

U.G. 4th Semester Examination - 2020**COMPUTER SCIENCE****[GENERIC ELECTIVE]****Course Code : CMSH/GE-P-202****[PRACTICAL]**

Full Marks : 20

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***Marks Allotment :**

Experiment : 10 Marks

Viva voce : 5 Marks

Lab Notebook : 5 Marks.

Answer any **one** question carrying 10 marks each:

$$10 \times 1 = 10$$

1. Create the following table with the fields given below:

PRODUCT (P_ID, Model, Price, Name, Date_of Manufacture, Date_of Expiry)

Use appropriate data types for all the fields. Select appropriate primary key. Insert at least 10 meaningful records in the table.

Write SQL queries to:

- a) Display name and date_of expiry of all the products whose price is more than 500.
- b) Display name, product_ID and price of all the products whose date_of manufacture is after "01-01-2018".
- c) Display name and date_of manufacture and date- of expiry of all the products whose price is between 5,000 and 10,000.

2. Create the following table ROUTE_HEADER with the following fields:

(ROUTE_ID, ROUTE_NO, CATEGORY_CODE, ORIGIN, DESTINATION, FARE, DISTANCE, SEATING_CAPACITY)

Select appropriate data types for each of the fields. Identify ROUTE_ID as primary key. Input meaningful data of at least 10 records.

Write SQL queries to:

- a) To display all the records, sorted in ascending order with respect to distance.
- b) To display the ROUTE_ID and ROUTE_NO whose FARE > 400.
- c) To display the SEATING_CAPACITY for any particular ROUTE_ID.

3. Consider Dept. table

DEPTNO	DNAME	LOC
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Write SQL query to perform the following:

- Add a new column PINCODE with not null constraints to the existing table DEPT
- All constraints and views that reference the column are dropped automatically, along with the column.
- Rename the column DNAME to DEPT_NAME in Dept. table

4. Consider Employee table

EMPNO	EMP_NAME	DEPT	SALARY	DOJ	BRANCH
E101	AMIT	Production	45000	12-Mar-00	Bangalore
E102	SUMIT	HR	70000	03-Jul-02	Bangalore
E103	SUNITA	Management	120000	11-Jan-01	Mysore
E104	SOURABH	IT	67000	01-Aug-01	Mysore
E105	SUMI	Civil	145000	20-Sep-03	Mumbai

Write SQL query to perform the following:

- Display all the fields of employee table
- Retrieve employee number and their salary
- Retrieve total salary of employee group by employee name and count similar names

5. Create a table named STUDENT with the following fields :

(FIRST NAME, MIDDLE NAME, LAST NAME, STUDENT_ENRLNO, DATE_OF_BIRTH, CLASS, SECTION, GENDER, YEAR_OF_JOIN, ADMISSION_NO, ADDRESS1, ADDRESS2, CITY, STATE, RESPHONE, PIN_CODE)

Write SQL query to perform the following:

- Display all the list of students who are in class - 6, section - A.
 - To display all the students list whose first name starts with "A".
 - To display all the students list who are girls.
6. Create the following database defined below :
- SUPPLIER (Supplier #, Company_Name, City)
- PARTS (Part #, Weight)
- SUPPLY_PARTS (Supplier #, Part #)
- PROJECTS (Project #, Part #, Quantity)
- ORDERS (Part #, Supplier #, Date_of_Delivery)
- Select appropriate data types for each of the fields.
- Input meaningful data of at least 10 record
- Write SQL query to perform the following:
- Find another supplier who supplies at least one part supplied by supplier "431".
 - Find all the projects where part "P7" is used.
 - Find all the suppliers who supplies part "P5".

7. Create the following table ROUTE_HEADER with the following fields :

(ROUTE_ID, ROUTE_NO, CATEGORY_CODE, ORIGIN, DESTINATION, FARE, DISTANCE, SEATING_CAPACITY)

Select appropriate data types for each of the fields. Identify ROUTE_ID as primary key. Input meaningful data of at least 10 records.

Write SQL query to perform the following:

- a) To display the ROUTE_ID and ROUTE_NO whose FARE > 400.
- b) Display the average total fare.
- c) Display all the types of CATEGORY_CODES.

8. Create the following database defined below :

EMPLOYEE (ENo, EName, Birth_Date, Address, DNo)

DEPARTMENT (DNo, DName, DManager)

DEPT_LOCATION (DNo, DLocation, Country)

WORKS_ON (ENo, PNo, Hours)

PROJECT (PName, PNo, PLocation, DNo)

Select appropriate data types for each of the fields. Input meaningful data of at least 10 records.

Write SQL query to perform the following:

- a) To find the EName and ENo of all the employees who work for PNo = 111.
- b) To display all the projects whose PLocation is "Delhi".
- c) To display all the ENos and ENames of the company.

9. Create a table named Book with following fields : (ISBN, TITLE, AUTHOR(s), PUBLISHER, NO. OF AUTHORS, YEAR, VOLUME, PRICE, NO. OF PAGES)

Select appropriate data types for each of the field. Identify ISBN as PRIMARY KEY.

Enter at least 10 records for the above table given in Q1 and answer the following 20 queries using SQL :

- a) Display all the books published in the year 2010 and whose price is greater than or equal to Rs. 500/-
- b) Display the ISBN of a selected book, if the title is given by the user.
- c) Display all the books which were written by 2 or more authors.

10. Create the following tables with the fields given below :

EMPLOYEE (LID, Name, Age, Address, Salary, Dep_ID) DEPARTMENT (Dep_ID, Name, City)

Select appropriate primary keys. Input at least 5 meaningful records in the tables. Select appropriate data types for all the fields.

Enter at least 10 records for the above table given and answer the following queries using SQL :

- a) Display name and Dep_ID of all the departments in city "Delhi".
 - b) Display name and age of the employees working in Dep_ID = 1001 and their salary is more than 10,000/- p.m.
 - c) Find total number of employees whose salary is less than 7,50,000/- p.m.
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