

M06303

**THIRD SEMESTER MCA DEGREE EXAMINATION, JUNE 2006  
DATABASE MANAGEMENT SYSTEM –MCA2K303**

**Time-3 hours**

**Maximum Marks-100**

**Answer any five questions. All carry EQUAL marks.**

- 1a. Explain about the advantages of a DBMS over a file processing system.
- b. Explain about ER model in detail.
- 2a. Explain about EER model in detail.
- b. Write a note on database languages and interfaces.
- 3a. Explain about various secondary storage devices in detail.
- b. Explain about B-Trees in detail.
- 4a. Explain about various functional dependencies in detail.
- b. Explain about 3NF, BCNF and 4NF in detail.
- 5a. Explain about additional relational algebra operations in detail.
- b. Explain about various operations in SQL.
- 6a. Explain about the desirable properties of transactions with examples.
- b. Explain about various lock-based protocols for concurrency control.
7. Explain about various database recovery techniques in detail.

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