24U3137 (Pages: 2) Name : .....

Reg. No : .....

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

CC24UCSC3MN203 - DATA VISUALISATION USING PYTHON

(Computer Science - Minor Course)

(2024 Admission - Regular)

Time: 2.0 Hours Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 3 marks.

1. Describe what happens when you add an int and a float in Python. [Level:2] [CO1]
2. Describe what the expression not (4 == 4) evaluates to? Justify your answer. [Level:2] [CO1]
3. Implement a Python code to check whether the substring "cat" is present in "concatenate". [Level:3] [CO3]
4. Explain the difference between left-associative and right-associative operators. [Level:2] [CO1]
5. Apply a date-time feature to calculate the date exactly 7 days from today. Demonstrate with an example. [Level:3] [CO4]
6. Demonstrate the if statement in Python with example. [Level:3] [CO2]
7. Summarize the role of the step parameter in range(start, stop, step). [Level:2] [CO1]
8. Interpret the use of Math library with an example. [Level:3] [CO4]
9. Explain why Python is called a high-level programming language with an example.List any other 2 features of Python. [Level:2] [CO1]
10. Use the issubset() method and provide an example. [Level:3] [CO3]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

Answer ***all*** questions. Each question carries 6 marks.

11. Describe why certain words in Python are considered keywords, and why they cannot be used as identifiers. [Level:2] [CO1]
12. Implement a Python program to find the sum and reverse of the digits of a given number using a loop. [Level:3] [CO2]

13. Demonstrate how to create a Python dictionary using different built-in methods with examples.Implement any other 2 basic operations of Dictionary. [Level:3] [CO3]

14. Implement a Python program using Matplotlib subplots to display: A line chart showing the temperature of a city for 7 days [30, 32, 31, 29, 28, 27, 26]. A bar chart showing rainfall for the same days [10, 12, 8, 6, 14, 9, 7]. Both should appear side by side with appropriate titles and axis labels. [Level:3] [CO4]

15. Summarize the features of the string (str) and numeric data type in Python with at least two examples. [Level:2] [CO1]

16. Explain arithmetic and logical operators in python with examples. [Level:2] [CO1]

17. Demonstrate the concept of list slicing in Python with examples that extract sublists from a given list. [Level:3] [CO3]

18. Demonstrate how to define and call a user defined function in Python. Implement a python program that calculates the area of a circle given its radius usinf functions. [Level:3] [CO4]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

19. Provide suitable situations with code where break, continue, and pass statements should be applied in Python. [Level:3] [CO2]

20. Implement basic Tuple operations using suitable Python examples. [Level:3] [CO3]

(1 × 10 = 10 Marks)

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