IV Semester Integrated M. Sc. Degree (Regular) Examinations, January 2023

(2020 Admission Onwards)

COMPUTER SCIENCE

4B13ICSC: Lab 5: Database Management System

Time: 3 Hours Max. Marks: 20

PART - A

Answer **any one** of the marked (✔) questions.

1. Create a table student with fields roll_no, name, gender and mark with the roll_no as primary key and assign suitable constraints (like check and not null) for each attribute. Insert 5 records.
   a. Display all boy students with their name.
   b. Find the average mark.
   c. Display the roll no., name and mark of the student who got the highest mark.
   d. Alter the table by adding one more field place and update the field place.
   e. Display the name and place of all girl students who have marks greater than 35 and less than 70.
2. Create a table library with fields book_id, book_name, author and price with the book_id as primary key, and book_name as NOT NULL.
   a. Insert 5 records using procedure.
   b. Select the table library using procedure.
   c. Select book_name and author from library.
   d. Update the price of book_id 101.
   e. Delete a row from the table library by passing the argument as any book_id.
3. Create a table depositor with fields acc_no as primary key, depositor_name, branch and balance. Assign suitable constraints for each attribute. Create another table borrower with fields loan_no as primary key, acc_no as foreign key and amount as NOT NULL. Insert five records into both tables.
   a. Write the queries using various group functions on the amount field.
   b. Display the count of depositors according to their branch.
   c. Display the name of customers who have an account but not loan.
   d. Drop the column amount from the borrower table.
4. Create a table Teacher with fields staff_id, name, d_no, salary and designation with staff_id as primary key, name as NOT NULL, dno as foreign key, salary and designation are NOT NULL. Create another table Dept with field d_no as primary key, d_name as NOT NULL. Insert five records into both tables.
   a. Write the queries using various character functions on the name field.
   b. Display the number of staff in each department.
   c. Add 20% extra salary to all employees who work in the Physics department.
   d. Display the name of teachers who work in the CS department.
   e. Display the name of the teacher who got minimum salary.
   f. Display the name of the teacher who got less than the average salary.
   g. Create a view named V1 with fields staff_id, name and d_name. Display the view.
5. Create a table customer with fields cust_id, cust_name, city, gender with cust_id as primary key and assign suitable constraints for each attribute. Create another table order with fields order_id as primary key, cust_id as foreign key, ordered_item and order_date. Insert 5 records into the table.
   a. Write queries to display the name of all customers whose city letter starts as ‘k’, whose city letter ends as ‘a’ and whose city's second letter as ‘a’.
   b. Display the customer name and order id of a customer with order_id 514.
   c. Display the details of customers whose name contains a letter ‘e’.
   d. Display the name and city of customers with the order date 23/10/2022.
   e. Add one more field order_status into the order table.
   f. Create a view named cust with the details of customers who did not order. Display the view.

6. Create a table employee with fields e_no, e_name, gender and salary with the e_no as primary key and assign suitable constraints (like CHECK and NOT NULL) for each attribute. Insert 5 records.
    a. Display all male employees with their name.
    b. Change the data type of e_name from CHAR to VARCHAR data type.
    c. Display the e_no, e_ name and salary of the employee who got the highest salary.
    d. Alter the table by deleting one column.
    e. Rename column e_name as emp_name.

PART - B

7. Create two users, and grant (INSERT,SELECT,DELETE) permission to user 1, grant (SELECT) to user 2. Revoke the permission DELETE from user 1.

8. Create a table department with fields dpt_id as primary key and d_name as NOT NULL. Create another table employee with fields emp_id, e_name, salary, dpt_id and dob. Assign constraints for emp_id as primary key and auto increment, dpt_id as foreign key, e_name, salary and dob as NOT NULL. Insert 5 records into both tables.
    a. Display the employees who got salary more than 60000 and less than 1 lakh.
    b. Display the d_name, e_name and salary of employees who get salary more than 50000.
    c. Rename the field e_name with emp_name.
    d. Create a view name emp_view with fields emp_id, emp_name and dob, display the view.
    e. Display emp_id and salary of all employees in descending order of their salary.
    f. Display the name of the department with the number of employees.

9. Create a table student with fields roll_no, stud_name, marks with the roll_no as primary key, and stud_name as NOT NULL.
    a. Insert 5 records using procedure.
    b. Select the table student using procedure.
    c. Select stud_name and marks from student.
    d. Update the mark of student having roll_no 4.
    e. Delete a row from table student by passing the argument as any roll_no.

10. Create a table loan with fields loan_no, branch_name, and amount with the loan_no as primary key. Create another table borrower with fields customer_name and loan_no where customer_name as NOT NULL. Insert 5 records into the table.
    a. Display the loan details of customers.
    b. Display all the borrower details with loan details.
    c. Display all loan details with the customer name.
    d. Display the details of all borrowers and customers.
    e. Display all details of customers who have loans also.

11. Create a table tutorials with fields id, title, author, create and date. Back up the details of the tutorials table using cursor.

12. Create a table customer with fields c_no as primary key, c_name, purchased_item, cost and date. Assign suitable constraints for each attribute. Insert 5 records.
    a. Add one more column purchased_no.
    b. Update the records of purchased_no.
    c. Display the average cost from the customer.
    d. Delete customer details whose c_no=103.
    e. Sort the customer’s details on the ascending order of the customer's name.
    f. Sort the customer’s details on the ascending order of the customer's name.
    g. Delete column cost from customer.
    h. Delete table customer.