



18103531

**QP CODE: 18103531**

Reg No : .....

Name : .....

**B.Sc. DEGREE (CBCS) EXAMINATION, NOVEMBER 2018**

**Third Semester**

**B.Sc Computer Science Model III**

**CORE COURSE - CC3CRT01 - DATABASE MANAGEMENT SYSTEMS**

2017 Admission Onwards

D99063C9

**Maximum Marks: 80**

**Time: 3 Hours**

**Part A**

Answer any **ten** questions.

Each question carries **2** marks.

1. What is external schema?
2. What is a query?
3. How to represent a multivalued attribute an an ER diagram?
4. Define the term domain.
5. Illustrate the use of LIKE operator.
6. What is the use of UNION operator?
7. What are nested queries?
8. What is partial dependancy?
9. Why can we have at most one primary or clustering index on a file, but several secondary indexes?
10. Define Parallel processing.
11. Why is recovery important in transaction process?
12. Write short note on discretionary access control and mandatory access control.

(10×2=20)

**Part B**

Answer any **six** questions.

Each question carries **5** marks.

13. Describe any four applications of DBMS.
14. What are the different types of database end users?Discuss the main activities of each.
15. Explain the symbols used in ER Diagram.





16. Briefly explain relational model schema.
17. What are the categories of an SQL language
18. Discuss joins in SQL.
19. What is functional dependency?
20. Difference between 3-NF and BCNF.
21. Explain the propagation of privileges using GRANT option.

(6×5=30)

### Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Explain database system environment using a neat diagram.
23. Construct an E-R schema diagram for the company database . Details of COMPANY database is as follows. (1) The company is organised into departments.each department has a unique name,unique numberand a particular employee who manages the department.Keep track of the start date when that employee began managing the department.A department may have several locations. (2) A department controls a number of projects,each of which has a unique name,a unique number and a single location. (3) Employee has name,SSN,address,salary,gender and birth date.An employee is assigned to ine department but may work on several projects,which are not necessarilyb controlled by the same department.Keep track of the current number of hours per week that an employee works on each project.Also keep track of the direct supervisor of each employee. (4) Keep track of the dependants of each employee for instance purposes.Dependant has name,genderdob and relationship to employee.
24. Explain different types of update anomalies with suitable examples.
25. Explain the four kinds of control measures to protect databases.

(2×15=30)

