R13

Code No: 813AP

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA III Semester Examinations, February - 2021
DATABASE MANAGEMENT SYSTEMS

Time: 2 hours **Max.Marks:60**

Answer any five questions
All questions carry equal marks
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1.a) What are levels of abstraction in a DBMS? Explain.
b) Explain class hierarchies in ER model with examples. [6+6]

2.a) Discuss about participation constraints and weak entities in ER model.
b) Write a brief introduction to the relational model. [6+6]

3. Explain in detail about relational algebra operations with suitable examples. [12]

4. What is schema refinement? Explain motivating examples of schema refinement. [12]

5. Explain about 3NF, 4NF and 5NF with suitable examples. [12]

6.a) Discuss about transaction support in SQL-92.
b) Explain concurrency control without locking. [6+6]

7.a) Write a brief introduction on crash recovery.
b) Describe analysis phase in detail. [6+6]

8. Explain the following:
a) The memory hierarchy
b) Extendable hashing versus linear hashing. [6+6]

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