ASSIGNMENT OF PYTHON PROGRAMMING (SEM-3)

1. Write a python script to calculate area of a triangle. Lengths of the sides are given by user.
2. Write a python script to accept marks of five subjects from user (assuming maximum marks is 100). Display student's result as PASS or FAIL. If the student is PASS then also display his percentage and division.
3. Write a python script to calculate product of first N odd natural numbers. Value of N is taken form user.
4. Write a python script to calculate LCM of two numbers.
5. values. For example boundary values are 10 and 30, step is 2 then your output should be 10,12,14,16,18,20,22,24,26,28,30.
6. Write a python script to print distinct list elements along with their frequency of occurrence in the list.
7. Write a python script to count occurrence of a given pattern in a given string.
8. Write a python script to compare two tuples, whether they contain the same elements in same order or not.
9. Write a python script to check whether a tuple is a subset of another tuple or not.
10. Write a python script to count the frequency of elements of a tuple.
11. Write a python script to print all possible subsets of r elements each from a given set of N elements.
12. Write a python script to find Cartesian product of two given sets.
13. Two sets represent two identical dices. (dice values are from 1 to 6.). Write a python script produce sample space to get a sum of dice values when rolled is N . N is given by user.
14. Write a python script to create a dictionary in which each item is a pair of Roll number(as KEY) and Student Name(as VALUE).
15. Write a python script to sort a dict according to VALUE.
16. Write a python function to calculate LCM of two numbers. (Take Something Return Something).
17. Write a python function to print reverse of a binary representation of a given number. (Takes Something Return Nothing).
18. Write a python function to find all possible combinations one can make from N items of a given set when two elements are selected at a time. (Take a set of values. Return list of sets).
19. Write a python function which takes a list of strings as an argument and returns a dictionary whose each item is a pair of alphabet (as key) and list of strings begin with that alphabet.
20. Write a python function which takes a tuple of int values and returns a dictionary whose each item is a pair of int value and its frequency in the tuple.
21. Write a recursive function to print first N natural numbers in reverse order.
22. Write a recursive function to calculate factorial of a number.
23. Write a recursive function to find Nth term of a Fibonacci series.
24. Define a class Employee with instance variables emp-id, name, salary. Define constructor to initialize member variables. Define function to show employee data.
25. Using class Employee, create a list of employees (data taken from user), and display list of employees in sorted order according to their names, Also define a function to sort list of employees according to their salary in descending order.

26. Define a class Account with static variable rate_of_interest, instance variables balance and account number. Make functions to set values in instance object of Account, show balance, show rate of interest, withdraw and deposit.
27. Define a class Book to store book relate information like book-id, title, price, author, publisher, Define functions to input, show, change price.
28. In Book class, define function to sort a list of books according to
    a. Title
    b. Price