Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME- SEMESTER II - EXAMINATION - SUMMER 2015

Subject Code: 2722318 Subject Name: Database Management Systems Time: 2:30 PM - 5:00 PM Instructions: Date:03/06/ Total Marks			Date:03/06/ 2015	
		70		
11150	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	(i) Draw symbols for Weak Entity set, Derived attribute in E-R diagram.(ii) List relational algebra operators and explain with example.	02 05	
	(b)	(i) Explain commit and rollback command.(ii) Explain mandatory access control of database security.	04 03	
Q.2	(a)	(i) Explain different database users.(ii) Consider following schema and write SQL query for the given statements.	03 04	
		* Branch(branch_name,branch_city) * Account(branch_name, acc_no, balance) * Depositor(Customer_name, acc_no) (1) Find out list of customers who have account at -abcøbranch. (2) Find out all customers who have account in -Ahmedabadøcity and balance is greater than 10,000.		
	(b)	What is canonical cover? Consider following set F of functional dependencies on schema R(A,B,C) and compute canonical cover for F.	07	
		$A \rightarrow BC B \rightarrow C A \rightarrow B AB \rightarrow C$ OR		
	(b)	What is Functional Dependency? Explain lossless decomposition with suitable example.	07	
Q.3	(a) (b)			
Q.3	(a) (b)	Explain system recovery procedure with check point record concept Draw E-R diagram for supplier who supplies different parts which are used in different projects. Explain the mapping cardinality used. Assume suitable attributes.		
Q.4	(a)	Describe various disadvantages of file system compare to Data base management system.	07	
	(b)	With example explain various mapping cardinalities and total participation OR	07	
Q.4	(a) (b)	List the ACID properties. Explain the usefulness of each. Explain following Term with suitable example. (1) Primary Key (2) Candidate Key (3) On delete cascade (4) foreign key	06 08	
0.5	(a)	What is deadlock? When it is occurs and how to avoid it?	07	

	(b)	(i) Explain BCNF with example.	03
	, ,	(ii) Write with example any two built in string functions.	04
		OR	
Q.5	(a)	What is join? Explain various types of joins with example.	07
	(b)	(i) Explain method of query optimization.	04
	` /	(ii) Explain deadlock detection mechanism.	03
