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Total No. of Pages : 02

Total No. of Questions : 09

**MCA (2014 Batch) (Sem.-2)**  
**RELATIONAL DATABASE MANAGEMENT SYSTEMS**  
**Subject Code : MCA-202**  
**M.Code : 26053**

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTIONS TO CANDIDATES :**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

**SECTION-A**

1. Define DBMS. Discuss the concepts of data independence and data abstraction.
2. Discuss the process of database design.

**SECTION-B**

3. What are the various types of Constraints? Explain each with an example.
4. What do you mean by database recovery? Discuss the various recovery mechanisms in detail.

**SECTION-C**

5. What are distributed database management systems? Discuss the advantages and disadvantages of DDBMS.
6. What are distributed database transactions? What are its features? Discuss transaction transparency in detail.

**SECTION-D**

7. What do you mean by DSS? What is the importance of DSS databases? Explain the DSS database requirements.
8. Define OLAP. Elaborate OLAP architecture.

### SECTION-E

**9. Write briefly :**

- a. What is Composite entity?
- b. Why do we need mappings between schema levels?
- c. Define Multi-Valued Dependency.
- d. Define Object-oriented database.
- e. What is concurrency? What are its problems?
- f. What are shared and exclusive locks? Explain with the help of suitable example.
- g. Differentiate between centralized and decentralized database designs.
- h. Define and distinguish between SPSP and MPMD.
- i. What is operational data? How is it different from decision support data?
- j. What is database administration?

**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.**