

Hall Ticket Number:

Y19ALSL8

II/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

July, 2021

Fourth Semester

Time: Three Hours

Common to CSE & IT

Database Management Systems

Maximum: 50 Marks

Answer Question No. 1 Compulsorily.

(10X1 = 10 Marks)

Answer ANY ONE question from each Unit.

(4X10=40 Marks)

1. a) Define DBMS. CO1
- b) What is data independence? CO1
- c) What is conceptual data model? CO1
- d) Define key. CO2
- e) What are data manipulation Language Commands? CO2
- f) Why the concurrency control is needed? CO4
- g) What is Functional Dependency? CO3
- h) Differentiate between B-tree and B+-tree CO3
- i) What is meant by schedule? CO4
- j) Define Serializability CO4

Unit - I

2. a) Outline the advantages of Database management system approach over the traditional file processing systems. CO1 5M
- b) Discuss the characteristics of DBMS. CO1 5M

(OR)

3. a) Write brief notes on the following ER Model concepts: CO1
 - a. Attributes
 - b. Relationship type, Relationship set.
 - c. Structural Constraints
 Also show the symbols and notations used. 5M
- b) Write in detail about various types of relational data model constraints CO1 5M

Unit - II

4. a) Explain Aggregate functions in SQL with suitable examples. CO2 5M
- b) Consider the following database schema. Write appropriate SQL DDL statements to define the database along with suitable integrity constraints. Also, Write DML statements to insert, delete and update data into the database. CO2

Employee

Emp_ID	Name	Address	Salary	Dept_ID
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Department

Dept_ID	Dept_Name	Loc_ID
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Location

Loc_ID	City	State	Country
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5M

(OR)

5. a) Discuss the Five clauses of SQL select statement. CO2 5M
- b) Illustrate the basic set of relational algebra operators. CO2 5M

P.T.O.

Unit - III

6. ✓ What is normalization? Explain different types of normal forms from first normal form to BCNF with suitable example. CO3 10M

(OR)

7. a) Explain in detail about single level ordered index. CO3 5M
b) Define Fully functional dependency. Explain how to find it with an example CO3 5M

Unit - IV

8. ✓ a) Discuss the Two-Phase lock-based protocols CO4 5M
b) Explain Characterizing schedule based on Recoverability. CO4 5M

(OR)

9. a) Discuss Time Stamp based protocols with examples CO4 5M
b) Define Transaction. Explain Desirable properties of Transactions. CO4 5M
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