Code No: RT31054 **R13** SET - 1

III B. Tech I Semester Supplementary Examinations, May - 2019

DATABASE MANAGEMENT SYSTEMS

(Common to Computer Science and Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1	a)	What is an instance? What is a schema?	[3M]
	b)	Explain commands with respect to SQL: (i) Rename (ii) Alter (iii) View	[3M]
	c)	What are Assertions? Give Example	[4M]
	d)	Given a relation R with 5 attributes ABCDE and the following FDs: A $\rightarrow$ B, BC $\rightarrow$ E, and ED $\rightarrow$ A. Is R in 3NF? Justify	[4M]
	e)	What is atomicity of a transaction?	[4M]
	f)	List the types of Single level ordered indexes.	[4M]

PART –B

2	a)	List and explain various data models used for database design.	[8M]
	b)	What is Entity set? and also define Relationship set. List and explain the symbols used to draw ER Diagram.	[8M]
3	a)	Explain two aggregate functions of SQL.	[4M]
	b)	Explain the following SQL constructs with examples: (1) order by (2) group by and having (3) as select (4) schema	[12M]
4		Write SQL Queries for following set of tables: EMPLOYEE (EmpNo, Name, DoB, Address, Gender, Salary, DNumber) DEPARTMENT (DNumber, Dname, ManagerEmpNo, MnagerStartDate). i) Display the Age of 'male' employees. ii) Display all employees in Department named 'Marketing'. iii) Display the name of highest salary paid 'female' employee. iv) Which employee is oldest manger in company? v) Display the name of department of the employee 'SMITH'.	[16M]
5	a)	Explain 3NF & BCNF. What is the difference between them?	[8M]
	b)	What is functional dependency? Explain its usage in database design.	[8M]
6	a)	List and explain various issues while transactions are running concurrently in DBMS.	[8M]
	b)	Explain Concurrency control with locking methods.	[8M]
7	a)	What is static hashing? What rules are followed for index selection?	[8M]
	b)	Explain about Buffer management in DBMS.	[8M]

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