

QP CODE: 26801763



Reg No :

Name :

INTEGRATED M.Sc. DEGREE EXAMINATION, APRIL 2026

Eight Semester

INTEGRATED M.Sc. COMPUTER SCIENCE-DATA SCIENCE

ELECTIVE - ICSD8EB1 - ADVANCED DBMS

2021 Admission Onwards

DE0CD9E0

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. List the different types of data models. Explain any two.
2. What is the difference between DELETE, TRUNCATE, and DROP commands in SQL?
3. What are the different states of a transaction?
4. Describe the difference between bind variables and substitution variables in PL/SQL.
5. What are the characteristics of Big Data?
6. What is the key difference between SQL and NoSQL?
7. List any four scalar data types in MongoDB.
8. What is the purpose of the \$or operator in MongoDB?
9. List the characteristics of distributed DBMS.
10. What is horizontal fragmentation?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain the differences between a strong and a weak entity set.
12. Write a query to return departments where the total salary exceeds 1,00,000.
13. List the steps to declare and use an explicit cursor in SQL. Mention required SQL statements.
14. Compare and contrast Wait-Die and Wound-Wait deadlock prevention schemes.





15. What are the major database security issues? How can they be mitigated?
16. Describe document-based and graph-based NoSQL databases with examples.
17. Explain the features of the MongoDB shell. Mention any four key operations.
18. Discuss the impact of lack of standard query language in OODBMS.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Write detailed notes on SQL subqueries, nested queries examples.
20. Write a PL/SQL program which includes variables, conditions and loops.
21. What is NoSQL? Explain the types of data handled by NoSQL. Discuss Big Data and its relationship with NoSQL databases using real-life applications.
22. Explain the concept, features, and need for OODBMS. Compare it with other database types.

(2×5=10 weightage)

