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Total No. of Questions : 09] **[Total No. of Pages : 02**

B.Tech. (Sem. - 5th)

DATABASE MANAGEMENT SYSTEMS

SUBJECT CODE : CS - 305

Paper ID : [A0466]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Section - A is **Compulsory**.
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Two** questions from Section - C.

Section - A

Q1) ***(10 x 2 = 20)***

a) What do you mean by data independence?

b) What are various types of database users?

c) Define the functional dependency.

d) What is many to many relationships? Give examples.

e) Give an example of a query with 'where' and 'group by' clause.

f) Define entity and attribute.

g) Define normalization.

h) Discuss the various types of transaction failures that may occur in a system.

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

j) Define primary and candidate key.

Section - B

(4 x 5 = 20)

Q2) What do you mean by transaction? List different desirable properties of transactions?

Q3) What are the major functions of a database administrator?

Q4) Explain 2nd and 3rd normal forms.

Q5) What are various advantages & disadvantages of database approach?

Q6) Explain the difference between physical and logical data independence.

Section - C

(2 x 10 = 20)

Q7) (a) What do you mean by relationships? Explain different types of relationships.

(b) What is relational model? Compare and contrast it with network and hierarchical model.

Q8) Define relational algebra. Explain the various traditional set operations and relational operations of it.

Q9) (a) Discuss database Security and Integrity? Explain its various methods?

(b) What is SQL DBL and SQL DML? Give two examples for each.