Roll No. Total No. of Pages : 0

Total No. of Questions: 07

BCA (2013 & Onward) (Sem.-4) DATABASE MANAGEMENT SYSTEMS

Subject Code: BSBC-404 Paper ID: [B0243]

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 SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.

SECTION-A

1. Answer briefly:

- a) What are the major benefits of database systems?
- b) What is an ER diagram?
- c) Why do we need to normalize databases?
- d) Distinguish between database schema and database instance.
- e) What is Normalization?
- f) Differentiate between tuple relational calculus and domain relational calculus.
- g) What are the problems arising out of concurrent access of databases?
- h) What is domain integrity?
- i) What is the difference between authentication and authorization?
- j) Define disaster management.

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SECTION B

- 2. a) Explain the responsibilities of a Database Administrator.
 - b) Differentiate between physical and logical data independence.
- 3. What do you understand by Relational model of database system? Elaborate the major characteristics of relational database management system.
- 4. What are the various operators used in Relational Algebra? Discuss each with an example.
- 5. Define various types of functional dependencies. Discuss multi-valued dependency in detail.
- 6. Define database recovery. What do you mean by forward recovery and backward recovery? What are the various recovery data collection techniques?
- 7. Define Distributed databases. What are the various considerations for distributing the database? Discuss the structure of a distributed database.

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