

Reg. No.....

Name.....

B. C. A. DEGREE END SEMESTER EXAMINATION OCTOBER 2017
SEMESTER – 3 : BACHELOR OF COMPUTER APPLICATIONS (CORE COURSE)

COURSE: 16U3CRBCA9, RDBMS

(For Regular - 2016 Admission)

Time: Three Hours

Max. Marks: 75

PART A

ANSWER **ALL** QUESTIONS

1. Differentiate simple and composite attribute. Give an example.
2. Write any two functions of DBA?
3. Define an aggregate function. Give an example.
4. List the two reasons why we may choose to define a view?
5. Define functional dependency.
6. Why certain functional dependencies are called as trivial functional dependencies.
7. Define a foreign key.
8. State lost update problem.
9. Define a deadlock.
10. What are the different ways that can be used to generate a timestamp in transaction?

(1 x 10 = 10)

PART B

ANSWER ANY **EIGHT** QUESTIONS

11. Write any four applications of database systems.
12. Define and write a metadata for the relation *student*.
13. Write the difference between physical and logical data independence.
14. Explain the SQL command alter table with an example.
15. Differentiate equijoin and selfjoin.
16. Write down the advanced SQL features.
17. Explain a distributed database.
18. Explain the non-loss decomposition.
19. List the properties of a transaction.
20. When a transaction is said to be non serializable?

(2 x 8 = 16)

PART C

ANSWER ANY **FIVE** QUESTIONS

21. Explain projection & division operation in relational algebra with an example.
22. Explain in detail about the structure of trigger in SQL.

23. Explain Boyce-Codd normal form.
24. Explain why concurrency control is needed.
25. Explain the referential integrity constraint in SQL.
26. Explain the three schema architecture in detail.
27. Define primary key, super key and candidate key with a sample relation. (5 x 5 = 25)

PART D

ANSWER ANY **TWO** QUESTIONS

28. Draw an ER diagram for a library management system.
29. Explain about the various concurrency control techniques.
30. What is functional dependency and explain normalization using functional dependency.
31. Explain in detail about tuple relational calculus. Write a TRC query to obtain the roll no., name of all girl students in the Mathematics Dept. from the given relational schema
Student (Roll No, name, degree, year, sex, Dept. No., advisor)
Department (Dept. ID, name, HoD, phone) (12 x 2 = 24)
