IH Used Paper BTECH-28-10-20

R16

Code No: 135CA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, October - 2020
DATABASE MANAGEMENT SYSTEMS
(Common to CE, EEE, ME, ECE, EIE, MCT, MSNT)

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

Answer any five questions
All questions carry equal marks
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1.a) Explain DBMS applications and Database design.
b) Define DBMS. Explain the various Database languages with examples. [7+8]

2.a) What is NULL? What is its importance? How are these values handled in relational model?
b) Illustrate different types of joins in SQL. [8+7]

3.a) What is multi valued dependency? State and explain fourth normal form based on this concept.
b) What is the importance of dependency preservation during decomposition? How to achieve it? [7+8]

4.a) Explain Two Phase- Locking protocol. What benefit does strict two-phase locking Protocol provides? Discuss its disadvantages.
b) Explain deadlock with suitable example. [8+7]

5.a) Describe different methods of defining indexes on multiple keys.
b) Explain open hashing? Discuss their advantages and disadvantages. [7+8]

6. Draw an Entity Relation diagram for the Hospital Management System. Consider the different types of Patients with respect to Disease and In-Patient and Out-Patient Department in the design. Consider the availability of all well qualified Doctors. Consider various types of tests and operations to be conducted. Explain the mapping cardinality used. Assume suitable attributes. Use generalization and Specialization. [15]

7.a) What is a group function? List and explain how to use group functions in SQL with Appropriate examples.
b) Write and explain the structure of SQL SELECT statement with suitable example. [8+7]

8. Explain briefly about 2NF, 3NF and BCNF with suitable examples. [15]

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