

QP CODE

Enrollment Number:

H1132

Name:

B.SC DEGREE EXAMINATIONS, FEBRUARY 2026

Third Semester

B.Sc. Data Science

B24DS06DC – Introduction to Python Programming

(2024 July Admissions)

Time: 3 Hours

Max Marks: 70

Section A

Answer any ten of the following questions in a word or sentence each. Each question carries 1 mark.

1. What is Python IDE?
2. List any two arithmetic operators in Python.
3. What is Python List slicing ?
4. How is an empty list created in Python?
5. Can a variable name start with a number? (Yes/No)
6. Which keyword is used to test multiple conditions in Python?
7. Which loop checks the condition before execution?
8. What is a module in Python?
9. Which keyword is used to import a module?
10. What is meant by file handling in Python?
11. Which function is used to open a file in Python?
12. What is a class in Python?
13. Give one real-life example of database application.
14. Why is data cleaning important in managing datasets?
15. Which Matplotlib function is used to create a new figure or plotting window?

(1X10=10)

Section B

Answer any five of the following questions in two or three sentences each. Each question carries 2 marks.

16. What are the guidelines for naming variables in Python?
17. What is Boolean data type?

18. What is an assignment operator?
19. Explain the advantages of using functions in Python.
20. Differentiate between iterators and iterable objects in Python.
21. Explain instance variables.
22. Write a short note on the `__init__()` method.
23. Explain any two File methods.
24. What is pdb? Mention its use.
25. What is a DataFrame? Mention any two features.

(2X5=10)

Section C

Answer any five of the following questions in a paragraph each. Each question carries 4 marks.

26. Explain the features of Python as a high-level programming language.
27. Describe logical operators.
28. Describe python dictionary.
29. Explain 'for loop' and its syntax.
30. What do you mean by Anonymous Functions? Explain with an example.
31. Describe the `os.rename()` function in Python.
32. Explain the concept of a class in Python.
33. Explain Object-Oriented Programming and its features.
34. Explain Compile time, Run time error, logical error and semantic error.
35. Explain Pandas and discuss its advantages.

(4X5=20)

Section D

Answer any two of the following questions in three pages each. Each question carries 15 marks.

36. Write a Python program using a loop to read 10 numbers from the user and find their sum.
37. Explain packages in Python. Discuss their advantages and structure with suitable examples.
38. Discuss built-in and user-defined exceptions in Python.
39. Discuss the features and advantages of NumPy. Compare NumPy arrays with Python lists.

(15X2=30)