| MCA–645 | MCA-05/ |
| | PGDCA-04 |

M.C.A./P.G.D.C.A. DEGREE/DIPLOMA EXAMINATION – JUNE 2008.

First Year/First Semester

(AY 2004-05 to AY 2007-08)

INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS

Time : 3 hours   Maximum marks : 60/75

Answer for 5 marks questions should not exceed
2 pages.

Answer for 10/15 marks questions should not exceed
5 pages.

PART A — $(4 \times 5 = 20)/(5 \times 5 = 25)$

Candidates with Enrolment number starting with A4 MCA and C5 MCA should answer any FOUR from Question 1 to 6 and all others should answer any FIVE from question 1 to 7 in Part A.

1.   Write the advantages of Database Management Systems.

2.	Compare hierarchical and network models with relational model.

3.	Explain the features of relational calculus.

4.	Provide an architecture for distributed database systems.

5.	What are client/server databases? Explain.

6.	List the features of Knowledge Databases and explain them.

7.	Develop an E-R model for a hospital information system.

PART B — (4 × 10 = 40)/(5 × 10 = 50)

Candidates with Enrolment Numbers starting with A4 BCA and C5 BCA should answer any FOUR from Question No 8 to 13 and all others should answer any FIVE from Question No 8 to 14 in Part B.

8.	Explain the overall system architecture of database management systems.

9.	List the file organization techniques and explain them.

10.	Define first normal form, second normal form, third normal form and Boyce/Codd normal form. Explain them.

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11. Design a database using E-R model for implementing an enterprise wide information system for the Times of India Group.

12. Define abstract data types, object identity and Inheritance. How are they implemented in object oriented Databases?

13. Explain the CREATE TABLE, INSERT, DELETE, SELECT and UPDATE commands of SQL with suitable examples.

14. What are deductive databases? Explain the features of deductive databases.

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