Reg. No. : ....

Name : ....

IV Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/ Improvement) Examination, April 2025
(2019 to 2023 Admissions)
COMPLEMENTARY ELECTIVE COURSE IN COMPUTER SCIENCE FOR MATHEMATICS/STATISTICS/PHYSICS/ELECTRONICS
4C04CSC : Computation Using Python

Time : 3 Hours   Max. Marks : 32

PART – A (Short Answer)

Answer **all** questions.   (5×1=5)

1. What is indentation in Python, and why is it important ?

2. Name any two numerical types in Python.

3. What does the import function do in Python ?

4. What is the difference between array () and arange() in NumPy ?

5. Name any two types of charts that can be plotted using matplotlib.

PART – B (Short Essay)

Answer **any 4** questions.   (4×2=8)

6. Explain the difference between mutable and immutable objects with examples.

7. What are the different methods to run Python programs ?

8. What is the difference between if, elif and else statements in Python ?

9. Explain data hiding with example.

10. Explain the use of the transpose() and reshape() functions in NumPy.

11. What are built-in exceptions ? Give two examples.

PART – C (Essay)

Answer **any 3** questions. (3×3=9)

12. Describe the use of the range() and enumerate() functions in loops with an example.

13. Explain any 3 built-in methods of lists, sets and dictionaries with examples.

14. Explain recursion with an example program that calculates the factorial of a number.

15. Explain arithmetic operations on NumPy arrays with examples.

16. Explain multi-level inheritance in Python with an example.

PART – D (Long Essay)

Answer **any 2** questions. (2×5=10)

17. Explain the different types of function arguments in python with examples.

18. What are method overriding and operator overloading in Python ? Explain with examples.

19. Describe the different indexing and slicing techniques used in NumPy arrays.

20. Describe the steps involved in creating and using a module in Python. Provide an example.

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