

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER-4 EXAMINATION –WINTER- 2019

Subject Code:3340701

Date: 25-11-2019

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 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 કોઈપણ સાતના જવાબ આપો. 14
1. What is the purpose of transaction log.
૧. transaction log નો ઉપયોગ શુ છે?
 2. What is dependency preserving decomposition?
૨. dependency preserving decomposition શુ છે?
 3. Draw state transition diagram of transaction.
૩. Transaction નો state transition diagram દોરો.
 4. Explain If else statement in PL/SQL.
૪. PL/SQL માં If else statement સમજાવો.
 5. Differentiate shared lock and exclusive lock.
૫. shared lock અને exclusive lock નો તફાવત આપો.
 6. What is deadlock?
૬. Deadlock શુ છે?
 7. What is normalization? Which are the advantages of normalization?
૭. Normalization શુ છે? Normalization ના ફાયદાઓ કયા છે?
 8. Explain package.
૮. Package સમજાવો.
 9. Explain FOR loop.
૯. FOR loop સમજાવો.
 10. Explain GOTO statement
૧૦. GOTO statement સમજાવો.
- Q.2 (a) Explain two-phase locking protocol. 03
 પ્રશ્ન. ૨ (અ) two-phase locking protocol સમજાવો. ૦૩
- OR
- (a) Explain time-stamp method of concurrency control. 03
 (અ) time-stamp method of concurrency control સમજાવો. ૦૩
- (b) Explain closures of a set of functional dependency. 03
 (બ) closures of a set of functional dependency સમજાવો. ૦૩
- OR
- (b) Define and explain with example: FFD, trivial FD, non-trivial FD 03

	(બ)	વ્યાખ્યા આપો અને ઉદાહરણ આપી સમજાવો: FFD, trivial FD, non-trivial FD	૦૩
	(c)	What is Functional dependency? Explain FD diagram with example.	04
	(ક)	Functional dependency શું છે? FD diagram ઉદાહરણ આપી સમજાવો.	૦૪
		OR	
	(c)	Explain Armstrong's Axioms for functional dependency.	04
	(ક)	Armstrong's Axioms for functional dependency સમજાવો.	૦૪
	(d)	What is transaction? Explain ACID property of transaction.	04
	(ડ)	Transaction શું છે? ACID property of transaction સમજાવો.	૦૪
		OR	
	(d)	Write down three problems of concurrency control. Explain any one of them in detail.	04
	(ડ)	concurrency control ના ત્રણ problems લખો. તેમાંથી કોઈ એક ઊંડાણથી સમજાવો.	૦૪
Q.3	(a)	Write short note on synonym.	03
પ્રશ્ન. 3	(અ)	ટૂંકનોંધ લખો: synonym	૦૩
		OR	
	(a)	Explain DCL commands.	03
	(અ)	DCL commands સમજાવો.	૦૩
	(b)	What is sequence? How can we create a sequence?	03
	(બ)	Sequence શું છે? Sequence કેવી રીતે create કરી શકાય.	૦૩
		OR	
	(b)	Explain transaction control commands.	03
	(બ)	transaction control commands સમજાવો.	૦૩
	(c)	Explain different levels of lock.	04
	(ક)	different levels of lock સમજાવો.	૦૪
		OR	
	(c)	Explain Explicit locking in detail.	04
	(ક)	Explicit locking ઊંડાણથી સમજાવો.	૦૪
	(d)	What is Index? Explain different types of index with example.	04
	(ડ)	Index શું છે? જુદા જુદા પ્રકારની Index ઉદાહરણ આપી સમજાવો.	૦૪
		OR	
	(d)	What is view? How can we create a view? Which are the advantages of view.	04
	(ડ)	View શું છે? View કેવી રીતે create કરી શકાય? View ના ફાયદાઓ કયા છે?	૦૪
Q.4	(a)	Explain lossy and non-loss decomposition with example.	03
પ્રશ્ન. ૪	(અ)	lossy અને non-loss decomposition ઉદાહરણ આપી સમજાવો.	૦૩
		OR	
	(a)	Explain 1NF with example.	03
	(અ)	1NF ઉદાહરણ આપી સમજાવો.	૦૩
	(b)	What is trigger? How can we create a trigger ? Explain with example.	04
	(બ)	Trigger શું છે? Trigger કેવી રીતે create કરી શકાય? ઉદાહરણ આપી સમજાવો.	૦૪
		OR	
	(b)	Explain different types of triggers with example.	04
	(બ)	જુદા જુદા પ્રકારની triggers ઉદાહરણ આપી સમજાવો.	૦૪
	(c)	Explain 2NF and 3NF with example.	07
	(ક)	2NF અને 3NF ઉદાહરણ આપી સમજાવો.	૦૭

Q.5	(a)	Explain PL/SQL block structure.	04
પ્રશ્ન. ૫	(અ)	PL/SQL block structure સમજાવો.	૦૪
	(b)	Explain cursor attributes with example.	04
	(બ)	cursor attributes ઉદાહરણ આપી સમજાવો.	૦૪
	(c)	Explain user defined exception handling with example.	03
	(ક)	user defined exception handling ઉદાહરણ આપી સમજાવો.	૦૩
	(d)	Explain WHILE loop with syntax and example.	03
	(ડ)	WHILE loop syntax અને ઉદાહરણ આપી સમજાવો.	૦૩
