F 3532 (Pages : 2) Reg. No.....3.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Fifth Semester

Branch—Computer Science and Engineering/Information Technology

DATABASE MANAGEMENT SYSTEMS (R, T)

(Regular/Improvement/Supplementary)

Time : Three Hours Maximum : 100 Marks

Answer **all** *the questions.*

Part A

1. Describe briefly about the components of DBMS.
2. What do you mean by data independence ?
3. Why is the relational database model most popular ?
4. In a database table STUDENT (NAME, AGE, TOTAL MARK, BRANCH), write an SQN Query to find the name of the student with the highest mark.
5. Explain briefly about Query processing.
6. Write short note on curson in PL/SQL.
7. List out the differences between Integrity and domain constraints.
8. What do you mean by pitfalls in Relational-database design ?
9. List out the applications of distributed-database.
10. Mention the applications of Query Processing.

(10 × 4 = 40 marks)

Part B

11. (a) What are object-oriented databases ? Giving examples of one or two, cite their features in comparison to relational models.

Or

(b) How are one to one relationship between the same entity sets represented in the E.R. models ?

12. (a) Compare relational algebra to tuple relational calculus based on the fundamental operation.

Or

(b) With suitable examples, explain the functions of insert, delete and update statements in SQL.

Turn over

13. (a) What is the need for Query optimization ? What techniques are adopted by DBMS to achie optimized Query execution ?

Or

(b) Explain the basic structure of oracle system. Also discuss in detail about programmin in PL/SQL.

14. (a) Discuss in detail functional dependency and its normalization with an example.

Or

(b) Write a technical note of the following :—

(i) Second and third normal forms.

(ii) Multi – valued dependency.

(iii) Joint dependency and fifth normal form.

15. (a) What is data replication ? What is the need for replication of data ? What are the various methods in which replication can be done ?

Or

(b) Describe in detail how database recovery is done using log files.

(5 × 12 = 60 marks)