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. What are the various types of keys?

   b. What is DBMS? What are the disadvantages of using a DBMS?

   c. What is a view? What are the various types of views?

   d. What is shadow paging?

   e. Explain briefly various kinds of privileges.

   f. What is granularity of a data item?

   g. Why do we need concurrency control?

   h. What is serializability of schedule?

   i. What is a transaction?

   j. Difference between relation calculus and relational algebra.

SECTION-B

2. Draw an ER diagram for library management system which has student, teacher, books, inventory, and requirement? Clearly highlight entities, relationship, primary key, and foreign key?

3. Discuss validation concurrency control technique.

4. Explain why do we need to recover a database with example.

5. How do we deal with constraint violation?

6. Define normalization, structural constraints, interfaces and scheduling.

SECTION-C

7. Consider the following tables :

   Part (p_id, p_name, p_cost)

   Customer (c_id, p_id, c_name)

   Supplier (s_id, s_name, p_id, p_city)

   Shop(sh_id, p_id ,c_ id, s_id, sh_city)

   a. Insert into table part a new column named part details.

   b. List the name of customer who are from the same city.

   c. List the customers who have been supplied with minimum number of parts.

8. What is normalization? Why do we need to normalize our database? Explain various normal forms by taking proper examples.

9. Discuss the importance of following with respect to DBMS :

   a. Data independence

   b. Classification

   c. Granularity