

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA INTEGRATED-SEMESTER- II-EXAMINATION- SUMMER-2024

Subject Code: 2527107**Date: 19/06/2024****Subject Name: Database Management System****Time: 10:30 AM TO 01:30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1 (a) Do as Directed: 07**
1. Define: Primary Key
 2. Define: Candidate Key
 3. What is Super class?
 4. What is Denormalization?
 5. Define: Integrity Constraints.
 6. What is BCNF?
 7. What is Generalization?
- (b) Describe the main components of a DBMS 07**
- Q.2 (a) What are the different types of database languages, including DDL and DML? Discuss the role of each language in a DBMS 07**
- (b) Define data abstraction and explain its significance in database design. Differentiate between logical and physical data independence 07**
- OR**
- (b) Explain DBMS Advantages in detail. 07**
- Q.3 (a) Explain :1) Conceptual Data Model 07**
- 2) Logical Data Model
 - 3) Physical Data Model
- (b) Write a short note on the types of database users. 07**
- OR**
- Q.3 (a) Explain the Three Schema Architecture in detail and discuss why it is used? 07**
- (b) Explain Components of ER-Model in detail 07**
- Q.4 (a) Describe the Hierarchical model, Network model, and Relational model used in organizing databases 07**
- (b) 1) Explain the concept of functional dependencies 07**
- 2) Explain strong and weak entities in Entity-Relationship 07**
- OR**
- Q.4 (a) Discuss the various integrity constraints in a DBMS? 07**
- (b) What is Normalization? explain 1NF, 2NF and 3NF with example. 07**
- Q.5 (a) Define views and discuss the benefits of creating views in a DBMS? provide a suitable example 07**
- (b) Discuss Codd's 12 Rules in detail. 07**
- OR**
- Q.5 (a) Explain Functions in SQL: ROLLBACK, COMMIT, SAVEPOINT 07**
- (b) Define SQL and Explain various features offered by SQL 07**