Seat No. / Enrolment No.:

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering – SEMESTER – 4 (OLD) – EXAMINATION – Winter-2024

Subject Code: 3340701 **Date: 20-11-2024**

Subject Name: Advanced Database Management System

Time: 02:30 PM TO 05:00 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**
5. **English version is authentic.**

Q.1		Answer any seven out of ten. દશમાંથી કોઇપણ સાતના જવાબ આપો.	**14**
	1.	Define Transaction Log.	
	૧.	Transactional Log ની વ્યાખ્યા આપો.	
	2.	Give Example of Anchored data type.	
	૨.	Anchored data type નુ ઉદાહરણ આપો.	
	3.	Differentiate shared lock and exclusive lock.	
	૩.	shared lock અને exclusive lock નો તફાવત આપો.	
	4.	What is Pre-defined exception?	
	૪.	Pre-defined exception શું છે?	
	5.	Differentiate before and after trigger.	
	૫.	before and after trigger વચ્ચેનો તફાવત સમજાવો.	
	6.	Define: Normalization.	
	૬.	Normalization ની વ્યાખ્યા આપો.	
	7.	Explain UNIQUE index with example.	
	૭.	UNIQUE index ઉદાહરણ આપી સમજાવો.	
	8.	Explain If else statement in PL/SQL.	
	૮.	PL/SQL માં If else statement સમજાવો.	
	9.	Draw Functional Dependency (FD) Diagram with example.	
	૯.	Functional Dependency (FD) Diagram ઉદાહરણ આપી દોરો.	
	10.	Explain SAVEPOINT.	
	૧૦.	SAVEPOINT સમજાવો.	
Q.2	(a)	Define and explain with example: FFD, trivial FD, non-trivial FD	**03**
પ્રશ્ન. ૨	(અ)	વ્યાખ્યા આપો અને ઉદાહરણ આપી સમજાવો: FFD, trivial FD, non-trivial FD	**૦૩**
		OR	
	(a)	Give advantages of PL/SQL.	**03**
	(અ)	PL/SQL ના ફાયદા આપો.	**૦૩**
	(b)	Explain GRANT and REVOKE with example.	**03**
	(બ)	GRANT and REVOKE ઉદાહરણ આપી સમજાવો.	**૦૩**
		OR	

	(b)	Explain time-stamp method of concurrency control.	**03**
	(બ)	Time-stamp method of concurrency control સમજાવો.	**૦૩**
	(c)	Explain User Defined Exceptions using suitable example.	**04**
	(ક)	User Defined Exceptions ઉદાહરણ આપી સમજાવો.	**૦૪**
		OR	
	(c)	Explain rules of Armstrong's Axioms for Functional Dependencies	**04**
	(ક)	Armstrong's Axioms for Functional Dependencies ના નિયમો સમજાવો	**૦૪**
	(d)	What is view? Write advantages of view. Which are the restrictions on view?	**04**
	(S)	View શું છે? View ના ફાયદા લખો. View પર કયા restrictions છે?	**૦૪**
		OR	
	(d)	What is sequence? Explain with example.	**04**
	(S)	Sequence શું છે? Sequence ઉદાહરણ આપી સમજાવો.	**૦૪**
Q.3	(a)	What is Closure? Explain Closures of a set of Functional Dependencies.	**03**
પ્રશ્ન. 3	(અ)	Closure એટલે શું? Functional Dependencies ના Closures સેટ નુ ઉદાહરણ આપી સમજાવો.	**૦૩**
		OR	
	(a)	Explain synonym with example.	**03**
	(અ)	Synonym ઉદાહરણ આપી સમજાવો.	**૦૩**
	(b)	Explain transaction control commands.	**03**
	(બ)	Transaction control commands સમજાવો.	**૦૩**
		OR	
	(b)	Explain WHILE loop in PL/SQL.	**03**
	(બ)	PL/SQL મા WHILE loop સમજાવો.	**૦૩**
	(c)	What is deadlock? How to control deadlock.	**04**
	(ક)	Deadlock એટલે શુ? Deadlock ને control કઈ રીતે કરી શકાય.	૦૪
		OR	
	(c)	What is Index? Explain different types of index with example.	**04**
	(ક)	Index શુ છે? વિવિધ પ્રકારના Index ઉદાહરણ આપી સમજાવો.	**૦૪**
	(d)	Explain parameterized cursor with example.	**04**
	(S)	Parameterized cursor ઉદાહરણ આપી સમજાવો.	**૦૪**
		OR	
	(d)	Explain Lossless join decomposition with example.	**04**
	(S)	Lossless join decomposition ઉદાહરણ આપી સમજાવો.	**૦૪**
Q.4	(a)	Write short note on Two phase locking.	**03**
પ્રશ્ન. ૪	(અ)	નોંધ લખો: Two phase locking	**૦૩**
		OR	
	(a)	Explain 1NF with example.	**03**
	(અ)	1NF ઉદાહરણ આપી સમજાવો.	**૦૩**
	(b)	List out any four pre define Exceptions and explain NO_DATA_FOUND with example	**04**
	(બ)	કોઈપણ ચાર pre define Exceptions ની યાદી બનાવો અને ઉદાહરણ સાથે NO_DATA_FOUND સમજાવો	**૦૪**
		OR	
	(b)	Explain different types of triggers with example.	**04**

	(બ)	ઉદાહરણ સાથે વિવિધ પ્રકારના triggers સમજાવો.	**૦૪**
	(c)	Explain 2NF and 3NF with example.	**07**
	(ક)	2NF અને 3NF ઉદાહરણ આપી સમજાવો.	**૦૭**
Q.5	(a)	Explain cursor attributes with example.	**04**
પ્રશ્ન. ૫	(અ)	Cursor attributes ઉદાહરણ આપી સમજાવો.	**૦૪**
	(b)	Explain ACID properties of Transaction Processing.	**04**
	(બ)	ACID properties of transaction સમજાવો.	**૦૪**
	(c)	Explain package with its structure.	**03**
	(ક)	Package તેના structure સાથે સમજાવો.	**૦૩**
	(d)	Explain PL/SQL block structure.	**03**
	(ડ)	PL/SQL block structure સમજાવો.	**૦૩**

****