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CS 5004

III/IV B.Tech. DEGREE EXAMINATION, NOVEMBER, 2012

Fifth Semester

COMPUTER SCIENCE AND ENGINEERING

DATABASE MANAGEMENT SYSTEMS

Time : 3 hours ***Max. Marks : 70***

Part-A is compulsory

Answer One Question from each unit of Part-B.

PART-A

10 x 1 = 10M

a. Write data types in SQL.

b. What is a view?

c. What is referential integrity?

d. How do you represent generalization and specialization in an E-R diagram?

e. What is a derived attribute?

f. Write aggregate functions in relational algebra.

g. What is functional dependency?

h. What is strict two phase locking?

i. What is data abstraction?

j. Define functional dependency.

PART-B

4 x 15 = 60M

UNIT-I

1. a. Discuss about database users and administrators. **8M**

   b. Explain database languages. **7M**

(or)

2. Explain the following

   a. Data independence **3M**

   b. Keys **4M**

   c. Security and user authorization in SQL **4M**

   d. Triggers **4M**

UNIT-II

3. a. What is weak entity set and explain with an example? **7M**

   b. Discuss various types of join operations. **8M**

(or)

4. a. Explain relational algebra operations with examples. **8M**

   b. Explain about Domain relational calculus. **7M**

UNIT-III

5. a. How is BCNF more stronger than 3NF? Illustrate your answer with an example. **8M**

   b. Define multi valued dependency. Explain 4NF with an example. **7M**

(or)

6. a. Explain desirable properties of transactions. **7M**

   b. Define serializability. Explain conflict serializability and view serializability. **8M**

UNIT-IV

7. a. Explain locking techniques for concurrency control. **10M**

   b. Explain validation based protocol. **5M**

(or)

8. Explain basic recovery techniques from transaction failures. **15M**

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