

Seat No.: _____

Enrolment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – III • EXAMINATION – SUMMER 16

Subject Code: 3330703

Date: 17.05 .2016

Subject Name: 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. Each question carry equal marks (14 marks)

- Q.1** (a) Define the following terms **07**
(1) Entity (2) Information (3) DBMS (4) System Catalog (5) Domain (6) DML
(7) Metadata
- (b) Write advantages of database system over file management system. **07**
- Q.2** (a) Discuss the concept of data independence and explain its importance in a database environment. **07**
- (b) Explain various components of DBMS in brief. **07**
- OR
- (b) What are the main functions and responsibilities of database administrator? **07**
- Q.3** (a) List different Database Systems. Explain Client/Server and Distributed Database Systems. **07**
- (b) What is relational algebra? Explain following operations with example. **07**
(1) Select (2) Set Difference (3) Rename
- OR
- Q.3** (a) Distinguish between followings **09**
(1) Primary Key and Foreign Key
(2) Char and Varchar2
(3) Group by and Order by clause
- (b) Write comparison between different data models. **05**
- Q.4** (a) Explain Unique and Check constraints with example. **06**
- (b) Explain following SQL functions **08**
(1) SUM() (2) INITCAP() (3) TO_NUMBER() (4) MONTHS_BETWEEN
- OR
- Q.4** (a) List different SQL operators. Explain Logical and Range Searching operators with example. **07**
- (b) Write Short-Note on oracle reports. **07**
- Q.5** (a) Consider Following Table **14**
Student (Enrollment_no, Name, Course, Semester, Percentage, Address)
Write queries for following
(1) Create table Student.
(2) Retrieve all rows from student table and display these data sorted on Percentage column in decreasing order.
(3) List details of those students whose name starts with 'K'.
(4) Change the course of a student 'raj' from 'Mechanical' to 'Computer'.
(5) Add primary key data constraint on Enrollment_no column.
(6) Display course wise student details.
(7) Delete all rows of student table.
- OR
- Q.5** (a) Explain following commands **06**
(1) DROP() (2) UPDATE() (3) CREATE
- (b) Explain Specialization and Generalization concepts with example **08**

પ્રશ્ન. ૧	અ	નીચેના શબ્દો સમજાવો (1) Entity (2) Information (3) DBMS (4) System Catalog (5) Domain (6) DML (7) Metadata	૦૭
	બ	Database systemની file management system પરની ઉપયોગીતાઓ લખો.	૦૭
પ્રશ્ન. ૨	અ	Data independenceનો મુદ્દો ચર્ચો અને database environmentમા તેની અગત્યતા સમજાવો.	૦૭
	બ	DBMSના વિવિધ કોમ્પોનન્ટ ટૂંકમા સમજાવો. અથવા	૦૭
	બ	Database administratorના મુખ્ય કાર્યો અને જવાબદારીઓ શું છે?	૦૭
પ્રશ્ન. ૩	અ	વિવિધ ડેટાબેઝ સીસ્ટમની યાદી બનાવો. Client/Server અને Distributed ડેટાબેઝ સીસ્ટમ સમજાવો.	૦૭
	બ	Relational algebra એટલે શું? નીચેના operations ઉદાહરણ સહિત સમજાવો (1) Select (2) Set Difference (3) Rename અથવા	૦૭
પ્રશ્ન. ૩	અ	નીચેના તફાવત લખો (1) Primary Key and Foreign Key (2) Char and Varchar2 (3) Group by and Order by clause	૦૮
	બ	વિવિધ data models વચ્ચેની સરખામણી કરો.	૦૫
પ્રશ્ન. ૪	અ	Unique અને Check constraints ઉદાહરણ સહિત સમજાવો.	૦૬
	બ	નીચેના SQL ફંક્શન સમજાવો (1) SUM() (2) INITCAP() (3) TO_NUMBER() (4) MONTHS_BETWEEN અથવા	૦૮
પ્રશ્ન. ૪	અ	વિવિધ પ્રકારના SQL operatorsની યાદી બનાવો. Logical અને Range Searching operators ઉદાહરણ સહિત સમજાવો.	૦૭
	બ	Oracle reports વિષે ટૂંકનોંધ લખો..	૦૭
પ્રશ્ન. ૫	અ	Consider Following Table Student (Enrollment_no, Name, Course, Semester, Percentage, Address) Write queries for following (1) Create table Student. (2) Retrieve all rows from student table and display these data sorted on Percentage column in decreasing order. (3) List details of those students whose name starts with 'K'. (4) Change the course of a student 'raj' from 'Mechanical' to 'Computer'. (5) Add primary key data constraint on Enrollment_no column. (6) Display course wise student details. (7) Delete all rows of student table. અથવા	૧૪
પ્રશ્ન. ૫	અ	નીચેના કમાન્ડ સમજાવો (1) DROP() (2) UPDATE() (3) CREATE	૦૬
	બ	Generalization અને Specializationના મુદ્દા ઉદાહરણ સહિત સમજાવો. *****	૦૮