

**Code: 9F00301**

**MCA III Semester Supplementary June 2012 Examinations  
DATABASE MANAGEMENT SYSTEMS  
(For 2009 & 2010 admitted batches only)**

**Time: 3 hours**

**Max Marks: 60**

**Answer any FIVE questions  
All questions carry equal marks**

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1. (a) What are the functions of database administrator?  
(b) Explain the phases of database design.  
(c) Explain the different types of relationships.
2. (a) Explain ER diagram for a company database.  
(b) Explain different types of constraint.
3. (a) Explain about extended entity relationship.  
(b) Explain different types of keys.
4. (a) What are aggregate functions explain with an example?  
(b) Explain different types of constraints in SQL explain with an example.
5. (a) What is normalization?  
(b) Explain about third normal form.
6. (a) What are different types of locks?  
(b) Explain about concurrency control based on timestamp ordering.
7. (a) Explain about write-Ahead logging protocol for recovery algorithm.  
(b) Explain about remote backup systems.
8. (a) Explain about B<sup>+</sup> trees.  
(b) Explain about ISAM.

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