C 44081

Name ················

Reg. No ···············

SECOND SEMESTER M.Sc. DEGREE EXAMINATION AUGUST 2013

(CUCSS)

Computer Science

CSC 2C 02 – DATABASE MANAGEMENT SYSTEMS

(2010 Admissions)

Maximum : **36** Weightage

Time : Three Hours

Part A

Answer all questions.
Each question carries a weightage of 1.

1. What is schema of a database? Why is it required?

2. What is logical data independence?

3. Write down any two DML commands of SQL.

4. What is key, candidate key and primary key of a relation?

5. How a relationship and relationship degree is expressed in ER model?

6. Distinguish entity and weak entity with an example.

7. Why BCNF is considered stronger than 3NF?

8. Give an example each for select and project operations.

9. How views are created?

10. What is meant by integrity of a transaction?

11. What are the advantages of distributed databases?

12. Why Web need a special type of database management system?

(12 x 1 = **12** weightage)

Part B

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

13. Explain left and right join operations using suitable examples.

14. Explain aggregate functions of relational algebra.

15. **What are the desirable properties of a transaction?**

16. **What is implied by minimal cover of set of FDs? Explain how minimal cover is computed.**

17. **What is a nested query? Give an example.**

18. **What are lost update problems in a transaction management? Explain.**

19. **Why PJ normal form is considered ultimate normal form? Explain.**

20. **What is the role of query evaluator? Explain.**

21. **Write down the features of $PostgreSQL$.**

(**6 x 2 = 12** weightage)

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

22. **Briefly explain the need of a DBMS. What are the duties of a DBA?**

23. **Explain all constructs of an SQL statement. Provide examples.**

24. **Explain 2-phase commit protocol used in $DDBMS$.**

25. **Why normalization of database tables is required? Explain $3NF$.**

26. **Describe $ODMG$ data model and ODL.**

27. **Outline recovery mechanisms used in a $DDBMS$.**

(**3 x 4 = 12** weightage)