

CBSE 2025

24. Consider the string, "Informatics Practices". Write suitable SQL queries for the following :

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- (i) To convert the entire string to uppercase.
- (ii) To display the total number of characters in the given string.

25. What is a Database Management System (DBMS) ? Mention any two examples of DBMS.

2

26. (i) Write the SQL statement to create a table, Customer with the following specifications : (2+1) S

Table:Customer

Column Name	Data Type	Key
CID	Int	Primary Key
FName	Varchar (20)	
LName	Varchar (20)	
Age	Int	

(ii) Write the SQL query to display all records in descending order of LName from the Table Customer.

32. (a) Given the following tables :

8

Table: STUDENTS

S_ID	NAME	AGE	CITY
1	Rahul	20	Delhi
2	Priya	22	Mumbai
3	David	21	Delhi
4	Neha	23	Bengaluru
5	Khurshid	22	Delhi

Table: GRADES

S_ID	SUBJECT	GRADE
1	Math	A
2	English	B
3	Math	C
4	English	A
5	Math	B

Write SQL queries for the following :

- (i) To display the number of students from each city.
- (ii) To find the average age of all students.
- (iii) To list the names of students and their grades.

OR

Q) Consider the following tables :

3

Table 1: PRODUCTS

This table stores the basic details of the products available in a shop.

PID	PName	Category
201	Laptop	Electronics
202	Chair	Furniture
203	Desk	Furniture
204	Smartphone	NULL
205	Tablet	Electronics

Table 2: SALES

This table records the number of units sold for each product.

SaleID	PID	UnitsSold
301	201	50
302	202	100
303	203	60
304	204	80
305	205	70

Write SQL queries for the following :

- To delete those records from table **SALES** whose **UnitsSold** is less than 80.
- To display names of all products whose category is not known.
- To display the product names along with their corresponding units sold.

34. (a) An educational institution is maintaining a database for storing the details of courses being offered. The database includes a table COURSE with the following attributes :

4

C_ID : Stores the unique ID for each course.

C_NAME : Stores the course's name.

INSTRUCTOR : Stores the name of the course instructor.

DURATION : Stores the duration of the course in hours.

Table : COURSE

C_ID	C_NAME	INSTRUCTOR	DURATION
C101	Data Structures	Dr. Alok	40
C102	Machine Learning	Prof. Sunita	60
C103	Web Development	Ms. Sakshi	45
C104	Database Management	Mr. Suresh	50
C105	Python Programming	Dr. Pawan	35

Write SQL queries for the following :

- (i) To add a new record with following specifications :

C_ID : C106

C_NAME : Introduction to AI

INSTRUCTOR : Ms. Praeti

DURATION : 55

- (ii) To display the longest duration among all courses.

- (iii) To count total number of courses run by the institution.

- (iv) To display the instructors' name in lower case.

OR

- (b) Ashutosh, who is a manager, has created a database to manage employee records. The database includes a table named **EMPLOYEE** whose attribute names are mentioned below :

4

EID : Stores the unique ID for each employee.

EMP_NAME : Stores the name of the employee.

DEPT : Stores the department of the employee.

SALARY : Stores the salary of the employee.

JOIN_DATE : Stores the employee's joining date.

Table : **EMPLOYEE**

EID	EMP_NAME	DEPT	SALARY	JOIN_DATE
E01	ARJUN SINGH	SALES	75000	2019-11-01
E02	PRIYA JAIN	ENGINEERING	85000	2020-05-20
E03	RAVI SHARMA	MARKETING	60000	2018-08-14
E04	AYESHA	NULL	50000	2021-01-10
E05	RAHUL VERMA	FINANCE	40000	2017-06-25

Write the output of the following SQL Queries :

- (i) `Select SUBSTRING(EMP_NAME, 1, 5) from EMPLOYEE where DEPT = 'ENGINEERING';`
- (ii) `Select EMP_NAME from EMPLOYEE where month(JOIN_DATE) = 8;`
- (iii) `Select EMP_NAME from EMPLOYEE where SALARY > 60000;`
- (iv) `Select count(DEPT) from EMPLOYEE;`

37. (a) Write SQL query for the following :

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- (i) To display sum total of all the values of the **Score** column, from **STUDENTS** table.
- (ii) To display the first five characters of the **Name** column from **STUDENTS** table.
- (iii) To display the values of **Name** column from the **STUDENTS** table, after removing the trailing spaces.
- (iv) To retrieve the lowest score from the **Score** column of **GRADES** table.
- (v) To increase the fee of all students by 100, in the **STUDENTS** table. (The name of the column is **FEE**)

OR

- (b) Write SQL queries for the following :

- (i) To calculate the square of 15.
- (ii) To round the number 456.789 to the nearest integer.
- (iii) To display the position of first occurrence of 'com' in the string 'mycommercial.com'.
- (iv) To display the name of the day for the date '2024-11-07'.
- (v) To display the current date and time.

