Chp-Loop, condition, jump statement----→

Q.1.Print the following pyramid / triangle using nested for loop —

(i) *
   * *
   * * *
   * * * *
   * * * * *

(ii)   *
     * *
     * * *
     * * * *
    * * * * *

(iii)   *
     * *
    * * *
   * * * *
  * * * * *

(iv) 1
   1 2
   1 2 3
   1 2 3 4
   1 2 3 4 5

(v) 1
   2 3
   4 5 6
  7 8 9 10

(vi) 1
   2 2
   3 3 3
   4 4 4 4
   5 5 5 5 5

Q.2.Fibonacci series

Q.3.Factorial

Q.4.Series:
    (i) 1! , 2!, 3! , ………………n!
    (ii) 1^1 , 2^2 , 3^3 , ……………n^n
    (iii) $1^1/1!$, $2^2/2!$, $3^3/3!$, ……………$n^n/n!$

Q.5. Roots of quadratic equation

Q.6.Leapyear Testing

Q.7.Armstrong number testing

Q.8.AP series, GP Series – program

Q.9.LCM

Q.10.GCD

Q.11.find out greatest and smallest number out of three numbers given by user

Chp-String----→

Q.1. Palindrome test
Q.2. Display even position elements from a user given string
Q.3.Swap even position character with its adjacent odd position character in a string
Q.4.Reverse and display a string using loop
Q.5. Find a user given character and space within a string(line) given by user-menu driven program
Q.6. Find no. of words in a sentence given by user using loop
Q.7.Find no. of lines in paragraph using loop
Q.8.Find no. of vowels in a string(sentence) given by user using loop
Q.9. Find no. of uppercase and lowercase alphabets in a string given by user using loop
Q.10.Find no. of digits in a string given by user using loop
Q.11. Convert uppercase letter into lowercase letter and vice versa in a string given by user
Q.12.Convert first letter of every words in a string (sentence-given by user) into uppercase letter

Chp-List----→

Q.1. Reverse elements of a list using loop
Q.2. Swap even position character with its adjacent odd position character in a list given by user
Q.3. Search an user given element within a list(user given) – using loop + menu driven program
Q.4.Modify a list by multiplying elements by 3 which are divisible by 5 and rest elements by 5
Q.5.Print a nested list
Q.6.Find any duplicate element in a list and display the duplicate element and how many times the element appears in the list
Q.7.Delete each element form a list one by one using loop and each time element is deleted will be displayed, When all elements are deleted, display the empty list

Chp-Dictionary----→

Q.1. Display even position elements of a dictionary
Q.2.Display the duplicate value from a dictionary
Q.3.Find the largest and smallest key in a dictionary if string is used as keys for the dictionary
Q.4.Find largest and smallest value in a dictionary if integer number is used as values in dictionary
Q.5.Display each key of dictionary by using its corresponding values

Important theory + code --→question

Q.1. Why python is called dynamic typed language? Give example
Q.2.Difference between Mutable and Immutable object. Give example
Q.3.Difference between pop() and remove() – function if it is used for list. Give example
Q.4.What type of object can be used as key in a dictionary. Give example
Q.5.Difference between split() and partition() – function for a string. Give example
Q.6.Which function elements leading and trailing spaces of a string? Give example
Q.7.Difference between pop(),remove() and clear() function for a list
Q.8.How you can replace a new string in place of old string? Give example
Q.9.Difference between list and string. Give an example in case of modification
Q.10.How you can sort a list of strings in descending order? Give example
Q.11. Difference between append() and extend() – function for a list
Q.12.How can you insert an element into a particular position in a list? Give example
Q.13.What is nested list? How you can create nested list and print it? Give example
Q.14.Which are aggregate functions can be used on a tuple? Give example
Q.15.How can you sort a tuple element in ascending and descending order? Give example