

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-V EXAMINATION – WINTER 2018

Subject Code: 2650004

Date: 26/11/2018

Subject Name: Advanced Data Base Management Systems**Time: 10.30 am to 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)** Define following terms. **07**
1. Double Buffering.
 2. Audit Trail.
 3. Unspanned Record.
 4. Data Model.
 5. Dirty bit.
 6. Shadowing.
 7. Database Management System.
- (b)** Explain Three-Schema Architecture and Data Independence with diagram. **07**
- Q.2 (a)** Explain Component modules of DBMS and its interactions with diagram. **07**
- (b)** Discuss the advantages of using DBMS Approach **07**
- OR
- (b)** Define Distributed database. List out and explain various advantages of Distributed database. **07**
- Q.3 (a)** Give function of temporal database. List out various temporal data types. Explain with example, the concept of Valid Time and Transaction Time dimensions in Temporal database system **07**
- (b)** Explain four main control measures used to provide security in database. **07**
- OR
- Q.3 (a)** Write a note on Public Key Encryption. **07**
- (b)** Explain Distributed Concurrency Control Based on a Distinguished Copy of a Data Item. **07**
- Q.4 (a)** Explain in brief the decisions to be taken during Physical Database Design. **07**
- (b)** What is Multimedia Database? Discuss different types of Multimedia data available in current systems. **07**
- OR
- Q.4 (a)** Explain deferred update recovery in detail. What are the advantages and disadvantages of it? Why it is called no-undo/redo? **07**
- (b)**
- i. Explain in brief the actions performed by DBA for database security. **04**
 - ii. Differentiate between dense index and sparse index. **03**
- Q.5 (a)** Explain MANET architecture in detail. **07**
- (b)** Draw and Explain Logical Storage Structure in Oracle 11g. **07**
- OR
- Q.5 (a)** What is GIS? List out and explain Data management requirements of GIS. **07**
- (b)** Discuss about bulk insert using SQL*Loader. **07**
