Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III • EXAMINATION – WINTER • 2014

	•	Code: 130703 Date: 30-12-2014 Name: Database Management System	
Ti	-	2.30 pm - 05.00 pm Total Marks: 70	
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Draw an E-R diagram for Banking enterprise. What is Relational Algebra? Enlist and Explain the fundamental operation of relational algebra.	07 07
Q.2	(a) (b)	What is the difference between Database user and Database administrator? Explain various functions of Database Administrator? Explain various operations in DDL, DML and DCL SQL languages.	07 07
	(0)	OR	07
	(b)	Explain Inner Join and Outer Join with SQL queries.	07
Q.3	(a)	Explain wait-die and wound-wait for deadlock prevention.	07
	(b)	Explain deferred database modification for log based recovery. OR	07
Q.3	(a) (b)	Explain three type of actions to be taken for recovery from deadlock. What is serializability? Explain view serializability with example	07 07
Q.4	(a)	What is decomposition? Explain Lossy and Non-loss decomposition with suitable example.	07
	(b)	Explain the steps in query processing? How the cost of query is measured? OR	07
Q.4	(a)	What is Normalization? Explain Normalization process for 1NF, 2NF and 3NF with example.	07
	(b)	What is query optimization? Explain how to optimize nested sub queries.	07
Q.5	(a) (b)	What is aggregate function? Explain any five aggregate functions with example. What is difference between SQL and PL/SQL? Write a PL/SQL block to determine the given number is odd or even. OR	07 07
Q.5	(a) (b)	Explain Having, Group by and order by clause with example. What is non-procedural Language? Write a PL/SQL block to print the square of number from 1 to 10 (Inclusive).	07 07
