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EX-210

B.Tech. IIIrd Semester (New Scheme) CSE

Examination, 2022-23

Database Mgt. System

Paper - CS - 304

Time : 3 Hours]

[Maximum Marks : 60

Note : -Q. 1 is compulsory. Attempt one question from each Unit.

1. Explain the following term in brief.

   (i) Instances

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(1)

P.T.O.

(ii) Project operation

(iii) BCNF

(iv) Transaction

(v) Indexing

Unit-I

2. (a) Describe the structure of database management system.

(b) Give the explanation on mapping constraints.

OR

(a) What are the functions of DBA ? Also explain data dictionary.

(b) What is data independence and why it is important ?

Unit-II

3. (a) What do you mean by relational data model ? Also explain the term domain.

(b) Explain the fundamental operations of relational algebra.

OR

(a) Explain the integrity constraints.

(b) Define union compatibility ? Write down some additional operations used in relational algebra.

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Unit-III

4. (a) Why fourth normal form more desirable than BCNF ? Explain.

(b) What is dependency preservation ? Explain with example.

OR

(a) Explain various inference rules for functional dependencies in detail ?

(b) Discuss project join normal form.

Unit-IV

5. (a) Explain why a non-recoverable schedule results in a loss of transaction atomicity.

(b) What are the disadvantages of shadow paging recovery technique ?

OR

(a) What do you mean by multiversioning ?

(b) Explain how two-phase locking guarantees serializability.

Unit-V

6. (a) Explain Bitmap index in DBMS with example ?

EX–210 (3) P.T.O.

(b) Explain physical storage media in DBMS.

OR

(a) What is hashing in DBMS. Also describe its types ?

(b) What are the three types of file organisation ?

AJEET SONI

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