Class: XI   Max. Marks: 35

Subject: Computer Science   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 (Q.1 to Q.7)
Each question carries 2 Marks

1. Write the output of the following code: 2

    ```
    tup = (88, 22, 41, 61)
    ln = len(tup)
    for x in range(ln-1, -1, -2):
            print(tup[0:x])
    ```

2. Enlist at least four characteristics of python dictionaries.   2

3. (a) Predict the output of the following code: 2

    ```
    import math
    print(math.ceil(22.2))
    print(math.pow(math.sqrt(4),2))
    ```

    (b) A python code snippet is given as follows:

    ```
    import random
    import random
    mylist = [10, 15, 20, 25, 40]
    for a in range(3):
    r = random.randint(0,2)+2
       print(mylist[r])
    ```

    Which element(s) of mylist cannot be printed from the above code?

4. What is meant by Digital Footprint? how it can be useful.   2

5. Define the following: 2

    (i)   Phishing   (ii) Eavesdropping

6. Enlist at least four measures to maintain confidentiality of personal information to ensure cyber safety.   2

7. What is e-Waste? Write advantages of recycling e-Waste in a proper manner.   2

OR

Enlist at least two Gender and two Disability issues faced while teaching and using computers.

Section B (Q.8 to Q.10)
Each question carries 3 Marks

8. Write a python program to accept a list of strings and display the string which has maximum length and also display the length of maximum string.   3

For example:
If user enter list as ['Amar', 'Mallappa', 'Ria']
Output must be as follows:
String having maximum length : Mallappa
Length of maximum string : 8

OR

Write a python program to accept a list of integers, calculate and display the average of elements which are multiples of 5.

For example:
If user enter list as [10, 20, 17, 22, 15]
Output must be as follows:
Average of multiples of 5 is : 15

9. Write a python program to read a tuple of numbers and display the second largest element of the tuple.   3

10. Explain the following terms: 3
    (a) Malware   (b) Trojan   (c) Adware

Section C (Q. 11 to Q.13)
Each question carries 4 Marks

11. Consider a list given as follows: 4

    Mylist = [25, 80, [-2, -6, 'KVS'], 100, 80, 50, 40]

    Based on the above list declaration, answer the following:
    (a) Write slicing statement to display [50, 80, 100]
    (b) Write python statement to display 'KVS'
    (c) Write python statement to display how many times value 80 has appeared
        in the list.
    (d) Write python statement to insert value 200 before 100 in the list.

12. Write a python program to read a string count the number of times each   4
    character appears in a given string using a dictionary.

    For example if the input string is : 'INDIAN'
    Then output must be : { 'I':2, 'N':2, 'D':1, 'A':1}

    OR

    Write a python program that repeatedly asks the user to enter product names
    and prices. Store all of them into a dictionary whose keys are product names and
    values are prices. After entering all products and prices display those products
    whose price is more than Rs.1500

13. Simran wants to develop a software/application for the computerisation of her   4
    brother's music shop so that he can maintain stock and generate bills digitally.
    Answer any 4 questions given below with justification.
    (a) Her friend advised her to use software which comes under GPL, but
        Simran doesn't know what is GPL? Explain, what is GPL.
    (b) Simran has chosen Python language as front end and MySQL as backend
        for developing her application as both are Open source? Explain, what are
        Open Source software and write at least one advantage of using them?
    (c) What is the specific term/rights used to safeguard creations of the mind,
        such as inventions; literary and artistic works; designs; and symbols,
        names and images used in commerce.
    (d) Simran's friend Ranjeet somehow stole the software/application

developed by Simran and installed it on another Music store representing it as his own work without Simran's permission and without giving credit to her. What is the specific name of this this act. What she should do now to safeguard her work of intellect legally, so that no one can copy her application. What she should do?

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