statistics.mean(spiList))

   ii) import statistics
     # unsorted list of random integers
       data1 = [2, -2, 3, 6, 9, 4, 5, -1]
     # Printing median of the
     # random data-set
     print("Median of data-set is : % s "
     % (statistics.median(data1)))

   iii) import statistics
     set1 =[1, 2, 3, 3, 4, 4, 4, 5, 5, 6]
     # Printing out mode of given data-set
     print("Mode of given data set is % s" % (statistics.mode(set1)))

   iv) import random
     print("Random integer from 0 to 9")
     num1 = random.randint(0, 9)
     print("Random integer: ", num1)
     print("Random integer from 10 to 100")
     num2 = random.randint(10, 100)
     print("Random integer: ", num2)

v) import random
```
# Using randrange() to generate numbers from 0-100
print ("Random number from 0-100 is : ",end="")

print (random.randrange(100))
 # Using randrange() to generate numbers from 50-100
print ("Random number from 50-100 is : ",end="")
print (random.randrange(50,100))
# Using randrange() to generate numbers from 50-100
# skipping 5
print ("Random number from 50-100 skip 5 is : ",end="")
print (random.randrange(50,100,5))
```

6.Differentiate between the following:
   i.   randint( ) and randrange( )
   ii.   degrees( ) and radians( )
   iii.   e and exp
   iv.   import and import as

7.Write a python program that prints 5 different random numbers between X and Y.

8.Write a python program that prints 5 different random numbers between X and Y.With the steps of Z.

9.Code in python to find and display the absulote roots R1 and R2 of a quadratic equation.

10.Read the marks of 5 subjects and find its mean value.Your python code should use two different ways to find it out.

Note:Questions 1,7,8,9,10 should be written in the record book.