(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0203 Roll No. | | | | | | | | | | |

B.Tech

(SEM VII) ODD SEMESTER THEORY EXAMINATION 2009-10
DATA BASE MANAGEMENT SYSTEM, DATA MINING AND WAREHOUSING

Time : 3 Hours] *[Total Marks : 100*

Note : *Attempt all questions.*

1 Do any **four** parts : 5×4=20

(a) Compare the Database Management system with file system.

(b) Draw the overall structure of DBMS and explain its various components.

(c) Write a short note on data - independence.

(d) Write down the five major characteristics of RDBMS.

(e) Draw an E-R diagram for a college with a set of faculty and a set of students. Also show that a student is linked with many faculties.

(f) Differential between primary key and unique key. Also explain the candidate key.

2 Do any **four** parts of the following: 5×4=20

(a) Write down the advantages of relational data model over Network Data Model.

(b) What do you understand by referential integrity ? Explain with example.

(c) What are various characteristics of SQL ? Discuss the 3 agreegate functions with example.

(d) Write down the syntax for following in SQL :

(i) Creating a table

(ii) Adding a coloum to an existing table

(iii) Deleting a particular row from a table.

(iv) Updating a data in a row of a table.

(e) Differentiate between following :

(i) Drop Table and Delete Table

(ii) Rollback and Commit.

(f) Discuss the use of cursors in PL-SQL.

3 Attempt any **two** of the following : **10×2=20**

(a) What do you mean by normalization ? Explain the 3NF and BCNF with examples.

(b) (i) What is functional dependency and how it is different from Multi Value Dependency (MVD) ?

(ii) Consider the relational scheme R (A, B, C, D, E, F) and FDS $A \rightarrow BC, C \rightarrow A, D \rightarrow E, F \rightarrow A, E \rightarrow D.$ Is the decomposition of R into R_1 (A, C, D), R_2 (B, C, D) and R_3 (E, F, D) lossless ?

(c) Write down the precautions required in a database design.

4 Attempt any **two** part of the following : **10×2=20**

(a) (i) Write down the objectives of Data warehousing.

(ii) Compare and contrast OLTP and Data warehouse.

(b) In modern applications "Distributed data base" is prefered over "Centralized data base". Comment and discuss the pros and cons of same.

(c) Explain the salient features of client-server model.

5 Attempt any **two** parts of the following : **10×2=20**

(a) What are the different components of a data warehouse ? Explain with the help of diagram.

(b) Write short notes on :

(i) Metadata

(ii) Data extraction.

(c) (i) How database management system support in decision making.

(ii) Explain the data warehouse for a multiprocessor architecture set-up.
