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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (IT) (2012 to 2017) (Sem.-5)
DATABASE MANAGEMENT SYSTEM
Subject Code : BTIT-503
M.Code : 70596

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 mean by a Data Base instance and a Data Base schema?
- b) Differentiate between Strong and Weak entity sets. How are they represented in an E-R Diagram?
- c) What is DML in SQL? List the different DML commands used in SQL.
- d) What are NoSQL databases?
- e) Explain the Cartesian Product operation in Relational Algebra.
- f) Differentiate between char and varchar2 data types in oracle.
- g) What do you mean by integrity of data? List **any two** integrity constraints.
- h) What is Locking?
- i) What is an Applet?
- j) What are Object-Relational Databases?

SECTION-B

2. What is Relational Model? Discuss various features of Relational Model.
3. List various advantages of Data Base approach over Traditional File system approach.
4. Explain the different set operations used in SQL.
5. What are Multimedia Databases? How data is stored and indexed in Multimedia Databases?
6. What are Data Warehouses? Explain the meaning of Extraction, Transformation and Load in perspective of Data warehouses.

SECTION-C

7. Explain XML with the help of an example.
8. What do you mean by Normalization? Explain the first three normal forms along with BCNF and the anomalies that exist in these normal forms with the help of suitable examples.
9. What is meant by concurrent by the concurrent execution of Database Transactions in a multi user system? Discuss the different problems that can occur due to concurrent execution of transactions. Explain with the help of an example of the terms - Serial Schedule and Serializable Schedule.

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.