Total No. of Questions : 10] [Total No. of Printed Pages : 4

Roll No. .....

CS/IT-503(O)

B. E. (Fifth Semester) EXAMINATION, Dec., 2009

(Old Scheme)

(Common for CS & IT Engg. Branch)

DATABASE MANAGEMENT SYSTEM

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt any *one* question from each Unit. All questions carry equal marks.

Unit – I

1. (a) Explain hierarchical, network and relational data models. Give comparison between these models with an example. 10

   (b) Distinguish between the following : 10

   (i) Database approach and traditional file approach

   (ii) Strong entity and weak entity

Or

2. (a) Explain data independence with examples. Differentiate between logical data independence and physical data independence. 10

   (b) Discuss the architecture of DBMS. 10

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Unit – II

3. (a) (i) Explain join dependency. 5

(ii) Explain the fundamental operations of relational algebra. 5

(b) Represent each of the following operation in relational algebra in terms of fundamental operators : 10

(i) Intersection (A ∩ B)

(ii) Division (A ÷ B)

where A and B are two relations.

Or

4. (a) Explain various types of join with example. 10

(b) Explain the following terms : 10

(i) Primary Domain

(ii) Primary Key

(iii) Super Key

(iv) Integrity Constraints

(v) Extensions

Unit – III

5. (a) Consider the database given below. Give expressions in SQL for each of the following queries : 10

Supplier (SNo, SName, city, status)

Part (PNo, PName, weight, color)

Supp-Part (SNo, PNo, Qty)

database

(i) Get SName for suppliers who do not supply part 'P2'.

(ii) Get total quantity supplied by supplier 'S2'.