

**MCA 3rd Semester Examination, 2019**

**MCA**

*(DBMS Lab)*

*(Practical)*

**PAPER —MCA-391**

*Full Marks : 100*

*Time : 3 hours*

*The figures in the right hand margin indicate marks*

**Answer any two questions selecting  
on lottery basis :**

**30 × 2**

*( Turn Over )*

1. Create the following relation schema :

stu\_details(reg\_no, stu\_name, DOB, address, city)

mark\_details (reg\_no, mark1, mark2, mark3, total)

- (a) Create the above schema using SQL with suitable Primary key and Foreign key.
- (b) Alter the table mark\_details to add a column average with data type as number.
- (c) Count the number of students whose birthday falls in December.
- (d) Display the details of the student who have obtained second highest total marks.
- (e) List the mark details of the students whose name has following two consecutive characters "Sh".

10 + 5 + 5 + 5 + 5

2. Consider the insurance database given below :

PERSON (driver\_id, name, address)

CAR (regno, model, year)

ACCIDENT (report\_number, accd\_date, location)

OWNS (driver\_id, regno)

PARTICIPATED (driver\_id, regno, report\_number,  
damage\_amount)

- (a) Create the above tables by properly specifying the primary keys and foreign keys and enter at least five tuples for each relation.
- (b) Update the damage amount for the car with specific regno in the accident with report number 12 to 25000.
- (c) Find the total number of people who owned cars that were involved in accidents in the year 2008.
- (d) Find the number of accidents in which cars belonging to a specific model were involved.

15 + 5 + 5 + 5

3. Consider the following tables :

SAILOR (sid, sname, rating, age)

BOATS (bid, bname, colour)

RESERVES (sid, bid, day)

- (a) Create the above tables by properly specifying the primary keys and foreign keys and enter at least five tuples for each relation.
- (b) List the sailors in the descending order of their rating.
- (c) List the sailors who have reserved for both 'RED' and 'GREEN' boats.
- (d) List the details of the oldest sailor for each rating level.
- (e) Delete all the data from RESERVES table.

10 + 5 + 5 + 5 + 5

4. Consider the following schema :

AUTHOR (author\_id, name, city, country)

PUBLISHER (publisher\_id, name, city, country)

CATALOG (book\_id, title, author\_id, publisher\_id,  
category\_id, year, price)

CATEGORY (category\_id, description)

ORDER\_DETAILS (order\_no, book\_id, quantity)

- (a) Create the above tables by properly specifying the primary keys and foreign keys and enter at least five tuples for each relation.
- (b) Give the details of the authors who have 2 or more books in the catalog and the price of the books is greater than the average price of the books in the catalog and the year of publication is after 2000.
- (c) Find the author of the book that has maximum sales.
- (d) Demonstrate how you increase the price of books published by a specific publisher by 10 %.

10 + 10 + 5 + 5

5. Consider the following database for a banking enterprise :

CUSTOMER\_FIXED\_DEPOSIT (cust\_id, last\_name,  
mid\_name, first\_name, fixed\_deposit\_no, amount,  
rate\_of\_interest)

CUSTOMER\_LOAN (loan\_no, cust\_id, amount)

CUSTOMER\_DETAILS (cust\_id, acc\_type)

- (a) Create the above tables by properly specifying the primary keys and foreign keys and enter at least five tuples for each relation.
- (b) List customer names of all customer who have taken a loan  $> 3,00,000$ .
- (c) List customer names of all customer who have the same account type as customer 'jones simon'.
- (d) List customer names of all customer who do not have a fixed deposit.
- (e) Add a new field 'created\_on' with suitable datatype in the CUSTOMER\_DETAILS table.

10 + 5 + 5 + 5 + 5

6. Consider the following employee and department tables :

EMPLOYEE (empno, ename, designation, manager, hiredate, salary, commission, deptno)

DEPARTMENT (deptno, dname, location)

- (a) Create the above tables by properly specifying the primary keys and foreign keys and enter at least five tuples for each relation.
- (b) Count the different job titles in employee table.
- (c) List the details of employees who are acting as managers to other employees.
- (d) Add a constraint in EMPLOYEE table to check salary entered is greater than 1000.
- (e) List the details of manager who has maximum number of employees working under him.

