Exam. Code : 206601
Subject Code : 4595

M.Sc. (Bio-Informatics) 1st Semester

BI-512 : DATABASE MANAGEMENT AND DATA MINING

Time Allowed—3 Hours] [Maximum Marks—75

Note :— Question No. **1** from Section A is compulsory. Attempt any ***five*** questions from Section B, selecting ***one*** question from each unit.

SECTION—A

1. Define the following :
   (a) Normalization
   (b) Schemas
   (c) Data models
   (d) Entity
   (e) Data definition
   (f) Association analysis
   (g) Data mining
   (h) Triggers in PL/SQL
   (i) Relational databases
   (j) Classification. 1.5×10=15

SECTION—B

UNIT—I

2. Provide an account on different types of architecture used for database management system and their classification. 12

3. What do you mean by Database instances and Database schemas ? Explain data independence. 12

UNIT—II

4. Illustrate the informal guidelines of relation schemas used in database designing. 12

5. What is normalization ? What are its different forms ? 12

UNIT—III

6. Explain the connection between ER diagram and data modeling. Illustrate the different notations used in ER diagrams. 12

7. Answer the following :

   (a) Explain the relational model concepts and constraints.

   (b) Similarity and dissimilarity between ER model and Relational model. 6+6=12

UNIT—IV

8. What are different languages that can be used for database designing and management ? Which one is preferred over the other and why ? 12

9. Define SQL view. Write a note on procedures and functions in PL/SQL. What are characteristics of query languages ? 12

UNIT—V

10. Differentiate between :

    (a) Classification and clustering

    (b) Cluster and evolution analysis. 6+6=12

11. Write notes on :

    (a) Data mining on relational databases

    (b) Data mining on biological databases. 6+6=12