Code No: 134AP

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, December - 2019
DATABASE MANAGEMENT SYSTEMS
(Common to CSE, IT)

Time: 3 Hours   **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks and may have a, b, c as sub questions.

PART- A
                                                                                                       (25 Marks)
1.a)	Define View.	[2]
b)	Write the applications of DBMS.	[3]
c)	Define Trigger.	[2]
d)	What is join operation in relational algebra?	[3]
e)	Define functional dependency.	[2]
f)	What are the properties of decompositions?	[3]
g)	Define Transaction.	[2]
h)	What is multiple granularity locking?	[3]
i)	What is hashing?	[2]
j)	Give example of B+ trees.	[3]

PART-B
                                                                                                       (50 Marks)
2.   Explain the architecture of Database Management Systems with a neat diagram.   [10]
OR
3.a)   What are the statements in SQL for destroying and altering tables?
   b)   What is a primary key and foreign key?   [5+5]

4.a)   Write the aggregate operators in SQL.
   b)   Write about complex integrity constraints in SQL.   [5+5]
OR
5.a)   Write Relational Algebra Queries for the following (for Sailors Database) Sailors
        (**sid**,sname,rating,age), Boats(**bid**,bname,color), Reserves(**sid,bid,day**).
        (i) Find the Sailor id's with age over 20 and who have not reserved a red boat.
        (ii) Find the names of Sailors who reserved boat 103
   b)   Explain tuple relational calculus.   [6+4]

6.a)   What are the problems of redundancy? Explain with example.
   b)   What is the solution to the problems of redundancy? Explain.   [5+5]
OR
7.   What is normal form? Explain normalization using (1NF, 2NF, 3NF) with examples.
                                                                                       [10]

8.a)   Explain the properties of transactions.
   b)   What are the concurrent control mechanisms without locking?   [5+5]
OR
9.a)   What is ARIES algorithm? Explain.
   b)   Explain media recovery.   [5+5]

10. Explain Indexed Sequential Access Method. [10]

OR

11.a) Explain static hashing.

b) Explain Extendible hashing. [5+5]

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