25020289

QP CODE: 25020289

Reg No : .....

Name : .....

B.COM DEGREE (CBCS)) REGULAR/ IMPROVEMENT/ REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Fourth Semester

B.Com Data Analytics Model III

Optional Core - CO4OCT08 - PROGRAMMING LANGUAGES IN DATA ANALYTICS

2017 Admission Onwards

C5F5FE2B

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Differentiate between SAS and R in terms of data manipulation capabilities.
2. Define SAS and mention one of its key applications in data analytics.
3. Write any two advantages of using Markdown for report creation.
4. Write an example of subsetting a vector using the [] operator.
5. What is the use of the next statement in loops?
6. Define a tibble.
7. What is a variable?
8. What is the default data type of a number with a decimal point in Python?
9. What is the significance of the JVM?
10. Define a while loop with an example in Java.
11. Write a query to round 15.789 to two decimal places.
12. Why is a subquery also called a nested query?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Compare the functionalities of Pandas and NumPy with respect to data manipulation and storage.

14. Demonstrate a simple implementation of basic arithmetic operations using Julia.

15. Explain the purpose of a boxplot and provide an example of how to create one in R.

16. Describe the use of command-line arguments in Python programs.

17. Describe different file manipulation techniques in Python.

18. Explain Java primitive data types with examples.

19. Write notes on relational and assignment operators with examples in Java.

20. Explain the difference between UNIQUE and NOT NULL constraints with suitable examples.

21. What are aggregate functions in SQL? Explain any two with examples.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain the key features and different data structures available in R.

23. Explain the different application areas of Python. Why is Python considered a versatile programming language?

24. Describe the different control structures in Java used for looping. Explain with examples.

25. Explain the different types of SQL commands. How do these commands help in managing a database? Provide suitable examples to illustrate their usage.

(2×15=30)