2017

MCA

3rd Semester Examination

DBMS LAB.

PAPER—MCA 308

Subject Code—32

(Practical)

Full Marks : 100

Time : 3 Hours

The figures in the right hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

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

1. Consider the following database consisting of the following tables :

   Employee (ssn, first name, last name, gender, designation, date_of_joining, address)
   Employee-salary (ssn, basic pay, DA, TA, pay)
   Department (did, dname, mgrssn)
   Employee-department (ssn, deptid)
   Employee-dependency (ssn, depname, depgender, deprelationship)

   (a) Create the above database using SQL.

   (b) Retrieve the doj, address of employees who work for 'Research' department.

   (c) For each employee, retrieve the employee's first name and last name.

   (d) Retrieve the names of each employee who has a dependency with same first name and gender of that employee.

   (e) Display names of employees with total salary according to alphabetical order.

   (f) Find name of the highest paid male employee.

2. Patient (p_id, p_name, p_age, p_address)
   Doctor(d_id, d_name, d_add)
   Attend(d_id, p-id)
   Admitted (p-id, p-date_of_admission)

   (a) Create the above database using SQL.

   (b) List the names of patients with their doctor.

   (c) Find the names of the doctors who attend more than three patients.

   (d) Find name of the patient who lives at the same place as his/her doctor.

(Turn Over)

(e) Find name of the patient who are admitted before other.

(f) Count total number of patients and total number of doctors.

3. Consider the following database consisting of the following tables :

Department (dept id, dept name)
Student (roll no, name, gender, mark 1, mark 2, mark 3, total, average, dept id)
Staff (staff id, name, designation, qualification, dept id)
Tutor (roll no, staff id)

(a) Create the above database using SQL.

(b) Display the student details who come under the tutorship of the given staff name 'X'.

(c) Display the student details who got greater than overall average marks of their department.

(d) How many students are there in CSE department ?

(e) Count the total number of staffs for each department.

(f) Find the name of the students who have maximum tutors.

4. Create the tables described below with the constraints / attributes specified

Table Name : **EMP1_XX** (XX → *Last two digits of your class roll number*)
Description : Used to store employee information

Column Name	Data Type	Size	Constraints / Attributes
Empno	Number	4	Primary key, values between 7000 and 7999
Ename	Varchar2	20	Not null, Name must be in Upper case
Deptno	Number	2	Two digit number
Job	Varchar2	15	Not null
Mgr	Number	4	Foreign key references Empno of EMP1_XX, Values between 7000 and 7999
HireDate	Date		Not null
Salary	Number	5	Default 0

(a) Display all the different job types.

(b) Display all employees who were hired during 1983.

(c) Find highest salaried employee.

5. Consider the following database consisting of the following tables :

Branch (bname, bcity, assets)
Account (ano, starting date, balance)
Customer (cusid, name, address)
Deposit (ano, cusid, bname)
Transaction (ano, amount, mode, date of trans)

(a) Create the above database using SQL.

(b) Find the average account balance at each branch and display only if it is greater than 10000.

(c) Display the branch details located in a city starting with the letter 'S'.

(d) Find the number of depositors in each branch.

(e) Find total of last 5 deposit amount.

(f) Find name of the customer who has highest balance out of all branches.

6. Consider the following database consisting of the following tables :

Employee (ssn, first name, last name, gender, designation, date_of_joining, address)
Employee-salary (ssn, basic pay, DA, TA, pay)
Department (did, dname, mgrssn)
Employee-department (ssn, deptid)
Employee-dependency (ssn, depname, depgender, deprelationship)

Queries :

(a) Create the above database using SQL.

(b) Retrieve the names of employees who have no dependents.

(c) Retrieve all the information about employees working in 'Research' department including the department information.

(d) Display the department having employee count >5.

(e) Find names of employees who have more than two dependents.

(f) Find second highest paid employee.

7. Consider the following database consisting of the following tables :

Hostel (hno, hname, type [boys/girls/})
Menu (hno, day, breakfast, lunch, dinner)
Warden (wname, qual, hno)
Student (sid, sname, gender, year, hno)

(a) Create the above database using SQL.

(b) Display the total number of girls and boys hostel in the college.

(c) Display the menu in the hostel 'x' on Tuesday.

(d) Display the number of wardens for each hostel.

(e) Find the capacity (in term of no. of students) of each hostel.

(f) Find the name of hostel which has highest capacity.

8. Consider the following database consisting of the following tables :

Inventory (item, level, cost)
Minlevel (item, level)
Reorder (item, quantity)
Purchase (item, quantity, cost, customer name, date of purchase)

(a) Create the above database using SQL.

(b) Display the number of customers for the shop on a particular day.

(c) Write a query to display the item purchased by a given customer name.

(d) Display the overall income for the shop on a given date.

(e) Find highest cost item name.

(f) Find frequently selling item name.

9. Relation schema :

Employee (<u>Employee_no</u>, Employee_name, designation, Salary, Hiredate, Department_no, Manager_name)
Department (<u>Dnumber</u>, Dname, Location)

(a) Create the above database using SQL.

(b) Find employees whose commission is greater than 60% of their salaries.

(c) Find the names of anyone in dept. 20 who is neither manager nor clerk.

(d) Find the employees who do not receive commission or whose commission is less than 100/-.

(e) Find all the employees who were hired more than 2 years ago.

(f) List the employee names, department names and salary for those employees who have completed 1 year of service.

10. Create the following tables with the mapping given below :

Customer (Cust_id, Cust_name, Addr, ph_no, pan_no)
Loan (Loan_id, Amount, Interest, Cust_id)

(a) Create the above database using SQL.

(b) Display the Cust_name having both Loan and Account.

(c) Display number of Loans, the sum of Loan Amount of a Particular Custname ("LEENA")

(d) Display the Custname doesn't hold any Account nor taken any Loan.

(e) Add a column no. 1 (number of loans).

11. Relation Schema :

Answer the following using SQL.
Engineering Book Publishing Company.

b_name	authors	year	semester
Physics	Dr. A Roy	1	1
Circuit Theory	Mr. B. Biswas	2	1
Operating System	Dr. A. Dey	3	1
Digital Electronics	Miss. J. Gupta	2	2
Formal Language	Mr. S Sarkar	3	2
Mechanical Science	Dr. P Sen	1	2
VLSI design	Dr. P Sen	4	2
Microprocessor	Miss. J. Gupta	3	1
Web Technology	Mr. R. Biswas	4	1
Computer Organization	Mr. B. Biswas	3	2

The relation 'books'

(a) Find all books which are published for 3rd year.

(b) Find detail information about the publishing company.

(c) Find the author who are worked for the publishing company.

(d) Find the authors who are 'Dr' designation.

(e) Find the number of books published for 1 year.

<div align="center">

Viva-voce — 20Marks

Practical Note Book — 10Marks

———

</div>