Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA Integrated - SEMESTER-II• EXAMINATION - WINTER 2016

	•	Code: 4420603 Date: 04/01/20 Name: Fundamentals of Database Management System	17
Ti	me:1(tructio	0:30 am – 01:00 pm Total Marks:	70
	1. 2. 3.	The state of the s	
Q.1	(A)	Write a short note: (1) Lossless join dependency (2) Relational Algebra Operation	03 04
	(B)	Explain ANSI/SPARC Architecture of DBMS in detail.	07
Q.2	(A)	Write a short note: (1) What do you mean by Referential Integrity Constraint? (2) Types of relational calculus	03
	(B)	Explain the concept of Specialization, aggregation and generalization with examples?	07
		OR	
	(B)	Explain Tuple Relational Calculus giving suitable examples.	07
Q.3	(A)	(1) Justify – All BCNF is in 3NF, but all 3NF is not BCNF.(2) Explain Multi-valued Dependency	03 04
	(B)	Explain Division, Union, Project Relational Algebra operations with example. OR	07
Q.3	(A)		03 04
	(B)	Explain different between Disjoint and Overlapping Participation Constraint with example.	07
Q.4	(A)	Write a short note:(1) List and Explain Armstrong's Axioms.(2) Differentiate between Primary Key, Candidate Key and Alternate Key.	03 04
	(B)	Explain DBMS Vs. File System. OR	07
Q.4	(A)	Write a short note: (1) Write a note on mapping cardinalities	03
	(B)	(2) What do you mean by degree of Relationship? Construct an E-R diagram for a Student management system.	04 07
Q.5	(A)	(1) Explain Relational Model of DBMS in detail.(2) What do you mean by Physical and Logical data independence?	03 04
	(B)	Explain pitfalls of relational database design in details. OR	07
Q.5	(A)	Write a short note:	
		(1) Explain difference between ER and EER model.	03
	(B)	(2) Explain desirable properties of Decomposition What is data dictionary? Explain its different types.	04 07
