

**D 70926**

(Pages : 2)

Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE (REGULAR) EXAMINATION  
NOVEMBER 2019**

Computer Science

CSS 3C 01—ADVANCED DATABASE MANAGEMENT SYSTEMS

Time : Three Hours

Maximum : 36 Weightage

**Part A**

*Answer all questions.*

*Each question carries 1 weightage.*

1. What do you mean by data abstraction ?
2. Differentiate between candidate key and super key.
3. What is meant by E-R Model ?
4. What is meant by functional dependency ?
5. What are the different database normal forms ?
6. Define tuple and attribute.
7. Describe about DCL.
8. What is the role of foreign key in a relational database model ?
9. Define the term transaction.
10. What are the two types of serializability ?
11. List the features of distributed database systems.
12. What is OODBMS ?

(12 × 1 = 12 weightage)

**Part B**

*Answer any six questions.*

*Each question carries 2 weightage.*

13. Compare the advantages and disadvantages of DBMS and the conventional file processing systems.
14. What are the various components of Database systems ? Explain.

**Turn over**

15. What is multivalued dependency ? What kind of constraints does it specify ?
16. What is meant by lossless-join decomposition ? Explain.
17. Give the MySQL statement which creates STUDENT table with following fields :

Name	CHAR (35)
DOB	DATE
Sex	Boolean
Class	CHAR (10)
Marks	NUMBER (4)
Rank	CHAR (8)

18. Explain the use of GROUP BY clause in MySQL with example.
19. What are the two phase locking mechanisms in database systems ? Explain.
20. List the different types of fragmentation in distributed databases.
21. What is OID ? Explain its significance.

(6 × 2 = 12 weightage)

### Part C

*Answer any **three** questions.  
Each question carries 4 weightage.*

22. What are the different types of data models ? Explain each one.
23. Define the following terms :
  - (a) Relational Schema and Relational Database schema.
  - (b) Domain and attribute.
  - (c) Mapping cardinality.
  - (d) Data Independence.
24. Explain the various steps of query processing.
25. Define Normalization. Using suitable examples, explain how BCNF preserves dependency.
26. Explain how aggregate functions and groupings are used in SQL commands.
27. Explain the tradeoffs and benefits of OODBMS over ORDBMS.

(3 × 4 = 12 weightage)