GYANMANJARI INNOVATIVE UNIVERSITY

Gyanmanjari Diploma Engineering College

Diploma Engineering End Semester Examination (ESE)-Winter-2025

Enrollment No.:_____   Date: 04/12/2025

Subject Code: DETCE13204   Semester: 3

Subject Name: Database Management System   Total Marks: 100

Time: 10:30AM To 01:30PM

Instructions:

1. Question No. 1 is Compulsory.
2. Make Suitable Assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1 (a)	Explain BCNF in detailsBCNF વિગતવાર જણાવો.	05
(b)	Explain Serializability of scheduling in details.Serializability of scheduling વિગતવાર જણાવો	05
(c)	Give a difference between file oriented system vs Database systemfile oriented system vs Database system વચેનો તફાવત જણાવો.	10
Q.2 (a)	Explain what is Data and Information. Data અને information એટલે શું તે જણાવો.	05
(b)	Explain Data item or field, Records and files in DBMS.DBMS માં Data item or field, Records and files એટલે શું તે જણાવો.	05

OR

(b)	Explain Data Dictionary in detail.Data Dictionary ને વિગતવાર જણાવો	05
(c)	Explain Entity-relationship model in Details.Entity-relationship model વિગતવાર જણાવો	10

OR

(c)	Explain Database recovery in details.Database recovery વિગતવાર જણાવો.	10
Q.3 (a)	Explain relationship of Entity-relationship model.Entity-relationship model ની relationship સમજાવો.	05
(b)	Create student student tables with a few columns representing common data types (integer, text, date etc.)using DDL commands.Student table create કરો DDL command ની મદદ થી.	05
(c)	Explain DDL in details.DDL વિગતવાર થી જણાવો.	10

OR

(a)	Explain Functional dependencies Functional dependencies જણાવો	05
(b)	Explain ACID property with details.ACID property વિગતવાર જણાવો	05

(c) List out all aggregate functions with example.aggregate functions ને ઉદાહરણ સાથે સમજાવો. 10

Q.4 (a) What is database transaction?database transaction એટલે શું તે જણાવો. 05

(b) Explain and Draw symbols for following in E-R Diagram1) Weak Entity set 2)Derived attribute.આપેલ E R -Diagram ના symbols દોરી અને સમજાવો.1)Weak Entity set 2)Derived attribute 05

(c) Explain Join with its types.Joins અને તેના પ્રકારો જણાવો. 10

OR

(a) Explain any five Character functions with example કોઈપણ પાચ Character functions ઉદાહરણ સાથે સમજાવો 05

(b) Explain Cross join with its types.Cross join તેની types સાથે સમજાવો. 05

(c) Explain Normalization techniques with its types.Normalization techniques ને તેના પ્રકારો સાથે જણાવો. 10

Q.5 (a) Explain Self join with its types.Self join તેની types સાથે સમજાવો. 05

(b) Explain following terms :1) Authentication 2) Authorization 3) Access control આપેલ વિગતવાર જણાવો 1) Authentication 2) Authorization 3) Access control 05

(c) What is SQL injection.SQL injection એટલે શું? 10

OR

(a) Explain and Draw symbols for following in E-R Diagram1) Composite attribute 2)Multivalued attribute.આપેલ E R -Diagram ના symbols દોરી અને સમજાવો.1) Composite attribute 2)Multivalued attribute. 05

(b) Explain how to design database.Database કઈરીતે design કરવું તે જણાવો. 05

(c) Explain 1st and 2nd NF.1st and 2nd NF જણાવો. 10