

2023

## COMPUTER SCIENCE — HONOURS — PRACTICAL

Paper : CC-11P

Full Marks : 30

Batch - III

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 'Inventory Tracking System'.

Consider the following table schema for the 'Inventory Tracking System' :

Products (*product\_id*, name, category, price, stock\_quantity)Suppliers (*supplier\_id*, name, contact, address)Product\_supplier (*product\_supplier\_id*, *product\_id*, *supplier\_id*, supply\_date, quantity\_supplied)

- (a) Create table using MySQL and implement the integrity constraints. Insert sufficient records and perform the following :
- Display the names of products that are out of stock. A product is out of stock if stock\_quantity is less than 5.
  - To find the total quantity of each product supplied by each supplier.
- (b) Use PHP to perform the following :
- Update the price of a product with product\_id = 1005 to Rs. 500.
  - Display the names of suppliers from the 'Supplier' table in a tabular form.

2. Design an 'Employee Management System'.

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

Employees (*emp\_id*, *emp\_name*, *designation*, *salary*, *join\_date*)

Departments (*dept\_id*, *dept\_name*, *location*)

Assignments (*assign\_id*, *emp\_id*, *dept\_id*, *start\_date*, *end\_date*)

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

(i) Display the total salary expenditure for each department.

(ii) Find the employees who have worked in more than one department.

(b) Use PHP to perform the following :

(i) Update the salary of an employee with *emp\_id* = 1005 to Rs. 60,000.

(ii) Display the names of employees who joined the company in the year 2022.

3. Design a 'Hotel Reservation System'.

Consider the following table schema for the 'Hotel Reservation 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 the 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 December.

(b) Use PHP to perform the following :

(i) Mark a room with *room\_number* = 105 as unavailable.

(ii) Display the names of guests who live in Delhi.

4. Design a 'Student Information System'.

Consider the following table schema for the 'Student Information System' :

Students (*student\_id*, name, dob, contact, email)

Courses (*course\_id*, title, duration, fees)

Enrolments (*enrolment\_id*, *student\_id*, *course\_id*, enrolment\_date)

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

(i) Display the names of students enrolled in the 'Computer Science' course.

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

(b) Use PHP to perform the following :

(i) Insert a new student into the 'students' table with the name 'John Doe'.

(ii) Display the fees of the different courses.

5. Design a 'Flight Booking System' with tables :

Flight (*flight\_id*, airline, source, destination, departure\_time, arrival\_time)

Passenger (*passenger\_id*, name, contact, email)

Reservations (*reservation\_id*, *flight\_id*, *passenger\_id*, reservation\_date, seat\_number).

(a) Create the table using MySQL and implement integrity constraints and perform the following operations :

(i) Find the number of reservations for a specific flight.

(ii) Display the names of the passengers who have booked flights for a given destination.

(b) Use PHP to perform the following :

(i) Display the Passenger's information (name, contact, email) based on the *passenger\_id*.

(ii) Insert a new flight in the Flight table.

6. Design a database for an 'Online Shopping System' with tables :

Product (*product\_id*, name, category, price, stock\_quantity)

Customer (*customer\_id*, name, contact, address)

Orders (*order\_id*, *product\_id*, *customer\_id*, order\_date, quantity)

(a) Create the tables in MySQL and implement integrity constraints. Insert sufficient records. Perform the following operations :

(i) Calculate the total revenue for a specific category.

(ii) Display the products with low stock quantity. (when quantity is less than 10 units)

(b) Use PHP to perform the following operations :

(i) Display the customer's information (name, contact, address) based on the *customer\_id*.

(ii) Insert a new product in the Product table.

7. Consider the following table schema for the 'Sales Tracking System' :

Item (*ino*, *iname*, type, price, color)

Cust (*cid*, *cname*, phone, city)

Sales (*sales\_id*, *ino*, *cid*, sales\_date)

(a) Create tables in MySQL. Insert sufficient records and implement integrity constraints. Perform the following operations :

(i) Display name of each customer and total price of all items purchased by him/her.

(ii) Display all customers from Kolkata and Durgapur who have purchased a dish washer.

(b) Use PHP to perform the following operations :

(i) Change the phone no. of customer having *cid* = C001

(ii) Display the names of customers from Kolkata and Durgapur who have purchased a dish washer in September.

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