



QP CODE: 23003364



Reg No : .....

Name : .....

**M Sc DEGREE (CSS) EXAMINATION, APRIL 2023**

**First Semester**

M.Sc. Artificial Intelligence

**CORE - AI010103 - DATABASE TECHNOLOGY AND NOSQL**

2019 ADMISSION ONWARDS

B31D6451

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight 1 each.*

1. Differentiate data processing & data management system .
2. What is the role of Naïve users?
3. Briefly explain the Relational model .
4. Briefly describe different types of relationship in ER model.
5. Define Null Values.
6. Explain about denormalization.
7. How atomicity and durability are guaranteed in a DBMS?
8. What is mean by REDO phase in Recovery?
9. Write some querys in Mongodb.
10. What is a schema less?

(8×1=8 weightage)

**Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight 2 each.*

11. What are the disadvantages of DBMS ?
12. Explain the concept of participation constraints.
13. Illustrate fully functional dependency with example.





14. What are Complex integrity Constraints in SQL ?
15. How normal execution happened in Xact table?
16. What are the different conditions for deadlock?
17. How does database sharding works?
18. How to combine sharding & replication?

(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. Explain about all features of E-R diagram ?
21. What is a trigger, and what are its three parts ? What are the differences between row-level and statement-level triggers ? Explain with example.
22. Explain the types of NOSQL databases.

(2×5=10 weightage)

