Code No: 154AM

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester (Special) Examinations, January/February - 2021
DATABASE MANAGEMENT SYSTEMS
(Common to CSE, IT)

Time: 2 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1. Explain the functions of Database Administrator. [15]

2. What is Relational Model? Distinguish between Super key, Candidate key, Primary Key for a relation with examples. [15]

3. What is normalization? Explain 2NF, 3NF and BCNF Normal forms with example. [15]

4. What is serializability? Explain conflict and view is serializability in detail. [15]

5. Describe insertion and deletion operations in B+ tree with example. [15]

6.a) Explain various levels of data abstraction and data independence.
   b) Define generalization, specialization and aggregation? How it is represented in E-R Model? [7+8]

7. Let R = (ABC) and let r1 and r2 both relations on schema R. Give an expression in the tuple relational calculus that is equivalent to each of the following.
   a) $\prod_{A1,}(r1)$ b) $r1 \cap r2$ c) r1- r2 [5+5+5]

8. Explain various data manipulation and data definition statements in SQL with examples. [15]

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