

R17

Code No: 843AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA II Semester Examinations, July/August - 2021

DATA BASE MANAGEMENT SYSTEMS

Time: 3 Hours

Max.Marks:75

**Answer any five questions
All questions carry equal marks**

- 1.a) Explain about various data models.
- b) Discuss about database users and administrators. [8+7]
- 2.a) Draw ER diagram for Ternary Relationship set with suitable example.
- b) Discuss about key constraints for Ternary Relationships. [8+7]
3. Discuss about Complex integrity constraints in SQL. [15]
- 4.a) Explain about tuple relational calculus.
- b) Discuss about the expressive power of relational algebra and calculus. [8+7]
- 5.a) Define Third Normal Form and explain with example.
- b) Explain about Lossy-join decomposition. [8+7]
6. Describe Validation-based locking protocols. [15]
7. Explain advanced recovery techniques. [15]
- 8.a) Explain about B+ tree index file. Illustrate deletion of an element in B+ Tree with example.
- b) Explain in detail about Extendible hashing. [8+7]

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