QP CODE

H1023

Enrollment Number: ……

Name: ……

BCA DEGREE EXAMINATIONS, FEBRUARY 2026
Fourth Semester
BCA
B21CA07DC – Programming with Python
(2024 January 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 programming language?
2. What is the purpose of arithmetic operators in Python?
3. How is a list different from a tuple in Python?
4. What does the append() method do in a Python list?
5. What is a loop in Python?
6. Define generator in Python.
7. What are arguments in a function?
8. What is the purpose of file handling in Python?
9. Define class in Python.
10. What is meant by encapsulation?
11. How do you raise a custom exception in Python?
12. What does the \D special sequence match?
13. What is negative indexing?
14. Define the purpose of pie chart in Python.
15. What is the advantage of Pandas over Python lists?

(1X10=10)

Section B

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

16. Define assignment operators with an example.
17. What is array slicing? Give an example.
18. Write the use of the get() method in dictionaries.

19. Differentiate between break and continue.
20. Write a short note on Python IDE.
21. How is file renamed in Python?
22. Define abstraction in OOPs.
23. What is Zero Division Error? Explain.
24. How is a NumPy array created? Give an example.
25. What does plt.show() do in Matplotlib? Brief explanation.

(2X5=10)

Section C

Answer any five of the following questions in one page each. Each question carries 4 marks

26. Explain the different arithmetic operators in Python with examples.
27. What are tuples in Python? Explain characteristics of tuples with example.
28. Write a program to reverse a number using while loop.
29. What are *args and **kwargs? Explain how they allow variable-length arguments with example.
30. Explain any four important functions of the math module with examples.
31. Explain the different modes of opening a file in Python with examples.
32. What is the difference between +, *, ?, and {n} metacharacters? Explain with example.
33. What are CRUD operations of database programming? Explain each with example.
34. Explain array indexing and slicing in NumPy with examples.
35. Explain the difference between Series and DataFrame with examples.

(4X5=20)

Section D

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

36. Explain Python's built-in data types with examples.
37. Differentiate List, Dict, Set, and Generator with examples and methods.
38. Explain Python file handling in detail. Describe the working of open, read, write, renaming and deleting files with example.
39. Explain database programming in Python in detail. Discuss the steps involved in establishing a database connection, creating tables, inserting records, updating data, retrieving data, and closing the connection with examples.

(15X2=30)