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21. What will be the output of the following SQL queries : 2

(i) **SELECT RIGHT ("CHANDRAYAN3", 4) ;**

(ii) **SELECT ROUND (76345.456, 2) ;**

25. Write any two differences between UPDATE and ALTER TABLE commands of MySQL. 2

SECTION – C

26. (a) Consider the given table and write the following queries in MySQL : 3
Table : Sports

Sid	SName	Fees	DateofPlay	CoachId
1	Karate	1200	2024-08-24	S1
2	Football	1800	2024-09-13	S2
3	Cricket	1500	2024-06-14	S3
4	Lawn Tennis	2500	2024-09-25	S4
5	Badminton	1800	2024-10-20	S5

- (i) To display Sid and name of those sports which are to be played in the month of September.
- (ii) To display all Sports names in lower case.
- (iii) To display last two characters of all sports names whose fees is less than 1500.

OR

(b) Predict the output of the following queries based on the table **Sports** given above :

(i) **SELECT UCASE (TRIM (SName)) FROM Sports WHERE Sid=5;**

(ii) **SELECT LEFT (SName, 3) FROM Sports WHERE DateofPlay>"2024-09-13";**

(iii) **SELECT SUBSTR (CoachId, 1) FROM Sports WHERE SName="Cricket" or Fees>=2000;**

28. Answer the following questions based on the table Salesman given below : **3**

Table : Salesman

salesman_id	name	city	commission
5001	Neil Bhatt	Delhi	0.15
5002	Rohan Malik	Mumbai	0.13
5005	Ravi Mohan	Delhi	0.11
5006	Mehak Rai	Delhi	0.14
5007	Paul Lal	Bangalore	0.13
5003	Raman Sen	Kolkata	0.12

- (i) How many tuples does the given table have ?
- (ii) Suggest the primary key for the given table.
- (iii) Write the MySQL query to display all the records in descending order of commission.

SECTION – D

31. Rupam created a MySQL table to store the details of Nobel prize winners.
Help her to write the following MySQL queries :

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TABLE : NOBEL

Winner_Id	YEAR	SUBJECT	WINNER	COUNTRY	CATEGORY
1001	1970	Physics	Hannes Alfven	Sweden	Scientist
1002	1970	Physiology	Bernard Katz	NULL	Scientist
1003	1970	Literature	Aleksandr Solzhenitsyn	Russia	Linguist
1004	1971	Chemistry	Gerhard Herzberg	Germany	Scientist
1005	1978	Peace	Menachem Begin	Israel	Prime Minister
1006	1987	Economics	Robert Solow	USA	Economist
1007	1994	Literature	Kenzaburo Oe	Japan	Linguist

- (i) Display the names of Nobel Prize winner in 'Literature' for the year 1970.
- (ii) Display the subject and category of winners whose country is not known.
- (iii) Display the details of all Nobel Prize winners who were Scientists.
- (iv) Count total number of winners whose subject is Literature.

SECTION – E

33. Excellent Consultancy Pvt. Ltd. maintains two tables for all its employees. 5

Table : Employee

Employee_ id	First_ name	Last_ name	Salary	Joining_ date	Department
E101	Monika	Das	100000	2019-01-20	Finance
E102	Mehek	Verma	600000	2019-01-15	IT
E103	Manan	Pant	890000	2019-02-05	Banking
E104	Shivam	Agarwal	200000	2019-02-25	Insurance
E105	Alisha	Singh	220000	2019-02-28	Finance
E106	Poonam	Sharma	400000	2019-05-10	IT
E107	Anshuman	Mishra	123000	2019-06-20	Banking

Table : Reward

Employee_id	Date_reward	Amount
E101	2019-05-11	1000
E102	2019-02-15	5000
E103	2019-04-22	2000
E106	2019-06-20	8000

Write suitable SQL queries to perform the following task :

- (i) Change the Department of **Shivam** to IT in the table **Employee**.
- (ii) Remove the record of **Alisha** from the table **Employee**.
- (iii) Add a new column **Experience** of integer type in the table **Employee**.
- (iv) Display the first name, last name and amount of reward for all employees from the tables **Employee** and **Reward**.
- (v) Display first name and salary of all the employees whose amount is less than 2000 from the tables **Employee** and **Reward**.

OR

Write suitable SQL queries for the following task :

- (i) Display the year of joining of all the employees from the table **Employee**.
- (ii) Display each department name and its corresponding average salary.
- (iii) Display the first name and date of reward of those employees who joined on Monday from the tables **Employee** and **Reward**.
- (iv) Display sum of salary of those employees whose reward amount is greater than 3000 from the tables **Employee** and **Reward**.
- (v) Remove the table **Reward**.

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20. Keshav has written the following query to find out the sum of bonus earned by the employees of WEST zone :

SELECT zone, TOTAL (bonus) FROM employee HAVING zone = 'WEST';

But he got an error. Identify the errors and rewrite the query by underlining the correction(s) done.

2

21. Differentiate between **COUNT ()** and **COUNT (*)** functions in **MYSQL**. Give suitable examples to support your answer.

