



QP CODE: 25050818



25050818

Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc Artificial Intelligence

Core Courses - AI010103 - DATABASE TECHNOLOGY AND NOSQL

2020 Admission Onwards

E7C0D0BC

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Differentiate Data processing Vs Data management systems.
2. Explain about the duties of a Database Administrators.
3. Describe about DCL & TCL.
4. What is super key? Give example.
5. Discuss the basic form of SQL query.
6. Draw a chart about DDL, DML, DCL, TCL & DQL.
7. Define a Transaction? List the properties of transaction.
8. Define transaction management.
9. Write some queries in MongoDB.
10. What is mean by read resilience.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Describe about Storage Manager.
12. Explain the concept of participation constraints.
13. List the aggregate functions supported by SQL.
14. Demonstrate transitive dependency. Give an example.
15. Define isolation level. How different isolation levels are implemented in terms of the locks that are set?





16. What is a Distributed Database? What are the types of Distributed Databases?
17. Explain about CAP Theorem.
18. What are different data distribution models in NoSQL?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain about Additional feature of ER Model (key constraints, Participation constraints, Weak entities, Class Hierarchies & Aggregation).
20. Differentiate between Relational Model & E R Model.
21. Define normalization. List and Explain different normal forms with examples.
22. Explain the types of NOSQL databases.

(2×5=10 weightage)

