R15

Code No: 823AC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA III Semester Examinations, March/April - 2022
DATA BASE MANAGEMENT SYSTEMS

Time: 3 Hours   Max.Marks:75

Answer any five questions
All questions carry equal marks
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1.a) What is meant by ER model? Explain how an ER diagram can be converted into relations.
  b) Explain about the selection and projections operations in the relational algebra with suitable example.   [7+8]

2.a) Explain the difference between External, Internal and Conceptual schemas. Explain how these schemas are related to the concepts of logical and physical data independence.
  b) Explain the responsibilities of DBA.   [7+8]

3.a) Explain SQL, Nested queries and correlated nested queries.
  b) What are aggregate operators in SQL? Explain.   [7+8]

4.a) What is Functional Dependency? Explain 3NF with an example.
  b) Explain Lossless join decomposition.   [7+8]

5.a) Explain in detail about ACID properties of a transaction.
  b) Explain about Concurrent execution of transactions.   [8+7]

6.a) Define 2NF. Illustrate with an example.
  b) Contrast ARIES with Shadow–page based recovery schemes.   [7+8]

7.a) Give a comparison of three file organizations. Briefly discuss about RAID.
  b) Distinguish among Cluster, Primary, and Secondary indexes.   [7+8]

8.a) Distinguish various File Organization Techniques.
  b) Explain briefly about ISAM. (Indexed Sequential Access Methods).   [7+8]

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