

**C 63139**

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**Name**

**Reg. No.....**

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2014**

**(CUCSS)**

**Computer Science**

**CSC 2C 02—DATABASE MANAGEMENT SYSTEMS**

Time : Three Hours

Maximum : 36 Weightage

**Part A**

*Answer **all** questions.*

*Each question carries a **weightage** of 1.*

1. What are the limitations of traditional **file processing systems** ?
2. What is physical data independence ?
3. Write down any *two* **DDL** commands of **SQL**.
4. What is a **superkey** of a relation ?
5. What is the use of E-R model ?
6. How aggregation is represented in E-R model ?
7. What is entity integrity constraint ?
8. Differentiate **3NF** and **BCNF**.
9. Distinguish query from a transaction.
10. What is a view of a database ?
11. What is **UML** ? What is its use ?
12. What are the disadvantages of distributed database ?

(12 x 1 = 12 weightage)

**Part B**

*Answer any **six** questions.*

*Each question carries a **weightage** of 2.*

13. Explain join operation using a suitable example.
14. What are extension and intension of a relational model ?
15. When is a Schedule said to be **serializable** ? Explain.
16. What is implied by closure of a set of **FDs** ? Explain how closure is computed.

**Turn over**

17. Explain multi-valued dependence using an example.
18. What are lost update problems in a transaction management ? Explain.
19. What is **PJ** normal form ? Explain.
20. What is the role of query processor ? Explain.
21. Write down the features of **Postgre SQL**.

(6 x 2 = 12 weightage)

### Part C

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

22. With a neat diagram, explain the *three* schema architecture of a **DBMS**.
23. Outline the structure of an SQL query. Explain all constructs.
24. Explain *two* phase locking protocol used in transactions.
25. Why normalization of database tables is required ? Explain **3NF**.
26. Discuss concepts used in **OODBMS**.
27. Outline recovery mechanisms used in a **DDBMS**.

(3 x 4 = 12 weightage)