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 = 7


# 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)
```

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

```
# Number to be checked for prime

n = 5

# Check if the number is greater than 1

if n > 1:
    for i in range(2, int(n/2)+1):
            if (n % i) == 0:
                    print(num, "is not a prime number")
            break
    else:
            print(n, "is a prime number")
# If the number is less than 1, its also not a prime number.
else:
print(n, "is not a prime number")
```

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

```
# Program to check if a string is palindrome or not

my_str = 'aIbohPhoBiA'

# make it suitable for caseless comparison
my_str = my_str.casefold()

# reverse the string
rev_str = reversed(my_str)

# check if the string is equal to its reverse
if list(my_str) == list(rev_str):
   print("The string is a palindrome.")
else:
        print("The string is not a palindrome.")
```

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

```
# Python Program to find the area of triangle

a = 5
b = 6
c = 7

# Uncomment below to take inputs from the user
# a = float(input('Enter first side: '))
# b = float(input('Enter second side: '))
# c = float(input('Enter third side: '))
```

```
# calculate the semi-perimeter
s = (a + b + c) / 2

# calculate the area
area = (s*(s-a)*(s-b)*(s-c)) ** 0.5
    print('The area of the triangle is %0.2f' %area)
```

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

```
#Given a string and you want to count how many times each character appears



str1 = input ("Enter the string: ")

d = dict()

for c in str1:

   if c in d:

      d[c] = d[c] + 1

   else:

      d[c] = 1

print(d)
```