Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY MCA - SEMESTER-II • EXAMINATION – SUMMER 2017

Subj Time	Subject Code: 2620003Date:07/06/2017Subject Name: Database Management System (DBMS)Total Marks: 70					
Instru	1. 2.	is: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.				
Q.1	(a)		7			
	(b)	 Database management System. Define following. 1. DBMS 2.Schema 3. Logical data independence 4.Strong Entity set 5. Functional dependency 6. Super key 7. Normalization 	7			
Q.2	(a)	1 , 3 , 1 1	7			
	(b)	Make necessary assumptions add at least one multivalued attribute and derived attribute.	7			
Q.3	(b) (a)		7 7			
	(b)	Write short note on requirements of 1 NF,2NF and 3NF. OR	7			
	(a) (b)		7 7			
Q.4	(a)		7			
	(b)	operation. Which condition is called deadlock? Explain any one technique of deadlock prevention.	7			
	(a)	OR Define deadlock. Which are the modes of lock ? Explain any one schedule	7			
	(b)	which shows use of lock. How do we perform delete operation using locking protocol?	7			
Q.5	(a) (b)	 Write short not on log-based Recovery. i) List all the person's name and Id who are having Hobby stamps or coins collection using relational algebra ii) Rename the column Name with P_name using relational algebra. 	7 7			

Person:

Id	Name	Address	Hobby
1123	John	123 Main	stamps
1123	John	123 Main	coins
5556	Mary	5 Lake Dr.	hiking
9876	Bart	10Pine St.	stamps

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- Write short note on BCNF.
- (a) (b) Give classification of failure and storage.