

Code No: 134AP

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, March - 2022

DATABASE MANAGEMENT SYSTEMS

(Common to CSE, IT)

Time: 3 Hours

Max. Marks: 75

Answer any five questions  
All questions carry equal marks

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- 1.a) Differentiate between relation schema and relation instance.
- b) Define the terms Arity and Cardinality of a Relation.
- c) What are Domain Constraints? Explain. [5+5+5]
- 2.a) Discuss about E-R model and its additional features.
- b) What are the function of DBA? Explain about different types of database users. [8+7]
- 3.a) Illustrate about Outer Joins with examples.
- b) Explain about Nested queries and correlated nested queries. [7+8]
- 4.a) Explain the differences between Tuple Relational Calculus and Domain Relational Calculus.
- b) Discuss about Triggers and Active Databases. [9+6]
- 5.a) Define Functional dependencies and explain how are primary keys related to FD's.
- b) Illustrate about inclusion dependencies with examples. [8+7]
- 6.a) Describe the properties of Decomposition. Demonstrate with examples.
- b) Explain about join dependencies and Fifth Normal Form. [8+7]
- 7.a) What are the issues in implementing atomicity and durability? Discuss.
- b) Illustrate concurrent execution of transactions with examples. [7+8]
- 8.a) What are the differences between hash based indexing and Tree based indexing?
- b) Explain about the organization of records in files. [9+6]

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