

**R18**

**Code No: 154AM**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B.Tech II Year II Semester Examinations, August/September - 2022**

**DATABASE MANAGEMENT SYSTEMS**

**(Common to CSE, IT, ECM, CSBS, CSIT, ITE, CSE(AIML), CSE(DS))**

**Time: 3 Hours**

**Max.Marks:75**

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

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- 1.a) Draw and explain the structure of a DBMS.
- b) Explain generalization and specialization concepts with an example. [7+8]
- 2.a) What is ER model? Explain the basic symbols used for entities, attributes and relationships.
- b) What is an attribute? Explain various types of attributes with examples. [9+6]
- 3.a) Explain integrity constraints over relations.
- b) How to alter, destroy tables and views? Give example queries. [7+8]
- 4.a) Give a brief note on views.
- b) Explain fundamental operations in relational algebra with examples. [8+7]
5. What is meant by normalization? Explain in detail various normal forms with an example. [15]
6. Explain the following with any example queries.
  - a) Set operations.
  - b) Aggregate operations. [7+8]
- 7.a) How to test serializability of a schedule? Explain with an example.
- b) Explain log-based recovery protocol. [8+7]
- 8.a) What is the purpose of indexing in DBMS? Explain secondary indexing with suitable diagram.
- b) What is meant by file organization? Explain in brief about Indexed Sequential Access Method (ISAM). [8+7]

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