PYTHON – WORKSHEET 1

Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.

1. Which of the following operators is used to calculate remainder in a division?
   A) # B) &
   C) % D) $
2. In python 2//3 is equal to?
   A) 0.666 B) 0 C) 1 D) 0.67
3. In python, 6<<2 is equal to?
   A) 36 B) 10
   C) 24 D) 45
4. In python, 6&2 will give which of the following as output?
   A) 2 B) True
   C) False D) 0
5. In python, 6|2 will give which of the following as output?
   A) 2 B) 4
   C) 0 D) 6
6. What does the finally keyword denotes in python?
   A) It is used to mark the end of the code
   B) It encloses the lines of code which will be executed if any error occurs while executing the lines of code in the try block.
   C) the finally block will be executed no matter if the try block raises an error or not.
   D) None of the above
7. What does raise keyword is used for in python?
   A) It is used to raise an exception. B) It is used to define lambda function
   C) it's not a keyword in python. D) None of the above
8. Which of the following is a common use case of yield keyword in python?
   A) in defining an iterator B) while defining a lambda function
   C) in defining a generator D) in for loop.

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

9. Which of the following are the valid variable names?
   A) _abc B) 1abc
   C) abc2 D) None of the above
10. Which of the following are the keywords in python?
    A) yield B) raise
    C) look-in D) all of the above

Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.

11. Write a python program to find the factorial of a number.

```
# Python program to find the factorial of a number provided by the user.

# change the value for a different result
```

```
num = 3

# To take input from the user
#num = int(input("Enter a number: "))

factorial = 1

# check if the number is negative, positive or zero
if num < 0:
   print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
   print("The factorial of 0 is 1")
else:
   for i in range(1,num + 1):
       factorial = factorial*i
   print("The factorial of",num,"is",factorial)
```

```
output: The factorial of 3 is 6
```

12. Write a python program to find whether a number is prime or composite.

```
# Program to check if a number is prime or not

num = 29
# To take input from the user
#num = int(input("Enter a number: "))

# define a flag variable
flag = False

# prime numbers are greater than 1
if num > 1:
   # check for factors
   for i in range(2, num):
       if (num % i) == 0:
           # if factor is found, set flag to True
           flag = True
           # break out of loop
           break

# check if flag is True
if flag:
   print(num, "is not a prime number")
else:
   print(num, "is a prime number")
```

```
output: 29 is a prime number
```

13. Write a python program to check whether a given string is palindrome or not.

```
num=int(input("Enter a number:"))
temp=num
rev=0
while(num>0):
   dig=num%10
   rev=rev*10+dig
   num=num//10
if(temp==rev):
   print("The number is palindrome!")
else:
   print("Not a palindrome!")
```

```
output: Enter a number:21
        Not a palindrome!
```

```
string=input(("Enter a string:"))
if(string==string[::-1]):
    print("The string is a palindrome")
else:
    print("Not a palindrome")
```

```
output: Enter a string:RACECAR
        The string is a palindrome
```

14. Write a Python program to get the third side of right-angled triangle from two given sides.

```
import math
a = float(input("Enter base: "))
b = float(input("Enter height: "))
x = float(input("Enter angle: "))

c = math.sqrt(a ** 2 + b ** 2)
print("Hypotenuse =", c)
```

```
output: Enter base: 23
        Enter height: 21
        Enter angle: 30
        Hypotenuse = 31.144823004794873
```

15. Write a python program to print the frequency of each of the characters present in a given string.

```
# Given string
strA = "deepaksingh"
print("Given String: ",strA)
# Using counter
res = {}

res={n: strA.count(n) for n in set(strA)}

# Result
print("Frequency of each character :\n ",res)
```

```
output:  Given String:  deepaksingh
Frequency of each character :
  {'p': 1, 'n': 1, 'a': 1, 's': 1, 'g': 1, 'h': 1, 'd': 1, 'i': 1, 'k': 1, 'e': 2}
```