Code : 105412

2012 (A)

DATABASE MANAGEMENT SYSTEM

Time : 3 hours   Full Marks : 70

Instructions :

(i) The marks are indicated in the right-hand margin.

(ii) There are **TEN** questions in this paper.

(iii) Attempt any **FIVE** questions.

1. Discuss the main characteristics of database approach. How it differs from traditional file system?   14

2. Discuss the major steps taken to setup a database for any enterprise.   14

3. Describe the overall structure of a general database management system.   14

4. Differentiate the following with examples :
                    7+7=14

    (a) Weak entity set from Strong entity set

    (b) Disjoint design constraint from Overlapping design constraint

5. Draw an E-R diagram for a college library where the following constraints are to be considered :   14

    (a) Same author can write more than one book with unique ISBN.

    (b) A publisher can publish more than one book.

    (c) There are number of copies for same book with unique book code.

6. Design a generalization specialization hierarchy for a motor vehicle sales company. The company sales motorcycle, passenger cars, vans and buses. Justify your placement of attributes at each level of the hierarchy.   14

7. (a) How do we represent a weak entity set in a relational model?

    (b) Differentiate instance from schema
                    7+7=14

8. (a) Discuss select (σ) and project (π) operation with example.

    (b) Differentiate inner join from outer join.
                    7+7=14

9. (a) Explain that every candidate key is a super key but every super key may not be a candidate key.

    (b) What do you mean by a foreign key?
                    7+7=14

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10. Write the history of database system.   14