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 DBL and SQL DML? Give two examples for each.
4. Explain 2nd and 3rd 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?