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UG/2nd Sem/Comp/H/19 (Pr.)

2019

B.Sc.

2nd Semester Examination

**COMPUTER SCIENCE (Honours)**

**Paper - GE2P**

**[Practical]**

**Set - 1**

**Full Marks : 20**

**Time : 2 Hours**

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**Answer any one question on lottery basis.**

**1×15=15**

( 2 )

1. Consider the following tables :

Student (Roll No, Student\_Name, Age, Course\_ID)

Course (Course ID, Course\_Name, Fee, Duration)

- (a) Create the above database tables using SQL.
- (b) Insert at least three records in each table.
- (c) List all those students who are greater than 21 years of age and have opted for MCA course.
- (d) List all those courses whose fee is greater than that of MCA course.
- (e) Find the name of the students who have opted for the highest duration course.  $5 \times 3 = 15$

2. Consider the following tables :

Employee (Emp\_ID, Emp\_Name, Designation)

Project (Project\_ID, Project\_Name, City, Duration)

Assign (Emp\_ID, Project\_ID)

- (a) Create the above database tables using SQL.
- (b) Insert at least three records in each table.
- (c) Find the names of the employees who are assigned a project in 'Kolkata'.
- (d) List the employees who are working in a project with project duration more than 12 months.
- (e) Add a column named 'Salary' in Employee table with default value zero. 5×3=15

( 4 )

3. Consider the following tables :

Customer (Cust\_ID, Cust\_Name, Address)

Loan (Loan\_ID, Amount, Interest, Cust\_ID)

- (a) Create the above database tables using SQL.
- (b) Insert at least three records in each table.
- (c) Display the name of the customer who has taken highest amount of loan.
- (d) List the details of the customers who have not taken any loan.
- (e) Find the total amount of loan provided to the customers in 'Midnapore'.

4. Consider the following relations for a bus reservation system application :

Bus (Bus\_No, Source, Destination)

Passenger (Passenger\_ID, Passenger\_Name, Age, Gender)

Booking (Booking\_ID, Bus\_No, Passenger\_ID, Journey\_Date, Seat\_No)

- (a) Create the above database tables using SQL.
- (b) Insert some appropriate records in each table.
- (c) Display the names of the passengers who had booked for the journey from 'Howrah' to 'Digha' on 13th July 2018.
- (d) List the details of passengers who have travelled more than two times on the same route.
- (e) Find the details of the oldest passenger who has travelled in any route on 15 Aug, 2018.

5. Consider the following tables :

Product (Product\_ID, Product\_Name)

Purchase (Purchase\_ID, Product\_ID, Purchase\_Quantity, Purchase\_Cost\_per\_Unit, Supplier\_Name)

Sales (Sale\_ID, Product\_ID, Sale\_Quantity, Sale\_Cost, Per\_Unit, Customer\_Name)

- (a) Create the above database tables using SQL.
- (b) Insert some appropriate records in each table.
- (c) Display the product\_ID s of the products which are purchased more than two times.
- (d) List the product name which has been sold with highest profit per unit.
- (e) Find the total cost of the products which have been supplied by 'Joy Sri Ram Enterprise'.

Practical Note book : 2 Marks

Viva-Voce : 3 Marks

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**[Practical]**

**Set - 2**

Full Marks : 20

Time : 2 Hours

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in their own words as far as practicable.*

Answer any *one* question on lottery basis.

1×5=5

( 2 )

1. Consider the following schemes and answer the questions : 5×3=15

customer (cid, cname, city, discnt)

agents (aid, aname, city, percent)

products (pid, pname, city, qty, price)

orders (ordno, month, cid, aid, pid, qty, rupees)

- (a) Identify primary and foreign key. Create the database tables and insert at least 5 records in each database table.
- (b) Find all customer id, agent id and product id for customer, agent and product combinations that are all in the same city.
- (c) Get the names of agents who place order for all products ordered by customer COO3.
- (d) Get product names ordered by at least one customer based in Bangalore through an agent based in Mumbai.
- (e) Find customer ids of customers who have largest discount; separately find those who have smallest discount.



2. Consider the following schemas and answer the quires : 5×3

Student (Name, Roll, Class, Department)

Course (Cname, cnumber, credit\_Hours, Department)

Section (Section\_id, cnumber, semester, year, instruction)

Grade (Roll, section\_id, Grade)

Prerequisite (cnumber, pnumber)

- (a) Identify primary and foreign key. Create the database tables and insert at least 5 records in the each database table.
- (b) Change the class of student 'Pritam' from '1' to '2'.
- (c) Insert a new course ('Bio-tech', 'CS4390', '3', 'CS')
- (d) Retrieve the names of all students in the department 'CS'.
- (e) Delete the record for the student whose name is 'Chandan' and whose student roll no. is 17.

3. Consider the following Schemas and answer the queries : 5×3

Material-Master (item\_id, item-name, reorder\_level)

Material-Dts (item\_id, Supplier\_id, Purchase\_date, Csty, Utcost)

- (a) Identify primary and foreign key. Create the database tables and insert at least 5 records in the each database table.
- (b) Select the quantities of each purchased material alphabetically.
- (c) Select the names of materials which have the highest total quantity.
- (d) Replace the material name 'power supply' with 'UPS'.
- (e) Increase the quantities of material purchased by 'ABC' for all purchases done after February, 2003.

4. Consider the following Schemas and answer the queries : 5×3

Flights (flno, from, to, distance, departs, arrives, price)

Aircraft (aid, aname, cruising-range certified (eid, aid))

Employees (eid, ename, salary)

- (a) Identify primary and foreign key. Create the database tables and insert at least 5 records in each database table.
- (b) Identify the flights that can be piloted by every pilot whose salary is more than Rs. 1,00,000.
- (c) Find the aids of employees who make the second highest salary.
- (d) For all aircraft with cruising-range over 1000 miles, find the name of the aircraft and the average salary of all pilots certified for this aircraft.
- (e) Find the names of pilots who can operate planes with a range greater than 3000 miles but are not certified on any Boeing aircraft.

5. Consider the following schemas and answer the queries : 5×3

Room (Room\_No, Hotel\_No, Type, Price\_qn)

Hotel (Hotel-No, Hotel-Name, Address)

Booking (Hotel\_No, Guest\_No, Date\_From, Date-To, Room-No)

Guest (Guest\_No, Guest\_Name, Guest\_Address)

- (a) Identify primary and foreign key. Create the database tables and insert at least 5 records in each database table.
- (b) List all the note's which are situated in Kolkata.
- (c) List all single rooms with a charge below Rs. 100 per night.
- (d) List the names of all guest who are going to stay at ITC hotel from 25th December to 1st January.
- (e) List the price per night and types of all rooms at Grand Hotel.

Practical Note book : 2 Marks

Viva-Voce : 3 Marks