Model Question Paper - 1

Fifth Semester B.Tech. Degree Examination, November 2010
(2008 Scheme)

08.503 DATA BASE DESIGN

Time: 3Hours   Max.Marks:100

PART-A
(Answer all questions. Each carries 4 marks)

1   What are the characteristics of Database Approach?
2   What is indexed sequential file organization?
3   Explain the attribute types of E-R model?
4   Distinguish between schema and instances. Give examples
5   Define functional dependencies?
6   What is meant by a loss less decomposition of relations?
7   What are transaction states?
8   What do you meant by serializability?
9   What is a deadlock?
10 What are the ACID properties of a transaction?   (10*4 = 40 Marks)

PART-B
(Answer any one full question from each Module)

MODULE-1

11 a. What is meant by datamodel? Explain the different data model?   (10)

    b. Explain three schema architecture and describe how it contributes to data
       independence?   (10)

(OR)

12 A Bank maintains data as follows:

    The Bank has different branches, each identified by a branch-name, branch-number and
    branch assets. The bank maintains account for customers each containing account –
    number, balance, and customer-number.

    Each Customer is identified by Customer-number, Customer-name, Street, and City. The
    bank also maintains Loans taken by customers each containing Loan –number, Customer-
    name and Amount.

    A customer may be related with an account, loan or both. Also each loan is associated
    with a branch.

    Represent the information by using an Entity-Relationship diagram. Clearly state all
    assumptions made.   (20)

MODULE-II

13   Consider the following relational database.
CUSTOMER (CUSTNO, CUST-NAME, CITY)
BILL (BILLNO, CUSTNO, BILL-DATE)
BILLPRODUCT (BILLNO, PRODUCTNO, QUANTITY)
PRODUCT (PRODUCTNO, NAME, UNIT-PRICE)

Give SQL expressions for the following Queries:

A) Find the names of customers along with bill number and date, whose total purchase exceeds Rs.5, 000 in a bill.

B) Find the names of customers whose bill total amount is more than the total amount for every customer living in TRIVANDRAM.

C) Modify the Quantity in BILL PRODUCT table to 17 for BILLNO 5 and PRODUCTNO 12.

D) Delete all bills for customers who live in ERANAKULAM.

E) Find the name of the product whose unit price is maximum.   (20)

(OR)

14   a. What is normalization? What are its objectives?   (10)
     b. State and explain four forms of Normalization with examples.   (10)

MODULE-III

15   a. Explain the concepts of conflict serializability and view serializability with examples?   (10)

     b Explain about the locking methods?   (10)

(OR)

16   a. What are the problems with concurrent database?
      How can these problems handled?   (10)
     b.Write about database recovery?   (10)