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B. Tech. (ECE) (Semester –6TH)
DATABASE MANAGEMENT SYSTEMS-I
Subject Code: BCSE0-F95
Paper ID: OE2111324

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. Explain primary key.
b. Explain the terms DDL and DML.
c. What are ACID properties?
d. Explain concurrency.
e. What are necessary conditions for occurring of a deadlock?
f. Explain Entity set.
g. What are strong and weak entities?
h. What do you understand by data integrity?
i. Differentiate between specialization and aggregation.
j. Explain the term serializability.

Section – B **(5 marks each)**

Q2. Explain Entity Relationship model with neat and clean diagram. Explain the types of entities and types of relations also with diagram.

Q3. What is data independence? Explain the types of data independence.

Q4. Explain the DBMS architecture in detail. Explain the DBMS layers.

Q5. What are deadlocks? Explain the conditions of deadlock avoidance?

Q6. Explain the threats to database security? Explain the grant and revoke policy in detail.

Section – C **(10 marks each)**

Q7. What is Normalization? Explain the types of Normalization.

Q8. Explain all the three models Relational, Network and Hierarchical model in detail.

Q9. Explain file organization and indexing in detail.