

Question Paper

Exam Date & Time: 29-Nov-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

INTERNATIONAL CENTRE FOR APPLIED SCIENCES END SEMESTER THEORY EXAMINATION NOVEMBER/DECEMBER 2019 IV SEMESTER B.Sc. (Applied Sciences) in Engg. DATABASE MANAGEMENT SYSTEMS [ICS 242]

Marks: 100

Duration: 180 mins.

Answer 5 out of 8 questions.

- 1) What are different operators for Relational Algebra? Explain. (10)
 - A)
 - B) How do you create a table in SQL? Explain, giving primary keys and foreign keys, for three tables. (10)
- 2) What are left and right joins in SQL? Explain, with an example. (10)
 - A)
 - B) How do you decompose a relationship in BCNF? Explain. (10)
- 3) Explain 3 NF , with an example. (10)
 - A)
 - B) What is Storage Hierarchy in DBMS? Explain. (10)
- 4) What are B+ trees? Explain with an example. (10)
 - A)
 - B) What are Fixed Length Records and Dynamic Length Records, in File Organization? Explain. (10)
- 5) What are Aggregate Functions in SQL? Explain with an example. (10)
 - A)
 - B) What is With clause in SQL? Explain with an example. (10)
- 6) What are views in SQL? Explain with an example. (10)
 - A)
 - B) What is Conflict Serializability in SQL? Explain with an example. (10)
- 7) Why do you require Precedence Graphs in Transactions? Explain. (10)
 - A)
 - B) What is Serializability in Transactions? Explain. (10)
- 8) What are Hash functions in DBMS? Explain. (10)

A)

B)

What do you mean by Insertion and Deletion in SQL? Explain.

(10)

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