



K16U 2069

Reg. No. :

Name :

**Third Semester B.C.A. Degree (CBCSS-Reg./Supple./Improve.)
Examination, November 2016
(2014 Admn. Onwards)**

General Course

3A 13 BCA : DATABASE MANAGEMENT SYSTEM

Time : 3 Hours

Max. Marks : 40

SECTION – A

1. Fill in the blanks :

- a) _____ is a language in DBMS for specifying the database scheme as well as other properties of the data.
- b) A _____ is a collection of operations that performs a single logical function in a database application.
- c) An object that exists in the real world and is distinguishable from other objects is called _____
- d) An entity set that has a primary key is termed as _____
- e) _____ option in a DROP command enables us to remove database schema and all its tables, domains and other elements.
- f) If every non-prime attribute A of a relation R is fully functionally dependent on the primary key of R, then R is said to be in _____
- g) In SQL _____ clause is used to sort the rows selected by a query.
- h) _____ operation allows us to find tuples that are in one relation but are not in another.

(8×½=4)

P.T.O.



SECTION – B

Write short notes on **any seven** of the following questions.

2. What is the difference between a database schema and a database instance ?
3. Why we need transaction management in DBMS ?
4. Distinguish between strong and weak entity sets.
5. Define 3NF.
6. Name any four column constraints.
7. Differentiate between inner and outer join.
8. Write the syntax of DELETE command in SQL.
9. List various set operations available in SQL.
10. Distinguish between tuple relational calculus and domain relational calculus.
11. Define set intersection operation in relational algebra. (7×2=14)

SECTION – C

Answer **any four** of the following questions.

12. What are the responsibilities of DBA ?
 13. What is normalization ? Discuss 3NF with example.
 14. Define an integrity constraint. What is the role of a foreign key in maintaining the data integrity ?
 15. Write short notes on triggers and cursors.
 16. Explain with example, the importance of 'on delete cascade' option in a CREATE TABLE command.
 17. Discuss about the following relational algebra operations :
 - a) Cartesian product.
 - b) Union.
- (4×3=12)



SECTION – D

Write an essay on **any two** of the following questions.

18. Discuss the different views and levels of architecture for a DBMS.
19. Briefly discuss about functions and sequences available in SQL with example.

20. Consider the following relational database :

employee(employee_name, street, city)

works(employee_name, company_name, salary)

company(company_name, city)

manager(employee_name, manager_name)

Give an SQL DDL definition of this database. Identify referential integrity constraints that should hold and include them in the DDL definition.

21. Write short notes on :

- a) Various data models
- b) Transaction management in DBMS.

(2×5 =10)
