

R18

Code No: 158DC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech IV Year II Semester Examinations, September - 2022

DATABASE MANAGEMENT SYSTEMS

(Common to CE, EEE, ME, ECE, EIE)

Time: 3 Hours

Max.Marks:75

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

- 1.a) Define Data Abstraction and discuss levels of Abstraction.
- b) Discuss about different types of Data models. [7+8]
2. Describe the Conceptual Design with the ER-Model. [15]
3. Illustrate different types of integrity constraints. [15]
4. Explain following relational algebra operation with an example.
 - a) Natural join operation
 - b) Selection and projection operation. [6+9]
- 5.a) List and explain various DML, DDL commands in SQL.
- b) List and explain SQL Relational Set Operators. [6+9]
- 6.a) Explain Multi-valued dependencies and fourth normal forms.
- b) Describe properties of decompositions. [8+7]
- 7.a) Discuss Serializability in detail.
- b) Write in detail about Multiple Granularity locking. [8+7]
- 8.a) Explain about B+ tree index file. Demonstrate searching a given element in B+ trees. Explain with example.
- b) Illustrate insertion of an element in B+ Tree with example. [8+7]

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