	Roll No.													Total No. of Pages: 0	2
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Total No. of Questions: 07

BCA (2011 & Onwards) (Sem. – 4) DATABASE MANAGEMENT SYSTEM

M Code: 10069 Subject Code: BSBC-404 Paper ID: [B0243]

Time: 3 Hrs. Max. Marks: 60

INSTRUCTIONS 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 students have to attempt any FOUR questions.

SECTION A

- 1. Briefly answer the following:
 - a) Differentiate between physical and logical data independence.
 - b) What are the responsibilities of a DBA?
 - c) What are the main differences between Hierarchical and Network models?
 - d) What are weak entity sets? How a weak entity set can be converted into strong entity set?
 - e) Define Referential integrity constraint. Explain with an example.
 - f) Define Normalization. Why do we need to normalize databases?
 - g) What is Boyce-Codd normal form?
 - h) What do you mean by database recovery?
 - i) Define Natural Join with an example.
 - i) Differentiate between Authorization and Authentication.

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SECTION B

- 2. Elaborate the three-level architecture of database system.
- 3. What is Entity Relationship Model? Explain the major constructs of ER model with examples.
- 4. What do you understand by Relational model of database system? Elaborate the major characteristics of relational database management system.
- 5. Define various types of functional dependencies. Discuss multi-valued dependency with an example.
- 6. What are the problems arising out of concurrent data access? What are the various methods of handling concurrency?
- 7. What is a Distributed database system? Discuss the advantages and disadvantages of distributed database systems.

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