

U.G. 4th Semester Examination - 2021**COMPUTER SCIENCE****[HONOURS]****Course Code : COM.SC-H-CC-P-410****(Database Management Systems Lab.)****[PRACTICAL]**

Full Marks : 75

Time : 6 Hours

Marks Allotment :

Experiment : 60 marks

Viva voce : 10 marks

Lab Notebook : 5 marks.

Answer any **one** question:

60×1=60

1. Consider a library database management system with following schema:

BOOK(Acc_No, Index_No, Author, Publisher, Price)

STAFF(Card_No, Staff_id, Name, Address)

ISSUE (Card_No, Acc_No, Date_of_issue,
Date_of_return)

Create the above tables and input at least 20 data. Write the following SQL queries:

- a) Find the names of staff who have not borrowed any book of a particular publisher.

- b) Find the names of staff who have borrowed more than three books.
- c) Find the names of books which have never been issued.

2. Create the table ROUTE_HEADER with the following fields:

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

Create the above table and input at least 20 data. Write the following SQL queries:

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

TEACHER (T_ID, Department, Year_of_Exp, Name)

SUBJECT PAPER (Sub_Paper_ID, T_ID,
Title_of_Paper, Programme, Semester)

Create the above tables and input at least 20 data. Write the following SQL queries:

- a) Display Name and Year_of_Exp of all the teachers of "Physics" department.
- b) Display name and department of all the teachers who have more than 6 years of experience.
- c) List all entries of Subject Paper which are handled by T_ID = 1234.

4. 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)

Create the above tables and input at least 20 data. Write the following SQL queries:

- a) Display the list of students who are in class - 8, section - B.
 - b) To display the average age of the students whose first name starts with "S".
 - c) To display all the students who are boys above age 16.
5. Create the following table and perform the necessary task defined below:

Student(Student_Roll, S_Name, S_Date_of_Birth,

Programme, Semester, S_Address, S_Year_Of_Admission)

Create the above tables and input at least 20 data. Write the following SQL queries:

- a) Find the name of all the students of MCA program who are born after 01/01/1982.
 - b) List the name and roll number of all the students who are enrolled in year 2010.
 - c) List the name and address of all the students of B.Sc program.
6. Create the following table and perform the necessary task defined below:

DEPARTMENT (Dep_ID , Name , Year_Established, Head_Name, Address, Telephone, No_of_Employee)

Create the above tables and input at least 20 data. Write the following SQL queries:

- a) List the name and address of departments which are at least 25 years old.
- b) Find the name of head of department of department id = 605.
- c) List name, address and telephone numbers of all the departments which are established after year 2010.

7. Create the following table and perform the necessary task defined below:

Employee (EMPNO, EMP_NAME, DEPT, SALARY, DOJ, BRAN_C)

Create the above tables and input at least 20 data. Write the following SQL queries:

- Display details of employee whose name is SUMAN and salary greater than 50000.
- Display name of employees in descending order.
- Display the list of employees who earns more than the average salary.

8. Create the following table and perform the necessary task defined below:

Doctor (dno, dname, address, dcity)

Hospital (hno, hname, street, hcity)

Dochosp (dno, hno, date)

Create the above tables and input at least 20 data. Write the following SQL queries:

- List name of hospitals to which 'Dr. Bhattacharya' has visited on '23-08-21'
- Find out all the doctors who have visited hospitals in the same city.
- List all the doctors who visited 'XYZ' hospital on '14-08-21'.

9. Consider the following schema for Order Database:
SALESMAN (Salesman_id, Name, City, Commission)
CUSTOMER (Customer_id, Cust_Name, City, Grade, Salesman_id)

ORDERS (Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id)

Create the above tables and input at least 20 data. Write the following SQL queries:

- Find the name and id of all salesmen who had more than one customer.
- Find the salesman who has the customer with the highest order of a day.
- List all the orders placed before a particular date.

10. Create the following table with the fields given below:
PRODUCT (P_ID, model, price, name, date_of_manufacture, date_of_expiry)

Create the above table and input at least 20 data. Write the following SQL queries:

- Display name and date_of_expiry of all the products whose price is more than 500.
- Display name, P_ID and price of all the products whose date_of_manufacture is after "01-01-2018".
- Find the products that have minimum and maximum prices.