Class :	XI	Max. Marks: 35
Subject :	COMPUTER SCIENCE (083)	Time: 2 HOURS

General Instructions:

- The question paper is divided into 3 sections – A, B and C
- Section A, consists of 7 questions (1-7). Each question carries 2 marks.
- Section B, consists of 3 questions (8-10). Each question carries 3 marks.
- Section C, consists of 3 questions (11-13). Each question carries 4 marks.
- Internal choices have been given for question numbers 7, 8 and 12.

SECTION – A
Each question carries 2 marks

1. i. Write down the correct statement to define a tuple ***T*** which has only one element 2. (1)

    ii. What will be the outcome if the following program code is executed? (1)

    values = 4, 1, 7, 2, 6, 9

    print(values)

2. i. Define a dictionary ***Teacher*** whose keys are 'TID', 'TName', 'Salary' and the corresponding values are '23001', 'Chitra V', 45000.00 respectively. (1)

    ii. Can you add an item to ***Teacher*** whose key is ['Sub1','Sub2'] and value is ['Physics', 'Math']? (1)

    Give reason behind your answer.

3. Consider the following program code and answer the following questions:

    ```
    import random
    Grades = ['A','B','C','D','E']
    index = 2 + random.randint(0,2)
    for i in range(0,index):
            print(Grades[i],end='@')
    ```

	i.	What are the minimum and maximum values of index variable?	(1)
	ii.	Which of the following can be output(s) of the above program code?	(1)

     i.   A@   ii. A@B@

     iii. A@B@C@   iv. A@B@C@D@E

4.	Give an example of active digital footprint and passive digital footprint.	(2)
5.	Identify the types cyber-attack in each of the following cases:	(2)

Case I: A software encrypts files and data within a system, making the content inaccessible until a handsome amount is paid to some third party.

Case II: Hackers render a fully functional website inaccessible to legitimate customers by illegally blocking the network traffic.

6.	What do you mean by malware? Give 2 examples of malware.	(2)
7.	Name any two types of public license.	(2)

OR

Write down any two types of IPR violation.

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SECTION – B

Each question carries 3 marks

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8.	Write a program in python to input a tuple of strings from the user and display reverse of each string.	(3)

e.g. – If the tuple is ("word", "234qw", "you", "$89") the output should be : drow wq432 uoy 98$

<div align="center">OR</div>

Write a program in python to input a tuple of numbers from the user and display the Second Highest element present in the tuple.

e.g. – If the tuple is (67.12, 709, -41, 11.43, 517, -39.06) the output will be 517.

9. Find the output of the following program: (3)
```
LP = list(("Story", (-2,3.1), 'True'))
for i in range(0, len(LP), 1):
    if len(LP[i])>1:
        print(LP[i][-1])
```

10. i. Why cookies can be harmful? (1)

ii. Which mode of browsing helps in identity protection during net surfing? (1)

iii. What do you mean by ethical hacking? (1)

SECTION – C
Each question carries 4 marks

11. Consider a list L = [53, 89, 12, 78, 45] and answer the following questions:

i. Write a statement to add the value 96 in L so that the L becomes [53, 89, 12, 78, 96, 45] (1)

ii. What will happen if the following statement is executed? (1)
print(L.pop())

iii. Write a statement to arrange the elements of L in the descending order of values i.e. L is [89, 78, 53, 45, 12] (1)

iv. What is the content of Lx if Lx = L[2:]+L[:3]*2, where L is the initial original list given in the question ? (1)

12. Write a program in python to input a text from the user and display the no. of occurrence of each alphabet irrespective of case present in it by using a dictionary. (4)
e.g. – If the input text is "Where is Swati's 7 books?" the output will be:
```
w = 2
h = 1
e = 2
r = 1
i = 2
s = 4
a = 1
```

t = 1
b = 1
o = 2
k = 1
OR

Write a program in python to input a text from the user and display the no. of vowels, consonants, digits and white space characters present in it by using a dictionary.
e.g. – If the input text is "Where is Swati's 7 books?" the output will be:

Vowels # 7
Consonants # 11
Digits # 1
White spaces # 4

13.   i.   What do you mean by e-waste? Why e-waste management is required?   (2)

     ii.   Which of the following comes under cybercrime as per Indian IT Act?   (2)

        a) Body shaming to teenagers through social media

        b) Burglary of mobile phone and laptop by breaking the safety door of a house.

        c) Sending threatening email

        d) Heated argument over phone

        e) Receiving unnecessary ads online

        f) Adult pornography

        g) Using someone's credit card to purchase online without prior permission of the user.

        h) Downloading a song from youTube

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