2122

M.Sc. (Bio-Informatics) First Semester
MBIN-8006: Introduction to Database System

Time allowed: 3 Hours   Max. Marks: 60

NOTE: *Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.*

x-x-x

1. (a) Explain schema and subschema.   [8X1.5 = 12]

    (b) Explain data independence types with examples.

    (c) Define key. State its significance in database systems.

    (d) State limitations of the E-R model.

    (e) Explain the GRANT statement with syntax and example.

    (f) What are database triggers? List a few uses of the same.

    (g) Explain Equi join with the help of an example.

    (h) Write a note on event handlers in Visual Basic.

SECTION – A

2. (a) Define architecture. Explain three-level database system architecture in detail. [6]

    (b) Explain the following: [6]

        1. Network Model

        2. Relational Model

3. (a) Define relationship. Explain various relationship types in database systems.   [4]

    (b) Develop an ER model for a car insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. Assume appropriate attributes and state any assumptions you make.   [4]

    (c) Implement the following relation using SQL query   [4]

        Student(st_no, st_name, sub1, sub2, totalmark, percentage)

        1. Create the table, add 5 records and display the data.

        2. Find names of all students who scored 0(zero) in any subject.

4. Discuss the importance of following with reference to database systems: [6]

        1. Data Independence

        2. Classification

        3. Granularity

(b) Explain client-server technology being realized through the use of SQL. Justify with the help of an example.

[6]

SECTION – B

5. (a) With the help of an example explain the following with respect to SQL: [8]
   1. create a table
   2. insertion and deletion in table
   3. destroying table
   4. data constraints

   (b) What is a view? What are various types of views? Differentiate between the table and a view? Write the syntax for creating a VIEW in SQL.

   [4]

6. (a) Explain nested queries and joins in SQL using suitable examples. [6]

   (b) Explain error handling in PL/SQL with the help of suitable examples. [6]

7. (a) Explain variables, procedures and functions with reference to visual basic. [6]

   (b) Explain the procedure of connecting to ms-access using visual basic and accessing data.

   [6]

x-x-x