

**16U419**

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Name: .....

Reg. No.....

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

(CUCBCSS-UG)

**CC17U BCS4 B05 - DATABASE MANAGEMENT SYSTEM AND RDBMS**

Computer Science – Core Course

(2017 Admissions Regular)

Time: Three Hours

Maximum: 80 Marks

**Section A**

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

1. What is DBMS?
2. What is a foreign key?
3. Define referential integrity.
4. What do you mean by normalization?
5. What is a tuple?
6. Define the term entity with an example
7. What do you mean by functional dependency?
8. What is DCL?
9. List any two string functions.
10. Write any four data types in SQL

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

**Section B**

Answer *all* questions. Each question carries 3 marks.

11. Briefly explain the different types of locks.
12. Briefly explain the working of a cursor.
13. Write the syntax of GROUP BY and HAVING clauses.
14. What is data independence? What are the different types?
15. What is the difference between a strong and weak entity set?

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

**Section C**

Answer any *five* questions. Each question carries 5 marks.

16. What is a data model? What are the different types of data models?
17. Explain the fundamental relational algebra operations.
18. Compare second and third normal forms.
19. What is a view? Write the commands to create and destroy a view.
20. With the help of a diagram, explain the states of a transaction.

21. Write the syntax of the DDL commands used in SQL.
22. Explain the looping statements in SQL.
23. What is the purpose of GRANT and REVOKE commands? Explain.

**(5 x 5 = 25 Marks)**

#### **Section D**

Answer any *three* questions. Each question carries 10 marks.

24. Explain in detail the advantages and disadvantages of DBMS.
25. What is a trigger? Explain the various operations on a trigger.
26. Briefly explain the following:
  - a) ACID properties of a transaction.
  - b) Two phase locking protocol.
27. Explain tuple relational calculus and domain relational calculus.
28. Explain the symbols in ER diagram with an example showing all types of relationships.

**(3 x 10 = 30 Marks)**

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