Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐ **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech.(CSE)/(IT)   (Sem.–5)
# DATA BASE MANAGEMENT SYSTEM
Subject Code : CS-305
Paper ID : [A0466]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

   a) Give the usage of rename operation with an example.

   b) With an example explain what a derived attribute is?

   c) List the SQL statements used for transaction control.

   d) Define functional dependency.

   e) What do you mean by weak entity sets?

   f) Define Physical schema and Logical schema.

   g) Differentiate between procedural and non procedural language.

   h) Define integrity constraints.

   i) Give various symbols used in E.R. diagram.

   j) Describe statistical database security.

SECTION-B

2. Explain the need of normalization in database.

3. Discuss the various disadvantages in the file system and explain how it can be overcome by the database system.

4. What is E-R model? What is the use of E-R model? Draw any E-R diagram of your choice. Specify different entities, their attributes, cardinalities and degrees of the relationships in the E-R model.

5. What do you mean by deadlock? How it can be removed?

6. What is the purpose of RAID? Which level of the RAID is best? Why?

SECTION-C

7. Diagrammatically illustrate and discuss the steps involved in processing a query.   (10)

8. a) What is Lossless-join decomposition?   (2)

   b) Explain two types of Participation constraints.   (3)

   c) What is the difference between tuple relational calculus and domain relational calculus?   (5)

9. Explain deferred database modifications and immediate database modification recovery techniques.   (10)