Q1.What does the following statement do? import random

a. Imports the random module

b. Imports a random module from a list of modules

c. Imports the random function

d. imports the directory named random

Q2. What will be the output after the following statements? import random as rd
   print(rd.randint(4,7))

 a. A random float value between 4 and 7, including 4 and 7

b. A random float value between 4 and 7, excluding 4 and 7

c. A random integer value between 4 and 7, excluding 4 and 7

d. A random integer value between 4 and 7, including 4 and 7

Q3. What will be the output after the following statements?

import random as rd print(rd.random())

a. A random float value between 0 and 1

b. A random integer value between 0 and 1

c. A random float value between 0 and 10

d. A random integer value between 0 and 10

Q4. What will be the output after the following statements?

from random import *

x = [0, 2, 4, 6, 8, 10]

 print(sample(x, 3))

a. A dictionary containing 3 random keys from list x

 b. Three random integer values between 0 and 10

c. A list containing 3 random elements from list x

 d. A tuple containing 2 random elements from list x

Q5. Which of the following can be a possible output after the following statements?

from random import *

print(sample(range(0,10), 3))

 a. [4, 11, 30]          b. [3, 15, 10]

 c. [1, 5, 7, 4]          d. [1, 5, 0]

Q6.What will be the output after the following statements?
   import math print(math.floor(67.3))

   a. 67          b. 68

   c. 67.0          d. 68.0

Q7. What will be the output after the following statements?
   import math print(math.ceil(21.4))

    a. 21          b. 22

   c. 21.0          d. 22.0

Q8. What will be the output after the following statements?
   import math print(math.sqrt(4))

    a. 2.1          b. 2

   c. 2.0          d. 4.0

Q9. What will be the output after the following statements?
   import math print(math.pow(3,2))

    a. 6          b. 9

   c. 6.0          d. 9.0

Q10. What does the following statements do?
   import datetime
   print(datetime.datetime.today())

 a. Displays current date and time

 b. Displays a list of all the hours remaining till midnight

 c. Displays a random time from today's date

 d. Displays today's weekday name

Q11. What is the output of the program given below
```
def cal(a,b,c):
    return a*3,b*3,c*3
val=cal(10,12,14)
print(type(val))
print(val)
```
a. [30, 24, 28]            b. [30,36,42]
c. [10, 20, 30]            d. [10,12,14]

Q12. What is the output of the program given below:
```
import random x = random.random()
y= random.randint(0,4)
print(int(x),":", y+int(x))
```
a. 0: 0      b. 2 : 4
c. 1: 6      d. 0 : 5

Q13. >>>def Interest(p,c,t=2,r=0.09):
              return p*t*r
Considering the above defined function which of following function call are legal.
1. Interest(p=1000,c=5)
2. Interest(r=0.05,5000,3)
3. Interest(500,t=2,r=0.05)
4. Interest(c=4,r=0.12,p=5000)
 i. 1 , 2 and 4         ii. 2 & 3
iii. 1 &4               iv. 3 & 4

Q14. What will be the output of the following code:
```
A=1
def f ():
    A=10
print(A)
```
a. 1            ii. 10
c. Error        d. None

Q15. Which of the following statements are True out of the given below:
1. More than one value(s) can be returned by a function
2. The variable declared inside a function is a Global variable.
3. Once the function is defined , it may be called only once
4. A function is used by invoking it
a. 1 & 2            b. 1 & 4
c. 2 & 3            d. 2 &

Q16. Match the columns:
|  A          |  B                              |
| ----------- | ------------------------------- |
| 1. max()    | a. will compute $x**y$          |
| 2. sqrt(x)  | b. will select a option randomly|
| 3. choice() | c. will return the largest value|
| 4. pow(x,y) | d. will compute $(x)^{1/2}$     |

i. 1-a,2-b,3-c,4-d       iii. 1-c,2-d,3-b,4-a
ii. 1-d,2-a,3-c,4-b      iv. 1-b,2-c,3-d,4-a

Q17. Which of the following statements are True out of the given below:

1. More than one value(s) can be returned by a function
2. The variable declared inside a function is a Global variable.
3. Once the function is defined , it may be called only once
4. A function is used by invoking it
i. 1 & 2                ii. 1 & 4
iii. 2 & 3              iv. 2 & 4

Q18. What is displayed on executing print(math.fabs(-3.4))?
i. -3.4                ii . 3.4
i i i . 3              i v . -3

Q19. How are required arguments specified in the Function heading?
i.      identifier followed by an equal to sign and the default value
ii.     ii. identifier followed by the default value within backticks (")
iii.    iii. Identifier followed by the default value within square brackets ([ ])
iv.     iv. Identifier

Q20. How many keyword arguments can be passed to a function in a single function call?
  i. zero                ii. one
  i i i . zero or more      i v . one or more

## Function Programs

Q1. Write a Python function to sum all the numbers in a list.

Q2. Write a Python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument

Q3. Write a Python function to check whether a number falls in a given range.

Q4. Write a Python function that takes a list and returns a new list with unique elements of the first list.
  *Sample List :* [1,2,3,3,3,3,4,5]
  *Unique List :* [1, 2, 3, 4, 5]

Q5. Write a Python function that takes a number as a parameter and check the number is prime or not.

Q6. Define a function that accepts 2 values and return its sum, subtraction and multiplication.

Q7. Define a function that accepts roll number and returns whether the student is present or absent.

Q8. Define a function in python that accepts 3 values and returns the maximum of three numbers.

Q9. Define a function which counts vowels and consonant in a word.

Q10. Define a function that accepts lowercase words and returns uppercase words.

Q11. Write a python program to perform the basic arithmetic operation in a menu-driven program with different functions. The output should be like this:
   Select an operator to perform the task:
   '+' for Addition
   '-' for Subtraction
   '*' for Multiplication
   '/' for Division

Q12. Write a python program to enter a temperature in Celsius into Fahrenheit by using the function.

Q13. Write a python program using the function to print the Fibonacci series up to n numbers.

Q14. Write a python program to demonstrate the concept of variable length argument to calculate the sum and product of the first 10 numbers.

Q15. Write a menu-driven python program using different functions for the following menu:
     1 Check no. is Palindrome or not
     2 Check no. is Armstrong or not
     3 Exit

## Theory-based questions for Working with functions Class 12.

Q1. What is a function and why programmers need functions in python programming?

Q2. How to create a function in python? Explain in detail.

Q3. What are the parts of functions? Explain with a suitable example.

Q4. How to call a function? Illustrate the flow of execution in the function call statement.

Q5. What are the comments? What are the role comments in the program? How to write single-line comments and multi-line comments?

Q6. Explain the physical line structure of a program. Illustrate with an example.

Q7. Write and explain the types of functions supported by python.

Q8. Write the ways of import module in the python program.

Q9. Differentiate between parameters and arguments and what are the arguments supported by python? Explain each of them with a suitable   example.

Q10. What is the local variable and global variable? Explain with an example.