

2023

COMPUTER SCIENCE — HONOURS — PRACTICAL

Paper : CC-11P

Full Marks : 30

Batch - I

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
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	30

1. Design a “Car Reservation System” that maintains the following database :

Drivers (d_id , dname, age, city, rating)

Cars (c_id , company, model, purchase_date)

Reserves (d_id , c_id , day)

[Rating should be between 0 to 10]

- (a) Create all the above tables in MySQL with sufficient records maintaining all integrity constraints. Perform the following operations :
- Give the name of oldest driver who have reserved a “Hyundai” company car over the weekend (Saturday/Sunday) in the month of “January 2023”.
 - Display the details of all the cars which have been driven by the driver with the highest rating in September, 2023.
- (b) Now perform the following operations through PHP.
- Insert a record in table ‘drivers’.
 - Display all the record of table ‘drivers’ in tabular format.

2. Design a 'Conference paper submission' with the following database :

Conference (*c_id*, *cname*, *city*, *date_from*, *date_to*)

Author (*a_id*, *aname*, *email*, *affiliation*)

Submit (*s_id*, *a_id*, *c_id*, *date*)

Create all the above tables in MySQL with sufficient records.

(a) Insert data in three tables maintaining the integrity constraints and city should be 'Kolkata', 'Mumbai', 'Pune' and 'Chennai'. Perform the following operations.

(i) List the names of all the authors affiliated to 'University of Calcutta' who have submitted a paper in any conference that is held at 'Kolkata'.

(ii) Count the total no. of conferences that has been held in 'Bengaluru' between 01.09.2022 and 28.10.2023.

(b) Perform the following operation using PHP :

(i) Create a form for the table 'Author' and insert a record in that table.

(ii) Change the affiliation having *a_id* = 'A001'.

3. Design a 'Aircraft Reservation System' with following database :

Company (*cid*, *cname*, *city*)

Pilot (*pid*, *cid*, *pname*)

Certification (*pid*, *aircraft_type*)

[aircraft type should be 'Boeing', 'Superstonic', 'Jumbo', 'Turbojet']

Perform the following operations in MySQL :

(a) Create all the above tables using MySQL with sufficient records and maintaining integrity constraints,

(i) Display the name of company which has maximum number of pilots.

(ii) Display name of companies which have no pilot with certification of type 'supersonic'.

(b) Perform the following operations using PHP :

(i) Display the table Pilot in tabular form.

(ii) Delete all records for companies located in 'Kolkata'.

4. Design a 'Stadium Booking system' that maintains following database :

Stadium (*sid*, name, event, type, capacity, price)

Organiser (*oid*, org_name, type_of_org)

Booking (*bid*, *sid*, *oid*, date_of_booking)

[Capacity should be 100 by default]

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

(i) List all organisers who have booked highest capacity stadium at least two times.

(ii) List all 'educational' organisations whose name starts with 'A' and who have never booked the costliest stadium.

(b) Now perform the following operations through PHP :

(i) Design a Login table to take user name and password.

(ii) Show all records of 'organiser' table for an authentic user. A user is authentic if the user name and password exists in the MySQL database 'Login' table.

5. Design the following database 'Art Gallery System'

Gallery (*gid*, gname, capacity, city)

Artists (*aid*, aname, age, rank)

Reserved (*gid*, *aid*, date_of_reserve)

[Artists name must start with 'A', 'D', 'P']

Perform the following operation.

(a) Create the above tables using MySQL. Insert sufficient records so that the following queries yield some results, maintaining integrity constraints.

(i) List the names of all artists and galleries they have reserved in the current month.

(ii) Calculate the total number of reservations made by the youngest artist in Kolkata.

(b) Use PHP to

(i) Insert a record in the table 'Artists', where the age of an artist is less than 30 years.

(ii) Display all the records of the 'Gallery' table in tabular form.

6. Design a 'Boat Reservation System' with following database :

Sailors (*s_id*, sname, rating, age)

Boats (*b_id*, b_name, bcolor)

Reserved (*s_id*, *bid*, day)

[*s_id* must be auto-incremented starting from the value 100 and bcolor should be 'black', 'green', 'red', 'blue'.]

(a) Create the above tables in MySQL with sufficient records having integrity constraints as given above.

Perform the following queries :

(i) Find the names of sailors who have reserved all boats.

(ii) Find the *s_id* of sailors who have reserved 'red' boat but not 'green' boat.

(b) Perform the following operations through PHP :

(i) Design a form for 'Boats' table and insert a record through that form.

(ii) Display all the records of 'Boats' table in tabular format.

7. Design the following database for 'Student Attendance System' :

Faculty (*Fid*, Fname, Age, Degree)

Student (*Sid*, Sname, Course, Year, Phone)

Attendance (*Fid*, *Sid*, Subject, date_of_class, no_of_class)

(a) Create the above tables in MySQL specifying integrity constraints and provide a check on age so that it lies between 24 to 65. Insert sufficient records in each table so that following queries yield some result :

(i) List all teachers who have taken classes on DBMS.

(ii) List all students who have attended at least one class today.

(b) Perform the following using PHP :

(i) Insert a record in the 'Faculty' table.

(ii) Display all the records of 'Student' table in tabular format.
