

QP CODE

C1103

Enrollment Number:

Name:

B.SC DEGREE EXAMINATIONS, AUGUST 2025

Second Semester

B.SC. Data Science

B24DS04DC – Database Management systems

(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. Define data independence.
2. Define database.
3. What is concurrency control?
4. Mention any two characteristics of application programmers.
5. DDL stands for?
6. Which SQL clause is used to order the tuples in the result of a query?
7. Define view.
8. Give any two datatypes of PL/SQL.
9. What is a cursor in SQL?
10. Define transaction.
11. What does NoSQL stand for?
12. Define a document in MongoDB.
13. What does CQL provide?
14. What is the main storage system used in Hadoop?
15. What is DBaaS?

(1X10=10)

Section B

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

16. Name any four data models.
17. What is two tier architecture?
18. Define Functional dependency. Give an example.
19. Which command is used to permanently delete entire database. Write its syntax.
20. Write a PL/SQL block to print Hello world.

21. What is an implicit cursor? Give its two attributes.
22. What are the four conditions for deadlock?
23. Give any two characteristics of No SQL DB.
24. Explain CAP Theorem.
25. What is data replication? What is its use?

(2X5=10)

Section C

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

26. Explain Database Anomalies.
27. What are constraints? Explain three types of constraints.
28. Given a table emp (empno, empname, designation). Write SQL queries to create the table and to display the details of all managers.
29. Give the advantages and disadvantages of views.
30. Explain special operators of PL/SQL.
31. What is PL/SQL Procedures? Explain its three parts.
32. Explain any three PL/SQL conditional statements.
33. What are parameter modes in procedures?
34. Explain types of schedules in DBMS.
35. Explain key features of distributed databases.

(4X5=20)

Section D

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

36. What is an ER Model? Explain its various components. Draw an ER model for hospital management system.
37. Explain how concurrency control is implemented in DBMS.
38. Explain the key features and working of Mongo DB.
39. a) What is data fragmentation? (3 marks)
b) Explain the types of fragmentation. (6 marks)
c) Explain the advantages and disadvantages of data fragmentation. (6marks)

(15X2=30)