Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.C.A.- SEMESTER – V • EXAMINATION – WINTER 2012

Subject code: 650004 **Date: 28-12-2012**

Subject Name: Advanced Database Management Systems (ADBMS)

Time: 10:30 am – 1:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Discuss Component modules of DBMS and its interactions with diagram.	**07**
	(b)	Attempt the following 1. Give reasons why most database are stored permanently on magnetic disk storage. 2. Give functions of various database system utilities.	**07**
Q.2	**(a)**	Discuss four main control measures used to provide Security in Databases.	**07**
	(b)	Discuss various issues related to security and threats to Database.	**07**
		OR	
	(b)	What are the goals of Database Tuning? Discuss types of statistics required during tuning; also discuss types of problems faced during Database Tuning.	**07**
Q.3	**(a)**	Discuss Deferred update and Immediate update recovery techniques.	**07**
	(b)	What is the main difference between a primary index and a clustering index? How does insertion of a record in a block affect a primary or clustering index-considering the case of with and without overflow?	**07**
		OR	
Q.3	**(a)**	Attempt the following. 1. How Distributed Database is different from Parallel Database? 2. What is meant by Data Allocation in Distributed Database design?	**07**
	(b)	What is Partitioned Hashing? How does it work? What are its limitations?	**07**
Q.4	**(a)**	What is Spatial Database? Explain different types of Spatial queries.	**07**
	(b)	Discuss the merits and demerits of proving secondary indexes and primary indexes.	**07**
		OR	
Q.4	**(a)**	What is Prolog and Datalog? Discuss its similarity and its differences with example.	**07**
	(b)	What is Temporal Database? Discuss benefits of Temporal Database giving example.	**07**
Q.5	**(a)**	Discuss with example, how type constructor, inheritance and overloading function written in SQL for Object Relational database system.	**07**
	(b)	What is Multimedia Database? Discuss different types of Multimedia data available in current systems.	**07**
		OR	
Q.5	**(a)**	Draw and briefly explain Mobile Computing architecture.	**07**
	(b)	Attempt the following: 1. What is function of Service name and Listener in oracle? 2. Discuss in brief Oracle Net Configuration.	**07**

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