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Total No. of Printed Pages: 1

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B.Sc. IT (Semester – 4th)
DATABASE MANAGEMENT SYSTEMS-I
Subject Code: BCSE0F95
Paper ID: [OE2130424]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

Q1. Attempt the following:

- a. Define data independence.
- b. Define Attributes.
- c. What is a Weak Entity?
- d. Which are the Integrity Constraints over relations?
- e. Write syntax to create Table in SQL.
- f. Write an example of nested Query in SQL.
- g. Explain ACID Properties.
- h. What is Concurrency Control?
- i. Differentiate between Grant and Revoke.
- j. What is Indexing?

Section – B

(5 marks each)

- Q2. What are the advantages of a DBMS?
- Q3. Explain Hierarchical Model.
- Q4. Explain Two-phase Commit Protocol.
- Q5. Differentiate between Discretionary Access Control and Mandatory Access Control.
- Q6. Explain different operations used in Relational Algebra.

Section – C

(10 marks each)

- Q7. Explain the architecture of Database System.
- Q8. Explain Conceptual Database Design with the help of ER Model.
- Q9. Explain different types of Normal Forms.