

24U275

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Name :

Reg. No :

SECOND SEMESTER UG DEGREE EXAMINATION, APRIL 2025

(FYUGP)

CC24UCSC2CJ102 - PYTHON PROGRAMMING

(Computer Science - Major 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. What are the key features of Python that make it popular for programming? [Level:2] [CO1]
2. Explain Precedence and Associativity of operators in Python with an example. [Level:2] [CO1]
3. How do you import a module in Python? Provide an example. [Level:2] [CO2]
4. How do you define a function in Python? Provide an example. [Level:2] [CO2]
5. How do you create a bar plot using Matplotlib? Provide an example. [Level:3] [CO4]
6. Explain list traversal with an example. [Level:3] [CO3]
7. How do you create a set in Python? Provide an example. [Level:3] [CO3]
8. Explain element-wise operations in NumPy arrays with an example. [Level:3] [CO4]
9. How do you create a Pandas Series from a dictionary? Provide an example. [Level:3] [CO4]
10. How do you select a specific row using .loc[] and .iloc[] in Pandas? [Level:3] [CO4]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

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

11. Write a Python program to find the largest of three numbers using if-elif-else statements. [Level:2] [CO1]
12. What is type conversion in Python? Differentiate between implicit and explicit type conversion with examples. [Level:2] [CO1]
13. Explain the different types of function arguments in Python with examples. [Level:2] [CO2]
14. Write a Python program to find the sum of digits of a given number using a loop. [Level:2] [CO1]
15. Write a recursive function to compute the factorial of a given number. [Level:2] [CO2]

16. What is the global keyword in Python? How is it used? Provide an example. [Level:2] [CO2]
17. Explain string traversal using loops in Python with an example. [Level:3] [CO3]
18. What are the different tuple operations in Python? Provide examples. [Level:3] [CO3]
- (Ceiling: 36 Marks)**

Part C (Essay questions)

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

19. Describe the structure and syntax of if-else decision-making in Python. Write a program to classify a number as positive, negative, or zero using if-elif-else conditions. [Level:2] [CO1]
20. How do dictionaries handle key-value pairs? Explain how dictionaries manage hashable keys and their lookup time complexity. Provide examples to demonstrate adding, modifying, and deleting dictionary entries. [Level:3] [CO3]

(1 × 10 = 10 Marks)
