

**DATABASE MANAGEMENT SYSTEMS**

(Common to CSS, IT & CSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain object oriented model and network model in degrees of data abstraction.  
(b) What are the functionalities of data base administrator?
- 2 (a) Where do you place the foreign key when you are working with a 1:1 relationship?  
(b) What is the most common design trap and how does it occur?
- 3 (a) Discuss about union, intersect, difference set operators with examples.  
(b) Explain clearly about 1:1 relationship with example.
- 4 (a) How to create a table structure? Explain.  
(b) Create a table and write queries to display minimum and maximum elements in a selected column and row.
- 5 (a) Describe the characteristics of a table that is not in normalized form. Describe how such a table is converted to a first normal form relation.  
(b) What do you understand by attribute closure? Give an example.
- 6 (a) Explain about the concurrency controlled using locking methods.  
(b) What are acid properties? Explain.
- 7 (a) How the terms fuzzy check pointing and Recovery algorithm are used in advanced recovery technique?  
(b) What is immediate database modification and deferred database modifications? Explain.
- 8 (a) Compare the ordered indexing with hashing.  
(b) Compare linear hashing with extendible hashing.

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