

**D 91653**

(Pages : 2)

Name.....

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2015**

(CUCSS)

**Computer Science**

**CSS 3C 01—ADVANCED DATABASE MANAGEMENT SYSTEMS**

**(2014 Admissions)**

Time : Three Hours

Maximum : 36 Weightage

**Part A**

*Answer all questions.  
Each question carries 1 weightage.*

1. Define database.
2. What are the constraints on relationship types ?
3. Define database state.
4. What is **multivalued** dependency ?
5. What is referential integrity constraints ?
6. Write the syntax of Insert command in SQL.
7. State ACID properties.
8. What do you mean by strict schedule ?
9. Define Granularity.
10. What are the advantages of distributed database ?
11. What is **serializability** ?
12. What is partial dependency ?

(12 x 1 = 12 weightage)

**Part B**

*Answer any six questions.  
Each question carries 2 weightage.*

13. Explain time stamp ordering protocol.
14. Explain the three schema architecture.
15. Explain the different types of attributes.
16. Give the different database languages.

**Turn over**

17. What is dependency preserving decomposition ? Give an example.
18. Explain the anomalies in a database system.
19. With the help of an example explain spurious tuple generation.
20. Explain *two* phase locking mechanism.
21. State the different object oriented database system concepts.

(6 x 2 =12 weightage)

### Part C

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

22. Explain the relational algebra operations.
23. With the help of a neat diagram explain the DBMS components and its interactions.
24. Explain the various concurrency control techniques.
25. Write an SQL statement to show a nested query.
26. Give an overview of ODMG data model.
27. Given the table salary :

<i>Emp_No.</i>	<i>Name</i>	<i>Basic</i>	<i>Comm.</i>	<i>Deduction</i>
1002	Charles	3000	200	250
1004	Nadeem	2500	120	100
1005	George	2800	500	290
1007	Sreyas	3000	180	25
1009	Shifa	2800	100	150

Write the SQL query :

- (a) Sum the salary of each employee.
- (b) Add a new column **Sal\_Date** to the table.
- (c) Display the maximum salary.
- (d) Select a employee name whose salary is less than the average salary.

(3 x 4 = 12 weightage)