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

Total No. of Questions : 09

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

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS 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

l. **Write briefly :**

a. Define data independence.

b. What is a strong entity?

c. Define primary key.

d. Define views.

e. What is the need of DBMS?

f. What is a functional dependency?

g. What is a relational database?

h. Define ACID property.

i. Define serilizability.

j. Define shadow paging.

SECTION-B

2. Explain various components of DBMS with diagram.

3. Explain data abstraction with three layers. Why is it important?

4. Construct an ER diagram for a hospital management system with a set of patients and doctors. With each patient a series of various tests and examinations are conducted. On the Bases of preliminary report patients are admitted to a particular specialty ward.

5. Discuss various data manipulation functions and aggregate functions.

6. Explain third normal form with suitable example.

SECTION-C

7. Explain the various functions of relational algebra with example.

8. Discuss various locking techniques for concurrency control.

9. Write a note on database security.