Roll No. ....

OLE-3030

B. Tech. 3rd Semester (CSE) Examination – April, 2021

DATABASE MANAGEMENT SYSTEMS

Paper : PCC-CSE-201-G

Time : Three Hours]   *[Maximum Marks : 75*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. **1** is *compulsory*. All questions carry equal marks.

1. (a) Define instances and schemas of database ?   2.5

    (b) Define (i) Database (ii) DBMS   2.5

    (c) Define Armstrong's axioms.   2.5

    (d) Define Web Database.   2.5

    (e) Define serializability of scheduling.   2.5

    (f) What is DDL and DML?   2.5

UNIT – I

2. What is Data Independence ? Differentiate between Physical and Logical data independence by taking suitable example. 15

3. What are data models in DBMS ? Explain any *two* data models in detail. 15

UNIT – II

4. What is Normalization ? Explain its different types. Also explain the difference between BCNF and 3 NF briefly. 15

5. What is Query optimization ? How we implement Query optimization in DBMS ? 15

UNIT – III

6. (a) Compare and Contrast Extendible Hashing with Linear Hashing ? 7.5

(b) Explain ACID properties and Illustrate them through examples ? 7.5

7. (a) What is Data base recovery ? Explain different types of Advanced Recovery Techniques ?   7.5

(b) What is concurrency control ? Explain in brief. 7.5

UNIT – IV

8. What is intrusion detection ? Explain its techniques. 15

9. What is Data Mining ? Explain Data Mining Techniques. Compare between Data Mining and Data Warehousing.   15

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