Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ECE) (2012 to 2017 E-I)   (Sem.–6)

RELATIONAL DATA BASE MANAGEMENT SYSTEM

Subject Code : BTEC-901

M.Code : 71125

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1) **Answer briefly :**

   a) What do you understand by Entity and Entity set? Explain.

   b) What are the structure of projection? Explain.

   c) Explain the find statement.

   d) Give example using SQL for the retrieval using exist.

   e) What is second normal form?

   f) What is a query language?

   g) What do you understand by get? Explain

   h) Give example using SQL for the retrieval using union

   i) Give example using SQL for the retrieval using where clause

   j) What are the log files?

SECTION-B

2) What are the various objective of a data base system? Explain the architecture for a relational data Model.

3) What are the various components of DBMS? Explain the role of DBA in a data base environment.

4) Write short notes on the following :

Conceptual Schema.

Entity integrity

Functional dependency

5) What are the construct used in the relational calculus? Explain each of them with example.

6) What three data anomalies are likely to be the result of data redundancy? How can such anomalies be eliminated?

SECTION-C

7) Consider the following relational database :

EMPLOYEE (emp name, street, city)

WORKS (emp-name, comp-name, salary)

COMPANY (comp name, city)

MANAGES (emp_name, manager name)

For each of the following queries, give the relational algebraic expression and relational calculus expression :

a) Find the names of all the employees who work for XYZ Bank Corporation.

b) Find the names of those employees who earn more than every employee of the XYZ Bank Corporation.

c) Find the names of managers who work in a bank located in Delhi.

8) Compare and contrast the features of simple locking, intention mode locking and time stamping mechanism from the viewpoint of transaction control under concurrent transitions.

9) What is the purpose of Audit Trails? How can they be used in a Banking Database System? Describe in the context of Banking System of India.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.