

Course Code	: 2101CS302	Date	: 19-04-2023
Course Name	: Database Management System - II	Duration	: 150 Minutes
		Total Marks	: 70

Instructions:

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 String Handling Functions in detail. **4**
- (B)** Explain Aggregate functions with an example. **3**

OR

Compare Function & Stored Procedure.

- (C)** Explain Parameterized (IN, OUT & Default Parameter) Stored Procedure with suitable example. **7**

OR

Explain Insert, SelectAll & Delete stored procedure for given table.

Employee (EmpID int, EName varchar(50), Age int, Department varchar(50), City varchar(50), Salary decimal(5,2))

- Q.2 (A)** Draw Step wise Cursor life cycle with the help of example. **4**
- (B)** Explain different Types of Triggers. **3**

OR

Explain Advantages of DML triggers.

- (C)** Prepare cursor which accepts three parameters as first name, absent days & Month Name from **Attendance** table (FirstName varchar(50), AbsentDays int, MonthName varchar(50)) & prints output for all records like... **7**
- Hardik was 5 days absent in Jan month.
- Amit was 7 days absent in Jan month.

OR

Prepare trigger on **Exam** table (ExamID int, Sub1 int, Sub2 int, Sub3 int, TotalMarks int, TotalPCT decimal (5, 2)) that updates total marks & total percentage automatically when user enters marks of Sub1, Sub2 & Sub3.

- Q.3 (A)** Write difference between Clustered & Non-Clustered Index. **4**
- (B)** Write different Modes of Transaction in detail. **3**

OR

Write Exception Handling strategies in SQL.

- (C) Explain ACID properties of Transaction. 7

OR

Explain Explicit Transaction & Marked Transaction in detail.

- Q.4 (A) Compare SQL v/s NoSQL. 4
(B) Write a short note on different types of NoSQL databases. 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 messages columns in output. 7

OR

Prepare procedure that print the multiplication of two numbers: take both number as integer & handle exception with all error functions, if any one enters string value in numbers, otherwise print result of multiplication as output.

- Q.5 (A) Explain features of MongoDB. 4
(B) Explain skip (), sort (), count () & limit () in MongoDB. 3

OR

Explain insertMany(), updateMany() & deleteMany() in MongoDB.

- (C) Prepare SQL Statements for below table. 7
Table: **Employee_Info** (EID, EName, Gender, JoiningDate, Salary, City)
1. Display all employees who joined after 1st march, 1996.
2. Find total number of employees whose salary is more than 25000.
3. List the city having total salaries more than 50000 and employees joined before 1st January, 2014.
4. Handle divide by zero exception & print all error related details.
5. Create UPDATE procedure for given table.
6. Find all unique cities & also mention count for the same.
7. Add 9500 in salaries whose city's first letter starts with L.

OR

Prepare NoSQL Statements for below collection.

Collection: **Employee_Info** (EID, EName, Gender, JoiningDate, Salary, City)

1. Write a query to display the fields EID, EName, Gender, and Salary for all the documents in the collection Employee_Info.
2. Write a query to display all the Employees who lives in city Gondal.
3. Write a query to display the sum of all salaries in above collection.
4. Write a query to find the name and city for those employees in which salary is more than 5000.
5. Write a query to display the documents whose name starts with C and having 4 characters in above collection.
6. Write a query to display 4th document of above collection.
7. Write a query that deletes the documents whose city name is Rajkot.
