Code No: R1631054 **R16** SET - 1

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

DATA BASE MANAGEMENT SYSTEMS

(Common to Computer Science Engineering, Information Technology)

Time: 3 hours Max. Marks: 70

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

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PART –A

1.	a)	What is the role of Database Designers?	[2M]
	b)	What is a weak entity in ER diagram?	[2M]
	c)	Compare Row level trigger with Statement level trigger	[3M]
	d)	Write the Augmentation Rule for multivalued dependencies.	[3M]
	e)	What is a Dirty Read?	[2M]
	f)	How does a database index work?	[2M]

PART -B

2.	a)	With a neat diagram, explain the structure of Database Management System.	[10M]
	b)	What is data independence and how does a DBMS support it? Explain.	[4M]
3.	a)	Give the diagrammatic representation of recursive relationship in an ER diagram and also explain the importance of role names in representing a recursive relationship by taking a real time example.	[8M]
	b)	Explain the Division operator of Relational algebra with a suitable example.	[6M]
4.	a)	How would you use the operators IN, EXISTS, UNIQUE, ANY and ALL in writing nested queries? Why are they useful? Explain with an example.	[7M]
	b)	What is a Trigger? And what are its three parts? Explain the differences between Triggers and Integrity constraints.	[7M]
5.	a)	What are the problems caused by redundantly storing information? Explain	[4M]
	b)	Given Relation, R=(A,B,C,D,E,F,G) and Functional Dependencies F={ {A,B}→{C}, { A,C}→{B}, {A,D}→{E}, {B}→{D}, { B,C}→{A}, {E}→{F}}. Check whether the following decomposition of R into R1=(A,B,C), R2=(A,C,D,E) and R3=(A,D,F) is satisfying the lossless Decomposition property.	[10M]
6.	a)	Discuss Write – Ahead log protocol.	[7M]
	b)	Consider the following schedule of three transactions T1: r1(X), w1(X); T2: w2(X); and T3: w3(X) Schedule S: r1(X); w2(X); w1(X); w3(X); Check whether the Schedule S is view equivalent to any serial schedule or not? Give Justification to your answer with neat explanation.	[7M]
7.	a)	Explain about the measures that are to be considered for comparing the performance of various file organization techniques.	[7M]
	b)	What are the benefits of using dynamic indexing? Explain in detail B+ tree file organization.	[7M]

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