

GUJARAT TECHNOLOGICAL UNIVERSITY**MBA Integrated - SEMESTER– II EXAMINATION – WINTER 2021****Subject Code: 2527107****Date: 28/12/2021****Subject Name: Database Management System****Time: 02:30 PM to 05:30 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) “Data is processed into Valuable Information and Valuable Information is processed into Knowledge” Give your opinion for the statement in the detail. **07**
- (b) Define the Following: **07**
1. DDL
 2. Derived Attribute
 3. Normalization
 4. Candidate Key
 5. Tuples
 6. Functional Dependency
 7. SQL
- Q.2** (a) Explain Codd’s 12 Rules in detail. **07**
- (b) Define Data Abstraction. Differentiate between Logical and Physical Data Interdependence. **07**
- OR**
- (b) Explain the following Models with neat diagram and suitable example: **07**
- 1) Relational Model
 - 2) Network Model
 - 3) Hierarchical
- Q.3** (a) Explain various Components of Database with Examples. **07**
- (b) Discuss in brief Data Dictionary. Describe various types of users of DBMS. **07**
- OR**
- Q.3** (a) Define Data Integrity. Discuss various Integrity Constraints of DBMS. **07**
- (b) Differentiate between Strong and Weak Entity Set. Also Discuss aggregate functions with example(s). **07**
- Q.4** (a) Draw an E – R Model as per following: **07**
- There are 1000 Students in a college pursuing various courses like 10% are in MBA, 25% are in BBA, 15% are in MCA and rest are in Engineering.
- (b) What is Normalization? Explain any 2 Forms of your choice with suitable example. **07**
- OR**
- Q.4** (a) Draw an E-R Diagram for the situation given below: **07**
- A university consists of a number of departments. Each department offers several courses. A number of modules make up each course. Students enroll in a particular course and take modules towards the completion of that course. Each module is taught by a lecturer from the appropriate department, and each lecturer tutors a group of students.
- (b) Discuss the functions of SQL- ROLLBACK, COMMIT, SAVEPOINT. **07**
- Q.5** (a) Enlist SQL commands for DML. **07**
- Consider following relations and write SQL queries for given statements.

Assume suitable constrains.

Department (dept-no, dept-name)

Job(job-id, job-title, minimum-salary, maximum-salary)

Employee(emp-no, emp-name, emp-salary,dept-no)

Deposit(acc-no, cust-name, branch-name, amount, account-date)

Borrow(loan-no, cust-name, branch-name, amount)

1. Give name of depositors whose branch name starts from 'P'.

2. Give employee name(s) whose salary is between Rs. 50000 to 70000 and department name is Production.

3. Delete borrower details whose amount is more than 20000.

(b) What is RDBMS? What is the Structure of Relational Data? **07**

OR

Q.5 (a) From the Given Data, Create 5 Different Queries and Sub Queries: **07**

Roll No	First Name	Last Name	Subject
1001	Abhinav	Dushyant	Marketing
1002	Keshav	Gandhi	Finance
1003	Jagruti	Patel	Marketing
1004	Vijay	Gohil	Human Resource
1005	Swati	Rawal	Finance

(b) Discuss the role of Data Warehouse for Online Retailer. **07**
