

**16U417**

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Name: .....

Reg. No. ....

**FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2019**

(Supplementary/Improvement)

(CUCBCSS - UG)

**CC15U BCS4 B06 - FUNDAMENTALS OF DATABASE MANAGEMENT SYSTEM  
AND RDBMS**

Computer Science – Core Course  
(2015, 2016 Admissions)

Time: Three Hours

Maximum: 80 Marks

**PART A**

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

1. In an Entity-Relationship diagram ellipse represents -----
2. The database schema is written in ----- language.
3. The number of tuples in a relation is termed as -----
4. Give the syntax of ALTER TABLE.
5. A Foreign key in one table points to a ----- key in another table.
6. DDL stands for -----
7. Join dependency is related with ----- normal form.
8. What are ACID properties?
9. Minimal super key is called -----
10. Define PL/SQL.

**(10 x 1 = 10 Marks)**

**PART B**

Answer *all* questions. Each question carries 2 marks.

11. Explain DDL and DML.
12. Differentiate between entity and entity sets.
13. Why fourth normal form is more desirable than BCNF?
14. What is meant by concurrency control?
15. What is a lock? List out different types of locks.

**(5 x 3 = 15 Marks)**

**PART C**

Answer any *five* questions. Each question carries 4 marks.

16. What is data independence? Why is it essential?
17. Compare the database system with conventional file system.
18. Explain lost update problems in detail.
19. What are the responsibilities of DBA?

20. List and explain aggregate functions used in SQL with examples.
21. How do we represent null values? Discuss the importance of handling null values.
22. Explain IF-THEN-ELSE statement in PL/SQL with an example.
23. What are triggers? How are they created? Explain its advantages and disadvantages.

**(5 x 4 = 20 Marks)**

**PART D**

Answer any *five* questions. Each question carries 8 marks.

24. Explain ER diagram in detail.
25. Briefly explain the process of normalization with suitable examples.
26. Illustrate two phase locking protocol with an example.
27. Discuss different types of join operations.
28. Explain procedures and functions in PL/SQL.
29. Define cursor. Explain with examples.
30. With a neat diagram describe three schema architecture.
31. Explain database structure in detail with the help of a neat diagram.

**(5 x 8 = 40 Marks)**

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