2023

COMPUTER SCIENCE — HONOURS — PRACTICAL

Paper : CC-11P

Full Marks : 30

Batch - IV

Answer *any one* question.

Marks Distribution :

Database creation and tuple insertion :	5
Database connection :	2
SQL Query :	2×3 = 6
HTML/PHP Code (Front End) :	4
Front End Output :	3
Sessional :	4
Viva voce :	6
	30

1. Design a 'Patient Record System'.

   Consider the following table schema for the 'Patient Record System' :

   Patients (*patient_id*, name, dob, contact, address)

   Doctors (*doctor_id*, name, specialization, contact)

   Appointments (*appointment_id, patient_id, doctor_id*, appointment_date, diagnosis)

   (a) Create Table in MySQL. Insert sufficient records satisfying the integrity constraints. Perform the following operations :

       (i) Display the names of patients who have appointments with a neurologist.

       (ii) Find the total number of appointments for each doctor.

   (b) Use PHP to perform the following :

       (i) Update the contact information of a patient with patient_id = 5005.

       (ii) Display the details of the patients in tabular form.

2. Design a 'Music Library System'.

Consider the following table schema for the 'Music Library System' :

Songs (*song_id*, title, artist, genre, release_date)

Albums (*album_id*, title, artist, release_date)

Album_songs (*album_song_id*, album_id, song_id, track_number)

(a) Create the table in MySQL. Insert sufficient records satisfying the integrity constraints. Perform the following :

    (i) Display the titles of all albums along with the corresponding artist names.

    (ii) Find the number of songs in each genre.

(b) Use PHP to perform the following :

    (i) Insert a new song into the 'Songs' table with the title 'Shape of You' by 'Ed Sheeran'.

    (ii) Display 'Albums' table in tabular form.

3. Design a 'School Management System'.

Consider the following table schema for the 'School Management System' :

Students (*student_id*, name, dob, contact, address)

Courses (*course_id*, title, duration, fees)

Enrollments (*enrollment_id*, student_id, course_id, enrollment_date)

(a) Create table in MySQL and insert sufficient records satisfying integrity constraints. Perform the following :

    (i) Display the name of students enrolled in the 'Mathematics' course.

    (ii) Find the courses with no current enrolments in the year 2022.

(b) Use PHP to perform the following :

    (i) Insert a new student into the 'Students' table with the name 'Emma Johnson'.

    (ii) Display the name of students who have enrolled in more than one course.

4. Design a 'Ticket Booking System'.

Consider the following table schema for the 'Ticket Booking System' :

Flights (*flight_id*, airline, source, destination, departure_time, arrival_time)

Passengers (*passenger_id*, name, contact, email)

Bookings (*booking_id*, *flight_id*, *passenger_id*, booking_date)

(a) Create table in MySQL and insert sufficient records satisfying the integrity constraints. Perform the following :

    (i) Display the number of passengers on each flight.

    (ii) Find the passengers whose name starts with 'A'.

(b) Use PHP to perform the following :

    (i) Insert a new flight into the 'flights' table with the airline 'Delta' and destination 'Paris'.

    (ii) Display the departure times of flights departing from 'New York'.

5. Design a 'Hotel Management System'.

Consider the following table schema for the 'Hotel Management System' :

Rooms (*room_number*, type, occupancy, price_per_night, available)

Guests (*guest_id*, name, city, contact, email)

Reservations (*reservation_id*, *room_number*, *guest_id*, check_in_date, check_out_date)

(a) Create table using MySQL and insert sufficient records satisfying integrity constraints. Perform the following :

    (i) Display the room numbers and check-in dates for all reservations.

    (ii) Find the total revenue generated by the hotel in the year 2023.

(b) Use PHP to perform the following :

    (i) To mark a room with room_number = 210 as unavailable.

    (ii) To display the names of guests living in Mumbai.

6. Design a 'Car Rental System'.

Consider the following table schema for the 'Car Rental System' :

Cars (*car_id*, brand, model, type, rental_rate, available)

Customers (*customer_id*, name, contact, email)

Rentals (*rental_id*, car_id, customer_id, rental_date, return_date)

(a) Create table in MySQL and insert sufficient records satisfying integrity constraints. Perform the following :

   (i) Display the names of customers who have rented a car.

   (ii) Find the cars with the highest rental rates.

(b) Use PHP to perform the following :

   (i) Insert a new car into the 'cars' table with the brand 'Toyota' and model 'Camry'.

   (ii) Display the rental dates for a specific car with car_id = 1005.

7. Design a 'Cinema Ticket Booking System'.

Consider the following table schema for the 'Cinema Ticket Booking System' :

Movies (*movie_id*, title, genre, release_date, rating)

Cinemas (*cinema_id*, name, location, capacity)

Bookings (*booking_id*, movie_id, cinema_id, seat_number, booking_date)

(a) Create Table using MySQL and insert sufficient records satisfying integrity constraints. Perform the following :

   (i) Display the titles of all movies along with their ratings.

   (ii) Find the cinemas with the highest seating capacity.

(b) Use PHP to perform the following :

   (i) Insert a new movie into the 'movies' table with the title 'Inception' and genre 'Sci-Fi'.

   (ii) To display the cinemas table in tabular form.

———————