10 + 5 + 5 + 5 + 5

7. A tour and traveling company maintains the following relations for its bus reservation system :

BUS (ROUTE\_NO., SOURCE, DESTINATION)

PASSENGER (PAS\_ID, PAS\_NAME, DOB, GENDER)

BOOK\_TICKET(PAS\_ID, ROUTE\_NO., JOURNEY\_DATE, SEAT\_NO)

- (a) The primary keys are underlined. Identify the foreign keys and draw schema diagram.
- (b) Create the above mentioned tables and populate those accordingly to have results for the following questions.
- (c) A constraint that DOB of passenger should be after 2014 must be included.
- (d) Display the details of the male passengers who had booked the journey from Kolkata to Digha on 02-OCT-2019.
- (e) Create a view that displays the ROUTE\_NO, SOURCE, DESTINATION and JOURNEY\_DATE which moves from Durgapur to Kolkata.
- (f) Add a column CONTACT\_NO to PASSENGER table.

5 + 5 + 5 + 5 + 5 + 5



8. A goods transport company maintains the following relations :

DRIVER (D\_CODE, D\_NAME, DOB, GENDER)

CITY (CITY\_CODE, CITY\_NAME)

TRUCK (TRUCK\_CODE, TRUCK\_TYPE  
[LIGHT OR HEAVY])

DRIVE\_TRUCK (TRUCK\_CODE, D\_CODE, DATE  
OF\_TRIP, CITY\_CODE)

- (a) The primary keys are underlined. Identify the foreign keys and draw schema diagram.
- (b) Create the above mentioned tables and populate those accordingly to have results for the following questions.
- (c) Include the constraint that the gender of driver is always 'male'.
- (d) Write a SQL query to list the details of each driver and the number of trips traveled.
- (e) Write a SQL query to list the details of the drivers who can drive HEAVY truck and has experience to drive to KHARAGPUR.
- (f) Write a SQL query to list the details of the drivers who can drive HEAVY truck with age more than 40.                      5 + 5 + 5 + 5 + 5 + 5

9. A bank maintains the following relations :

CUSTOMER (CUST\_ID, CUST\_NAME, ADDR,  
PH\_NO, PAN\_NO)

LOAN (LOAN\_ID, AMOUNT, INTEREST,  
CUST\_ID)

- (a) Create the above database using SQL by specifically mentioning the primary key and foreign key. Populate the tables.
- (b) Find the name and address and PAN no of the customer having highest loan amount in the bank.
- (c) Find the details of the customer who have more than the average loan drawn from this bank.
- (d) Find the details of the customer having substring 'MA' in their name.
- (e) Insert columns EMAIL\_ID and AADHAR\_NO in CUSTOMER table.
- (f) Alter the table LOAN by dropping INTEREST COLUMN from LOAN table.

5 + 5 + 5 + 5 + 5 + 5

10. Consider the following database having following tables :

**HOSTEL (H\_NO, H\_NAME, TYPE [BOYS/GIRLS])**

**MENU (H\_NO, DAY, BREAKFAST, LUNCH,  
DINNER)**

**WARDEN (W\_NAME, QUAL, H\_NO, GENDER)**

**STUDENT (SID, SNAME, GENDER, YEAR, HNO)**

- (a) Create and populate the above database by specifically mentioning the primary keys and foreign keys.
- (b) Display the details of the girl students in all the hostels whose names are starting with 'S'.
- (c) Include the constraint that the gender of a GIRLS' hostel must be 'female'.
- (d) Display the Wardens for each hostel with the qualification 'B.A'.
- (e) Change the LUNCH of the hostel 2 on Thursday to 'BIRIYANI'.
- (f) List the name of the wardens of all the GIRLS' hostels.

5 + 5 + 5 + 5 + 5 + 5

Viva-voce    -20 Marks

Practical Note Book                              -20 Marks

