MCA – I Introduction to Python Programming

Practical Sheet – II

1. Write a Python program to calculate the length of a string.
2. Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string.
   Ex Input : beautiful Expected Output : beul
3. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself.
   Ex Input : abracadabra Expected Output : abr$c$dbr
4. Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.
   Ex Input : st1=hello st2=world
   Expected Output : st3=wollo herld
5. Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.
   Ex Input : test Expected Output : testing
   If Input : testing Expected Output: testingly
6. Write a Python program to remove the nth index character from a nonempty string.
7. Write a Python program to remove the characters which have odd index values of a given string.
8. Write a Python script that takes input from the user in proper cause and displays that input back in upper and lower cases.
9. Write a Python program to get the second largest number from a list.
10. Write a program to remove all the duplicate elements from list.
11. Write a Python program to find the list in a list of lists whose sum of elements is the highest.
12. Write a Python program to concatenate following dictionaries to create a new one.
    d1={1:100, 2:200}
    d2={3:300, 4:400}
    d3={5:500, 6:600}
13. Write a Python program to check if a given key already exists in a dictionary.
14. Write a Python program to remove duplicate values from Dictionary.
15. Write a Python script to print a dictionary where the keys are numbers between 1 and 15 (both included) and the values are square of keys.
16. Write a program to determine frequency of number in a list of numbers.
17. Write a Python program to find all prime numbers between given range using functions.
18. Write a Python program to print all Armstrong numbers between given range using functions.

MCA – I Introduction to Python Programming

Practical Sheet – II

19. Write a Python program to print all perfect numbers between given range using functions.
    [perfect number is a positive integer that is equal to the sum of its positive divisor, excluding the number itself example 6 3+2+1= 6]
20. Write a Python program to generate nth Fibonacci term using function.
21. Write a python program to find twin prime numbers up to a range.
    [ex 3,5 5,6 11,13 17,19 41,43] all are twin prime their number difference is 1
22. Write a Python program to sort a list of tuples using Lambda.
    Original list of tuple:-
    [('English',88),('Science',90),('Maths',97),('Socialsciences',82)]

    Resultant tuple:-
    [('Social sciences', 60), ('English', 70), ('Science', 77), ('Maths', 95)]
23. Write a Python program to filter a list of integers using Lambda
    Original list of numbers:-
    [1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10]
    Result:-
    Even number list:-
    [2 , 4 , 6 , 8 , 10]
    Odd number List:-
    [1 , 3 , 5 , 7 , 9]
24. Write a program to sort a given list of names.
25. Write a program to sort a given list of names using bubble sort technique.
26. Write a program to merge two given sorted lists of names into single sorted list of names.
27. Write a program to remove the duplicates from a list.
28. Write a program to find the maximum number in the list.
29. Write a program to find the kth smallest number in a list(without sorting).
30. Write a program to find the longest monotone sequence in a given list of numbers.
31. Write a program to test whether a given string is palindrome or not.
32. Write a program to reverse a given string.
33. Write a program to read a string and display no of occurrences of each character present in the string.
34. Write a program to sort a given list of names.
35. Write a program to enter key and value for message according the key print the message.

MCA – I Introduction to Python Programming

Practical Sheet – II

36. Write a program to demonstrate different set operation in python.
37. Write a program to define a function for calculating factorial of a number.
38. Write a program that send a list to the function and determine the odd and even numbers from the list.
39. Write a program that passes two strings to the function and return similar characters from the function.
40. Write a program to define a function which accept undefined number of arguments and return the average of accepted Number type arguments.