Seat No.:_____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING– SEMESTER –4 (NEW) EXAMINATION – WINTER-2020

Subject Code: 3341605   **Date: 25-02-2021**
Subject Name: Database Management
Time: 02:30 PM TO 04:30 PM   **Total Marks: 56**
Instructions:
1. **Attempt any FOUR Questions from Q.1 toQ.5.**
2. **Make Suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Use of programmable & Communication aids are strictly prohibited.**
5. **Use of only simple calculator is permitted in Mathematics.**
6. **English version is authentic.**

Q-1   **Answer any seven out of ten.**   **14**

1. Define DBMS and Information

   DBMS અને Informationની વ્યાખ્યા આપો

2. Define Entity and Attribute

   Entity અને Attributeની વ્યાખ્યા આપો

3. List out different joins

   જુદા જુદા joins ની યાદી લખો

4. Define REFERENCE KEY

   REFERENCE KEY ની વ્યાખ્યા આપો

5. Write syntax of Create Table command

   Create Table command લખો

6. What is E-R diagram?

   E–R ડાયાગ્રામ એટલે શું?

7. List data types used in DBMS

   ડી.બી.એમ.એસ ના ડેટા ટાઇપ ની યાદી લખો

8. Write any four advantages of three tier architecture

   Three tier architectureની કોઈપણ ચાર ફાયદાઓ લખો

9. Give types of SQL commands

 SQL COMMANDS ની ટાઈપ આપો

10. What is the NOT NULL constraint?

 NOT NULL constraint શું છે?

Q.2	a	Explain the distributed database architecture	03

 Distributed database architecture સમજાવો

	a	Explain components of data dictionary	03

 Data dictionaryનાં ઘટકો સમજાવો.

	b	Define followings: (1) Metadata (2) System Catalog (3) Data Warehouse	03

 નીચેનાની વ્યાખ્યા આપો: (1) Metadata (2) System Catalog (3) Data Warehouse

 OR

	b	Explain second Normal Form (2NF) with example	03

 Second Normal Form (2NF) ઉદ હરણ સ થે સમજાવો

	c	Explain UNIQUE KEY and PRIMARY KEY	04

 UNIQUE KEY અને PRIMARY KEY સમજાવો

	c	Explain the application of DBMS.	04

 DBMSની application સમજાવો

	d	List different Database Systems. Explain Centralized Database System	04

 વિવિધ Database Systemsની યાદી બનાવો. Centralized Database System સમજાવો

	d	Explain functions and services of DBMS	04

 DBMSન ફ્નકશન અને સર્વિસીસ સમજાવો

Q.3	a	Explain Components of a DBMS	03

 ડીબીએમએસ નાં કમ્પોનન્ટસ સમજાવો

 OR

	a	Explain specialization in E-R diagram	03
		ઈ-આર ડાયાગ્રામ માં Specializationને સમજાવો	
	b	Explain the Client/Server Database System	03
		Client/Server Database System સમજાવો	
		OR	
	b	Explain Distributed Database Systems	
		Distributed Database Systems સમજાવો	
	c	Explain Group by clause with example	04
		Group by clause ઉદાહરણ સહિત સમજાવો	
		OR	
	c	Explain Order by clause with example	
		Order by clause ઉદાહરણ સહિત સમજાવો	
	d	List different types of Joins. Explain Equi-join with example	04
		વિવિધ પ્રકાર નાં Joinsની યાદી બનાવો. Equi-join ઉદાહરણ સહિત સમજાવો	
		OR	
	d	Write short note: Mapping Cardinality	04
		ટૂંકનોંધ લખો : Mapping Cardinality	
Q.4	a	Explain the Responsibilities of Database Administrator	03
		ડેટા બેઇઝ એડમીનીસ્ટ્રેટરની જવાબદારીઓ સમજાવો	
	a	Explain the concept of generalization	03
		generalization સમજાવો	
	b	Differentiate Physical Data Independence and Logical Data Independence	04
		Physical Data Independence and Logical Data Independence નો તફાવત આપો	
		OR	
	b	Explain union and intersection operations of relational algebra	04
		union and intersection of relational algebra ઓપરેશન સમજાવો	
	c	Explain SQL Functions for different operations with example	07
		SQL Functions for different operations ઉદાહરણ સાથે સમજાવો	

Q5 a Explain the GRANT and REVOKE statement in SQL 03

SQL માં GRANT અને REVOKE statement સમજાવો

b Explain select operations of relational algebra with example 04

Relational algebra ના select operations સમજાવો

c Consider following table and solve given queries:07 07

EMP(emp_no, emp_name, desg, salary, deptno)

(1) Create table EMP.

(2) Display information of all employees whose name starts with 'p' and ends with 'h'.

(3) Display department wise salary total.

(4) Add new column email_id in EMP table

નીચેના ટેબલને ધ્યાન માં લો અને આપેલી ક્વેરીનો ઉકેલ શોધો

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