Enrollment No.:	

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# Darshan Institute of Engineering & Technology B.Tech. | Sem-3 | Winter-2022

Course Code : 2101CS302 Date : 12-10-2022
Course Name : Database Management System - II Duration : 150 Minutes
Total Marks : 70

- 1. Attempt all the questions.
- 2. Figures to the right indicates maximum marks.
- 3. Make suitable assumptions wherever necessary.
- Q.1 (A) Define Function & Explain types of functions in SQL.
  - (B) Explain user defined function & its types with example. 3

#### OR

Compare Function & Stored Procedure.

(C) Explain IN & OUT Parameter in stored procedure with suitable example. 7

## OR

Explain Insert, Update & Delete procedure for given table.

**Customer** (CustID int, CName varchar(50), Age int, City varchar(50), Acc\_Balance decimal(5,2))

- Q.2 (A) Draw & explain Cursor life cycle with example. 4
  - (B) Explain Trigger with its types.

## OR

Explain Advantages & Disadvantages of trigger.

(C) Prepare cursor which accepts two parameters as first name & salary from **person** 7 table & prints output like Hardik-18000, Ajay-21000 etc.

## OR

Prepare trigger on **Result** table (ResultID int, Sub1 int, Sub2 int, Sub3 int, totalmarks int) that updates total marks automatically when user enters marks of Sub1, Sub2 & Sub3.

- Q.3 (A) Write short note on Clustered Index. 4
  - (B) Write different Modes of Transaction in detail.

## OR

Define Clustered & Non-Clustered Index.

(C) Explain State Transition Diagram of Transaction. 7

Explain Explicit Transaction & Save Points in Transaction in detail.

Q.4	(A)	Write a short note on different types of NoSQL databases.	4	
	(B)	Define NoSQL & Why it differs from RDBMS?	3	
		OR		
		Write advantages of using NoSQL instead of RDBMS.		
	(C)	Prepare a stored procedure that handles divide by zero exception & prints all error function columns in output.	7	
		OR		
		Prepare a stored procedure that handles divide by zero exception with the help of RAISERROR function & prints custom message to the end user.		
Q.5	(A)	Explain features of MongoDB.	4	
(B)	(B)	Compare RDBMS & MongoDB.		
		OR		
		Explain insertOne(), updateOne() & deleteOne() in MongoDB.		
	(C)	<ol> <li>Prepare SQL Statements for below table.</li> <li>Table: Employee_Info (EID, EName, Gender, JoiningDate, Salary, City)</li> <li>Display all employees whose joining date is not available.</li> <li>Find total number of employees whose salary is more than 5000.</li> <li>List the city having total salaries more than 15000 and employees joined after 1st January, 2014</li> <li>Handle divide by zero exception &amp; print all error related details.</li> <li>Create delete procedure for given table.</li> <li>Find all unique cities.</li> <li>Add 1000 in salaries in which joining date is 12 Feb, 2022.</li> </ol>	7	
		OR		
		<ol> <li>Prepare NoSQL Statements for below collection.</li> <li>Collection: Employee_Info (EID, EName, Gender, JoiningDate, Salary, City)</li> <li>Write a query to display the fields EID, EName, Gender, and Salary for all the documents in the collection Employee_Info.</li> <li>Write a query to display all the Employees who lives in city London.</li> <li>Write a query to display the sum of all salaries in above collection.</li> <li>Write a query to find the name and city for those employees in which salary is more than 10000.</li> <li>Write a query to display the documents whose name starts with A and having 5 characters in above collection.</li> <li>Write a query to display 3rd document of above collection.</li> </ol>		
		7. Write a query that deletes the documents whose city name is Sydney.		