QP Code: U25C044

Reg. No : .....

Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

III SEMESTER (FYUGP) DEGREE EXAMINATIONS, OCTOBER 2025

CSC3MN203 : DATA VISUALIZATION USING PYTHON

2024 Admission Onwards

(Credits: 4)

Time: 2 Hours **Maximum Marks: 70**

Section A

*Answer **all**. Each question carries **3** Marks.* ***(Ceiling: 24 Marks)***

1. What is a Python IDE? Give two examples.
2. Describe the difference between a variable and a keyword in Python.
3. What is the purpose of a Boolean expression in Python?
4. Explain how a while loop with an else block works.
5. What is the purpose of the continue statement?
6. Explain the difference between discard() and remove() methods in Python sets with a suitable example.
7. Analyze the output of the following code snippet: my_list = [10, 20, 30, 40]; my_list.remove(20); print(my_list).
8. Write a program to add an element to an existing tuple.
9. How do you define a function in Python?
10. What is recursion?

Section B

*Answer **all**. Each question carries **6** Marks.* ***(Ceiling: 36 Marks)***

11. Write a Python program that uses both print() and input() functions to interact with the user.
12. Write five examples that demonstrate different features of 'multiple assignment' in Python.
13. Write a Python program to find the sum of all numbers from 1 to 100 using a while loop.
14. Design a program to take a user's age as input and categorize it into 'Child', 'Teenager', 'Adult', or 'Senior' using nested if-else statements.

Turn Over

15. Analyze how you can iterate through a dictionary's keys, values, and items. Give example for each.
16. Explain the concept of modular programming using functions. What are its advantages?
17. Discuss the importance of docstrings in Python functions.
18. Evaluate the following Python code snippet and determine the value of total. x = 12; y = 5; total = (x ** 2 + y * 3) // (x % y + 1) + (x + y).

Section C

*Answer **any one**. Each question carries **10** Marks.* ***(1x10=10marks)***

19. What are the different types of operators in Python? Provide a detailed description of each with examples.
20. Describe the main operations that can be performed on a Python list. Use a programming example to illustrate each operation.

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