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

III B. Tech I Semester Supplementary Examinations, May - 2017

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**

*****

PART –A

1	a)	Define the two levels of data independence.	[3M]
	b)	Explain the terms super key and candidate key with an example.	[4M]
	c)	Differentiate between super class and sub class.	[3M]
	d)	What is normalization? Differentiate between first normal form and second normal form.	[4M]
	e)	Define the term ACID properties.	[4M]
	f)	Explain the concept of B+ trees.	[4M]

PART –B

2	a)	Explain the role of a data base administrator.	[6M]
	b)	What are the different data models present and explain briefly?	[6M]
	c)	Explain the merits and demerits of data base system.	[4M]
3	a)	Consider the following schema: Suppliers (sid, sname, address) Parts (pid, pname, color) Catalog (sid, pid, cost) Write the relational algebraic queries for the following: i)Find the sids of suppliers who supply some red or green part ii) Find the sids of suppliers who supply every red or green part iii) Find the pids of parts supplied by at least two different suppliers.	[6M]
	b)	Discuss in detail the operators SELECT, PROJECT, UNION with suitable example?	[6M]
	c)	Explain about different DML operations.	[4M]
4	a)	Construct an ER diagram for university registrar's office. The office maintains data about each class, including the instructor, the enrollment and the time and place of the class meetings. For each student class pair a grade is recorded. Determine the entities and relationships.	[8M]
	b)	Explain the following: a) Ternary relationship, b) Weak entity set, c) Grouping d) Aggregation.	[8M]

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

5	a)	Explain about Boyce Codd normal form with an example.	[8M]
	b)	Explain the concept of functional dependency with an example.	[8M]
6	a)	Explain read-only, write-only and read-before-write protocols in serializability.	[8M]
	b)	How the use of 2PL would prevent interference between two transactions.	[8M]
7	a)	Explain Heap File Organization with unclustered index.	[8M]
	b)	Explain the differences between static hashing and dynamic hashing.	[8M]

*****