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Reg.No : .....

Name : .....

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**

**MGU-UGP (HONOURS) Regular EXAMINATION October 2025**

**Third SEMESTER**

**Discipline Specific Core Course (DSC) - MG3DSCCSC200, MG3DSCECC201**

**- DATABASE MANAGEMENT SYSTEMS**

**(2024 ADMISSION ONWARDS)**

**Duration: 1 Hour 30 Minutes**

**Maximum Marks: 50**

***Remember(K), Understand(U), Apply(A), Analyse(An), Evaluate(E), Create(C), Skill(S), Interest(I)  
and Appreciation(Ap)***

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

**Part A**

Very Short Answer Questions

Answer all questions

Each question carries **2** marks

1. Identify the term used to describe the duplication of data. Explain different situation in which data duplication occurs [U] / [CO1]
2. State the need of normalization in database. [U] / [CO2]
3. Write a SQL command to insert a new record into a Student table with attributes ID, Name, and Age . [U] / [CO3]
4. Discuss how three-schema architecture supports data abstraction. [U] / [CO1]
5. Write the SQL clause to sort a table by column Name in descending order. [K] / [CO3]

**[2x5 = 10]**

**Part B**

Short Answer Questions

Answer any **5** questions

Each question carries **5** marks

6. Explain any two functions of a DBMS [K] / [CO1]

7. List and explain any two informal guidelines. [K] / [CO2]
8. Explain the use of FOREIGN KEY constraint in SQL. Write SQL commands to create a STUDENT table with a foreign key referencing DEPARTMENT. [A] / [CO3]
9. Explain the concept of a key attribute and describe how it is identified in a database system [U] / [CO1]
10. Compare entity integrity and referential integrity constraints with examples. [An] / [CO2]
11. The management wants to analyse employee salaries department-wise: (i)Find the total salary paid in each department. (ii)Display only those departments where the average salary is greater than 50,000. (iii)Sort the result in descending order of total salary. [An] / [CO3]
12. Demonstrate pattern matching in SQL using LIKE operator [A] / [CO3]
- [5x5 = 25]**

### **Part C**

#### Essay Questions

Answer any **1** questions

Each question carries **15** marks

13. Show How to draw an E-R diagram of a Library Database. [K] / [CO1]
14. Describe in detail the working of nested queries in SQL. Give suitable examples and write SQL queries that use nested queries in SELECT, WHERE, and HAVING clauses. [S] / [CO3]
- [15x1 = 15]**