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

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M.Sc.(IT) (2016 to 2018)   (Sem.–2)
RELATIONAL DATABASE MANAGEMENT SYSTEMS
Subject Code : MSIT-202
M.Code : 72729

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**
3. **Use of non-programmable scientific calculator is allowed.**

SECTION-A

1) Explain the three levels of architecture of DBMS diagrammatically.

2) a) Differentiate between strong entity sets and weak entity sets with examples.

   b) Explain different types of relationships in ER- model with their representation.

SECTION-B

3) What is normalization? Explain various forms of normalization.

4) Explain the structure and design of distributed databases. List down the characteristics of DDBMS.

SECTION-C

5) What is deadlock? What are the necessary conditions for deadlock to occur? Also explain deadlock detection and prevention techniques.

6) Explain the different levels of data and process distribution with suitable examples.

SECTION-D

7) a) What do you mean by Business intelligence? Why do we need it?

   b) Explain operational data v/s decision support data.

8) Define OLAP. Explain its architecture. Also explain database administration tools.

9) **Write briefly :**

   a) What are the disadvantages of manual databases?

   b) What is data abstraction?

   c) What is degree of relationship?

   d) Define the cardinality of relationship.

   e) What are serializable schedules?

   f) How can you recover from deadlock?

   g) Give the importance of DSS database.

   h) How can you provide security to the database?

   i) Explain de-normalization.

   j) Explain different types of attributes used in ER model.

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.