Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering Semester –III Examination Dec. 2011

Subject code: 330703 **Date: 29/12/2011**

Subject Name: Database Management System

Time: 10.30 am – 01.00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **English version is considered Authentic.**

Q.1	(a)	Differentiate between file-oriented approach for data management and computerized data management.	**07**
	(b)	Explain with neat sketch various components of database management system.	**07**
Q.2			
	(a)	Explain client/server architecture and what are the advantages and disadvantages of this approach.	**07**
	(b)	Differentiate between Schema, Subschema and Instance	**07**
		OR	
	(b)	Describe in detail the different types of DBMS	**07**
Q.3			
	(a)	Write about data independence and mapping constraints	**07**
	(b)	Discuss following concepts of a relational model (i) Relation (ii) Attribute (iii) Cardinality (iv) Domain (v) Keys	**07**
		OR	
Q.3	(a)	What do you mean by relational algebra? Define all the operators of relational algebra	**07**
	(b)	Explain responsibilities of Database Administrator	**07**
Q.4			
	(a)	Define the Primary key and foreign key constraints with example	**07**
	(b)	Explain with example Group by, Having and Order by clause.	**07**
		OR	
Q. 4	(a)	Write SQL syntax for the To_Date(), To_Number() and To_Char() functions	**07**
	(b)	Explain integrity constraints with example.	**07**
Q.5			
	(a)	With example, explain how you convert the E-R model to relation.	**07**
	(b)	Draw an E-R diagram for educational institute.	**07**
		OR	
Q.5	(a)	Discuss about super class, subclass and relationship	**07**
	(b)	What do you understand by specialization and generalization in E-R modeling? Explain with example.	**07**

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પ્રશ્ન–૧	અ	ડેટા મેનેજમેંટ માટે ફાઈલ ઓરિએંટ એપ્રોચ અને કોમ્પુટરાઈજ્ડ એપ્રોચ વચ્ચે તફાવત વર્ણન કરો	**07**
	બ	Database management system ના various components આકૃતિ સાથે સમજાવો.	**07**
પ્રશ્ન–૨	અ	Client/server architecture વિશે વર્ણન કરો તેમજ ફાયદા અને ગેરફાયદા જણાવો.	**07**
	બ	Schema, Subschema અને Instance વિશે તફાવત જણાવો	**07**
		અથવા	
	બ	Different types ની DBMS વિશે વર્ણન કરો.	**07**
પ્રશ્ન–૩			
	અ	Data independence અને mapping constraints વિશે લખો.	**07**
	બ	relational model માટે નીચેના ટર્મ સમજાવો (i) Relation (ii) Attribute (iii) Cardinality (iv) Domain (v) Keys	**07**
		અથવા	
પ્રશ્ન–૩			
	અ	relational algebra વિશે જણાવો. relational algebra ના બધા operators વિશે લખો.	**07**
	બ	Database Administrator ની responsibilities જણાવો.	**07**
પ્રશ્ન–૪			
	અ	Primary key and foreign key constraints example સાથે સમજાવો.	**07**
	બ	Group by, Having and Order by clause example સાથે સમજાવો.	**07**
		અથવા	
પ્રશ્ન–૪			
	અ	SQL functions syntax લખો અને સમજાવો To_Date(), To_Number(),To_Char()	**07**
	બ	Integrity constraints વિશે example સાથે સમજાવો.	**07**
પ્રશ્ન–૫			
	અ	E-R model ને relation મા કઈ રીતે convert કરશો તે સમજવો	**07**
	બ	Educational institute માટે E-R diagram દોરો.	**07**
		અથવા	
પ્રશ્ન–૫			
	અ	Super class, subclass, and relationship વિશે સમજાવો.	**07**
	બ	E-R modeling મા specialization and generalization એટલે શુ? Example સાથે સમજાવો.	**07**

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