

**Data Base Management System**  
**(CS-305, Dec.2005)**

**Note:** Section A is compulsory. Attempt any four question from section B and any two questions from Section C.

**Section-A**

1.
  - a) Define primary and candidate key.
  - b) What are various types of database users?
  - c) Define the functional dependency
  - d) What is one 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 Serializability.
  - 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 'View'.

**Section-B**

2. What are various advantages & disadvantages of database approach?
3. What is SQL DDL and SQL DML? Give two examples for each.
4. Explain 2<sup>nd</sup> and 3<sup>rd</sup> normal forms.
5. What is transaction? Explain its properties.
6. Explain the time stamp ordering used for concurrency control.

**Section-C**

7. What is relational model? Compare and contrast it with network and hierarchical model.
8. Define relational algebra. Explain the various traditional set operations and relational operations of it.
9.
  - (a) What is database security? Explain the mechanism for maintaining database security.
  - (b) What is log record? What fields it contains? How it is used for database recovery?

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