SET - 1

1. Solve the given equation using python for a given value of x and 'n' number of terms. (10)

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \cdots$$

2. Write a password guessing program to keep track of how many times the user has entered the password wrong. If it is more than 3 times, print "You have been denied access." and terminate the program. If the password is correct, print "You have successfully logged in." and terminate the program. (10)
3. Write a python program to multiply the given two matrices of size (m1,n1) and (m2,n2) respectively using functions. Function will return the result. Main program will display it as per the matrix format. (10)

SET - 2

1. Write a Python Program to display the following pattern. (10)

```
1
2 1
4 2 1
8 4 2 1
1 6 8 4 2 1
```

2. (a) Give the applications of bit-wise operators with suitable codes. (5)
   (b) Write a python program to display the present age of the person by reading his birth date. [Use the system date for the current date] (5)
3. Write a python program to read the mobile number and email id from the user. And, verify them whether mobile number is having 10 digits or not and email id is as per the proper format or not. Display the verified results.

SET - 3

1. Write a python program to read a square matrix (m, n) and display the new square matrix of size (m+1, n+1) by filling column sum and row sum in the place of extra column and row.

   Example :

1	2	3		1	2	3	6
4	5	6	=➔	4	5	6	15
7	8	9		7	8	9	24
				12	15	18	45

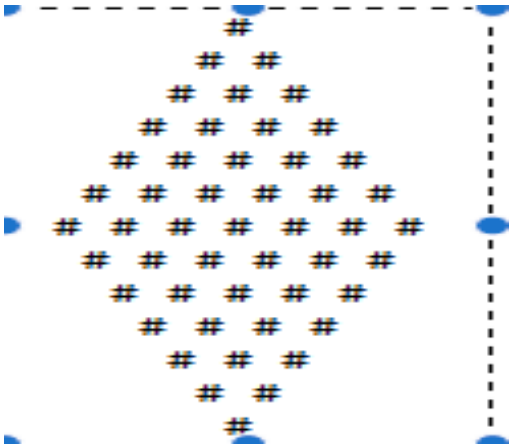
2. Write a python program to find the second largest among the given 'n' number of names using tuples. [don't use built-in functions]
3. Write a python program to display the n^{th} term in the Fibonacci series, which starts by 5 and 8.

SET - 4

1. Write a Python program to count the number of occurrences of the given element between the given range. (10)
2. Write a python program to read two lists say A and B, sort them by ascending order separately and create a list say C by merging A and B. List C should be in sorted order after merging. (10)
3. Write a python program to check the given password and classify them poor, medium and high. Password should be minimum 10 characters otherwise it will not be accepted. Password is "Poor" if it has only alphabets. Password is "medium" if it has alphanumerical. Password is "high" if it has alphabets, digits and special characters. Display the results. (10)

SET - 5

1. Write a python program to convert a given number of base 10 into hexadecimal number and vice-versa through base 2.
2. Write a python program to draw the following pattern.



3. Write a python program to read a paragraph, which consists of alphabets, numbers, special characters including small and capital letters. And, categorize them, group them and store them into different lists. Like First list is full of words, Second list for all the special characters and third list is for all the numbers. Avoid the duplication in the final output.

NOTE :

Five Sets of Question paper are given here. Maximum marks are 30. There are 3 questions in each set. Students need to use the question paper as per the following order and submit the assignments.

Question SET-1 : RollNo. 1 to 15
Question SET-2 : RollNo. 16 to 30
Question SET-3 : RollNo. 31 to 45
Question SET-4 : RollNo. 46 to 60
Question SET-5 : RollNo. 61 to 71

Last date for submission is 31st August 2020.

ALL THE BEST !!!