

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2024**(Regular/Improvement/Supplementary)****COMPUTER SCIENCE****FCSS3C11-ADVANCED DATABASE MANAGEMENT SYSTEM****Time: 3 Hours****Maximum Weightage: 30****Section A: Short answer questions. Answer any *four* questions. Each carries *two* weightage.**

1. What is DBMS? Explain its characteristics.
2. Explain the term granularity.
3. Describe ACID properties.
4. Write short notes on serializability.
5. Explain the different datatypes in SQL.
6. Briefly explain the design of distributed database management system.
7. What are the different anomalies in a database?

(4 × 2 = 8 weightage)**Section B: Short essay Question. Answer any *four* questions. Each carries *three* weightage.**

8. Explain the different database languages.
9. What is a data model? Explain the different data models with examples.
10. Explain the significance of triggers with suitable example.
11. Discuss the need of concurrency control in transaction processing system.
12. Elaborate on 2NF.
13. Describe the advantages of DBMS over traditional file processing system.
14. Explain the use of HAVING clause and GROUP-BY clause in SQL.

(4 × 3 = 12 weightage)**Section C: Essay questions. Answer any *two* questions. Each carries *five* weightage.**

15. Draw an ER diagram for a Library Management System.
16. With Suitable example, explain Fourth Normal Form.
17. Explain Time Stamp Ordering mechanism in Transaction Processing System.
18. Give a detailed account on the operations in Relational Algebra with example.

(2 × 5 = 10 weightage)