ASSIGNMENT-LIST (PYTHON)
CLASS XI

Q1. What will be the output of the following statements?

i).
```
list1 = [12,32,65,26,80,10]
list1.sort()
print(list1)
```

ii).
```
list1 = [12,32,65,26,80,10]
sorted(list1)
print(list1)
```

iii).
```
list1 = [1,2,3,4,5,6,7,8,9,10]
print(list1[::-2] )
print(list1[:3] + list1[3:] )
```

iv) .
```
list1 = [1,2,3,4,5]
print(list1[len(list1)-1] )
```

Q2. Consider the following list myList. What will be the elements of myList after the following two operations:

```
myList = [10,20,30,40]
```
i). `myList.append([50,60])`
ii). `myList.extend([80,90])`

Q3. What will be the output of the following code segment:

```
myList = [1,2,3,4,5,6,7,8,9,10]
for i in range(0,len(myList)):
        if i%2 == 0:
                print(myList[i])
```

Q4. What will be the output of the following code segment:

a)
```
myList = [1,2,3,4,5,6,7,8,9,10]
del myList[3:]
print(myList)
```

b)
```
myList = [1,2,3,4,5,6,7,8,9,10]
del myList[:5]
print(myList)
```

c)
```
myList = [1,2,3,4,5,6,7,8,9,10]
del myList[::2]
print(myList)
```

Q5. Consider a list:

```
list1 = [6,7,8,9]
```

What is the difference between the following operations on list1:

a). `list1 * 2`
b). `list1 *= 2`
c). `list1 = list1 * 2`

Q6. Differentiate between append() and extend() functions of list.

Q7. Write a menu driven program to perform various list operations, such as:

- Append an element
- Insert an element
- Append a list to the given list
- Modify an existing element

- Delete an existing element from its position
- Delete an existing element with a given value
- Sort the list in ascending order
- Sort the list in descending order
- Display the list.

Q8. Write a program to input a list of n elements ,check and display a given number is present in the list or not. If the number is present, display the position of the number. Print an appropriate message if the number is not present in the list.

Q9. The record of a student (Name, Roll No.Marks in five subjects and percentage of marks) is stored in the following list:

stRecord = ['Raman','A-36',[56,98,99,72,69], 78.8]

Write Python statements to retrieve the following information from the list stRecord.

a) Percentage of the student
b) Marks in the fifth subject
c) Maximum marks of the student
d) Roll no. of the student
e) Change the name of the student from 'Raman' to 'Raghav'

Q10. Write a program to find the number of times an element occurs in the list. [without using built-in function].

Q11. Write a program to read a list of n integers (positive as well as negative). Create two new lists, one having all positive numbers and the other having all negative numbers from the given list. Print all three lists.

Q12. Write a program to display the second largest number from a list of numbers.

Q13. Write a program to read a list of n integers and find their median.

[Note: The median value of a list of values is the middle one when they are arranged in order. If there are two middle values then take their average.]

Hint: You can use an built-in function to sort the list

Q14. Write a program to read a list of elements. Modify this list so that it does not contain any duplicate elements, i.e., all elements occurring multiple times in the list should appear only once.

Q15 Write a program to read a list of elements. Input an element from the user that has to be inserted in the list. Also input the position at which it is to be inserted.

Q16. Write a program to read elements of a list.

a) The program should ask for the position of the element to be deleted from the list. Write a function to delete the element at the desired position in the list.

b) The program should ask for the value of the element to be deleted from the list. Write a function to delete the element of this value from the list.

Q17. Read a list of n elements, reverses this list in-place without creating a new list.

Q18. Find and write the output of the following Python code:

```
L = ["X", 20 , "Y" , 10, "Z" ,30]
CNT = 0
ST = ""
INC = 0
for C in range(1,6,2):
```

```
CNT= CNT + C
ST= ST + L[C-1] + "@"
INC = INC + L[C]
print(CNT, INC, ST)
```

Q19. Consider the following unsorted list: 95, 79, 19, 43, 52, 3. Write the passes of bubble sort for sorting the list in ascending order till the 4th iteration.

Q20. Write a program in Python to search a number from the entered sorted list using binary search.

Q21. Write a program in Python to find and display the prime numbers between 2 to N.

Q22. Write definition of a method EvenSum(NUMBERS) to add those values in the list of NUMBERS which are even.

Q23. Write definition of a method COUNTNOW(PLACES) to find and display those place names in which there are more than 5 characters. For example:
If the list PLACES contains
["DELHI", "LONDON", "PARIS", "NEW YORK", "DUBAI"]
The following output should be displayed:
LONDON
NEW YORK

Q24. Suppose list1 = [0.5 * x for x in range(0, 4)], what will be the contents of list1 out of the given options:
(i) [0, 1, 2, 3] (ii) [0, 1, 2, 3, 4] (iii) [0.0, 0.5, 1.0, 1.5] (iv) [0.0, 0.5, 1.0, 1.5, 2.0]

Q25. Find and write the output of the following Python code:

```
L1 = [500,800,600,200,900]
START = 1
SUM = 0
for C in range(START,4):
        SUM = SUM + L1[C]
        print(C,":",SUM)
        SUM = SUM + L1[0]*10
print(SUM)
```

Q26. Write the definition of a function Reverse(X) in Python to display the elements in reverse order such that each displayed element is four times the original element (element*4) of the List X in the following manner: Example:
If List X contains 7 integers as follows:

X[0]	X[1]	X[2]	X[3]	X[4]	X[5]	X[6]
4	6	9	12	5	8	7

After executing the function, the array content should be displayed as follows:
28 32 20 48 36 24 16

Q27. Find and write the output of the following Python code: (2)

```
TXT = ["20","50","30","40"]
CNT = 3
TOTAL = 0
for C in [7,5,4,6]:
        T = TXT[CNT]
        TOTAL = float(T) + C
        print(TOTAL)
        CNT -= 1
```

Q28. What output will be generated when the following Python code is executed? (2)

```
L=[]
L1=[]
L2=[]
for i in range(1, 10):
        L.append(i)
for i in range(10,1,-2):
        L1.append(i)
for i in range(len(L1)):
        L2.append(L1[i]+L[i])
L2.append(len(L)-len(L1))
print(L2)
```

Q29. Write definition of a method/function **AddOddEven(VALUES)** to display sum of odd and even values separately from the list of VALUES.

Q30. Write a function in Python to merge the contents of two sorted arrays A & B into third array C. Assuming array A and B are sorted in ascending order and the resultant array C is also required to be in ascending order.

Q31. What is the output when following code is executed ?

```
names1 = ['Freya', 'Mohak', 'Mahesh', 'Dwivedi']
names2 = names1
names3 = names1[:]
names2[0] = 'Vishal'
names3[1] = 'Jay'
sum = 0
for ls in (names1, names2, names3):
        if ls[0] == ' Vishal ':
                sum += 2
        if ls[1] == 'Jay ':
                sum += 5
print sum
```

Q32. Suppose list1 is [9,1, 3, 2], What is list1 * 2 ?

Q33. Suppose list1 = [0.5 * x for x in range(1, 5)], list1 is ?

Q34. Write a Python program to remove and print every third number from a list of numbers until the list becomes empty.

Q35. Write a Python function that takes two lists and returns True if they have at least one common member.

Q36. Write a Python program to print the numbers of a specified list after removing even numbers from it.