

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
DIPLOMA ENGINEERING (NEW)– SEMESTER –3 (NEW) EXAMINATION – WINTER-2020

**Subject Code:3330703****Date: 18-02-2021****Subject Name:Database Management System****Time: 10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR Questions from Q.1 to Q.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. દશમાંથી કોઇપણ સાતના જવાબ આપો.

**14**

1. What is data dictionary?  
૧. data dictionary શું છે?
2. Define: metadata  
૨. Metadata ની વ્યાખ્યા આપો.
3. Explain DUAL table clause.  
૩. DUAL table clause સમજાવો.
4. What is DDL and DML?  
૪. DDL and DML શું છે?
5. Explain SYSDATE clause.  
૫. SYSDATE clause સમજાવો.
6. Explain any two DATE functions.  
૬. કોઇપણ બે DATE functions સમજાવો.
7. What is super key?  
૭. super key શું છે?
8. What is subquery? Explain with example.  
૮. Subquery શું છે? ઉદાહરણ આપી સમજાવો.
9. Explain NOT NULL constraint.  
૯. NOT NULL constraint સમજાવો.
10. List out different types of attributes in ER model.  
૧૦. જુદા જુદા પ્રકારના ER model ના attributes લખો.

**Q.2****પ્રશ્ન. ૨**

- (a) Define: schema, subschema and instance.
- (અ) schema, subschema and instance ની વ્યાખ્યા આપો.

**03****03****OR**

- (a) Explain physical data independence.
- (અ) physical data independence સમજાવો.
- (b) What is DBMS? Explain advantages of DBMS.
- (બ) DBMS શું છે? DBMS ના ફાયદા સમજાવો.

**03****03****03****03****OR**

- (b) Differentiate DA and DBA.

**03**

	(બ) DA અને DBA નો તફાવત આપો.	03
	(c) Explain three level ANSI SPARC architecture with diagram.	04
	(ક) three level ANSI SPARC architecture diagram સાથે સમજાવો.	04
	OR	
	(c) Explain functions of DBA.	04
	(ક) DBA ની functions સમજાવો.	04
	(d) Explain client – server database system.	04
	(ડ) client – server database system સમજાવો.	04
	OR	
	(d) Explain parallel database system.	04
	(ડ) parallel database system સમજાવો.	04
<b>Q.3</b>	(a) Explain CREATE, ALTER and UPDATE command with example.	03
<b>પ્રશ્ન. 3</b>	(અ) CREATE, ALTER and UPDATE command ઉદાહરણ આપી સમજાવો.	03
	OR	
	(a) Explain DELETE, DROP and TRUNCATE command with example.	03
	(અ) DELETE, DROP and TRUNCATE command ઉદાહરણ આપી સમજાવો.	03
	(b) Explain LIKE operator with example.	03
	(બ) LIKE operator ઉદાહરણ આપી સમજાવો.	03
	OR	
	(b) Explain IN operator with example.	03
	(બ) IN operator ઉદાહરણ આપી સમજાવો.	03
	(c) Explain GROUP BY and HAVING clause with example.	04
	(ક) GROUP BY and HAVING clause ઉદાહરણ આપી સમજાવો.	04
	OR	
	(c) Explain ORDER BY clause with example.	04
	(ક) ORDER BY clause ઉદાહરણ આપી સમજાવો.	04
	(d) Explain any four numeric functions with example.	04
	(ડ) any four numeric functions ઉદાહરણ આપી સમજાવો.	04
	OR	
	(d) Explain any four char functions with example.	04
	(ડ) any four char functions ઉદાહરણ આપી સમજાવો.	04
<b>Q.4</b>	(a) Explain natural join with example.	03
<b>પ્રશ્ન. 4</b>	(અ) natural join ઉદાહરણ આપી સમજાવો.	03
	OR	
	(a) Explain self join with example.	03
	(અ) self join ઉદાહરણ આપી સમજાવો.	03
	(b) Explain selection and projection operator of relational algebra with example.	04
	(બ) selection and projection operator of relational algebra ઉદાહરણ આપી સમજાવો.	04
	OR	
	(b) Explain union and difference operator of relational algebra with example.	04
	(બ) union and difference operator of relational algebra ઉદાહરણ આપી સમજાવો.	04
	(c) What is constraint? Explain PRIMARY KEY and FOREIGN KEY constraint with example.	07

	(ક) Constraint શું છે? PRIMARY KEY and FOREIGN KEY constraint ઉદાહરણ આપી સમજાવો.	૦૭
<b>Q.5</b>	(a) Explain ER diagram with example.	<b>04</b>
<b>પ્રશ્ન. ૫</b>	(અ) ER diagram ઉદાહરણ આપી સમજાવો.	<b>૦૪</b>
	(b) Explain mapping cardinalities in ER diagram.	<b>04</b>
	(બ) mapping cardinalities in ER diagram ઉદાહરણ આપી સમજાવો.	<b>૦૪</b>
	(c) Explain different types of entity sets.	<b>03</b>
	(ક) different types of entity sets સમજાવો.	<b>૦૩</b>
	(d) Explain advantages of using super-class and sub-class relationship.	<b>03</b>
	(ડ) advantages of using super-class and sub-class relationship સમજાવો.	<b>૦૩</b>

\*\*\*\*\*

GTUQuestionPapers.com