2

SECTION – C

26. Consider the table Patient given below and write SQL commands.

Table : Patient

Patientid	Name	City	Phone	Dateofadm	Department
1000001	Ritvik Garg	Delhi	68476213	2021-12-10	Surgery
1000002	Rahil Arora	Mumbai	36546321	2022-01-08	Medicine
1000003	Mehak Bhatt	Delhi	68421879	2022-02-02	Cardiology
1000004	Soumik Rao	Delhi	26543266	2022-01-11	Medicine
1000005	Suresh Sood	Bangalore	65432442	2021-03-09	Surgery

- (i) Display the details of all patients who were admitted in January.
 (ii) Count the total number of patients from Delhi.
 (iii) Display the last 2 digits of the Patientid of all patients from Surgery Department.

3

30. Write the output (i-iii) for the following SQL commands.

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Table : FASHION

ID	Product	Price	Qty
F01	Kajal	970	10
F02	Foundation	2100	15
F03	Night Cream	1700	20
F04	Day Cream	1400	10
F05	Shampoo	1200	25
F06	Lipstick	850	32

- (i) **SELECT COUNT(Product) FROM FASHION;**
 (ii) **SELECT SUM(Price*Qty) FROM FASHION WHERE Product="Night Cream";**
 (iii) **SELECT LEFT(Product,4) FROM FASHION WHERE Price>1500;**

OR

Find the output of the following SQL queries :

3

- (i) **SELECT SUBSTR("CLIMATE CHANGE",4,4) ;**
 (ii) **SELECT UCASE(RIGHT("Pollution",3)) ;**
 (iii) **SELECT LENGTH("HAPPY")+3 ;**

SECTION – D

31. Write the SQL queries which will perform the following operations : 5
- (i) To display the year from your Date of Admission which is '2023-05-15'.
 - (ii) To convert your email id 'ABC@XYZ.com' to lowercase.
 - (iii) To remove leading spaces from a string ' my country '.
 - (iv) To display current date.
 - (v) To display the value of 10⁶.

OR

Consider a table **PRODUCT** with the following data :

Table : PRODUCT

SNO	Itemname	Company	Stockdate	Price	Discount
1	Monitor	HP	2021-12-20	15499.739	15
2	Webcam	Logitech	2020-02-03	4890.90	5
3	Keyboard	Logitech	2022-08-19	1878.985	30
4	Mouse	HCL	2021-05-16	1200.00	7
5	Speakers	iBall	2021-10-19	NULL	25

Write SQL queries using SQL functions to perform the following operations :

5

- (i) Display the first 3 characters of all Itemnames.
- (ii) Display the names of all items whose Stockday is "Monday".
- (iii) Display the total price of all the products.
- (iv) Display the maximum Price.
- (v) Display the average Price of all the products by the company named 'Logitech'.

SECTION – E

34. Consider the following table **Schooldata**: 1+1+2

Table: Schooldata

Admno	Name	Grade	Club	Marks	Gender
20150001	Sargam Singh	12	STEM	86	Male
20140212	Alok Kumar	10	SPACE	75	Male
20090234	Mohit Gaur	11	SPACE	84	Male
20130216	Romil Malik	10	READER	91	Male
20190227	Tanvi Batra	11	STEM	70	Female
20120200	Nomita Ranjan	12	STEM	64	Female

Write SQL queries for the following :

- (i) Display the average Marks secured by each Gender.
- (ii) Display the minimum Marks secured by the students of Grade 10.
- (iii) Display the total number of students in each Club where number of students are more than 1.

OR

(Option for Part (iii) only)

- (iii) Display the maximum and minimum marks secured by each gender. 2

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3. Find the output of the following SQL Queries : 2

(i) **SELECT ROUND (7658.345,2);**

(ii) **SELECT MOD(ROUND (13.9,0),3);**

OR

Give any two differences between the POWER() and SUM() SQL functions.

4. Give one advantage and disadvantage each of Bus and Star topology. 2

5. Find the output of the following SQL queries : 2

(i) **SELECT SUBSTR("FIT INDIA MOVEMENT",5);**

(ii) **SELECT INSTR("ARTIFICIAL INTELLIGENCE", "IA");**

6. Srikanth created the following table STUDENT in his database. 2

Table : STUDENT

RollNo	Name	Class	Marks
1	Ritika	12	40
2	Angad	12	35
3	Kaveri	11	42
4	Lalitha	12	21
5	Daniel	11	44
6	Rabindra	11	39
7	Rabia	11	28

He now wants to count number of students in each class where the number of students is more than 3. He has executed the following query :

SELECT MAX(Marks) FROM STUDENT WHERE COUNT(*)>3 GROUP BY Class;

But, he got an error. Identify the error(s) and rewrite the query. Also underline the correction(s) done.

7. Ms. Mohini is working in a school and stores the details of all students in a table **SCHOOLDATA**.

2

TABLE : SCHOOLDATA

Admno	Name	Class	House	Percent	Gender	Dob
20150001	Aditya Das	10	Green	86	Male	2006-02-20
20140212	Harsh Sharma	11	Red	75	Male	2004-10-05
20090234	Swapnil Pant	10	Yellow	84	Female	2005-11-21
20130216	Soumen Rao	9	Red	91	Male	2006-04-10
20190227	Rahil Arora	10	Blue	70	Male	2005-05-14
20120200	Akasha Singh	11	Red	64	Female	2004-12-16

Write SQL statements from the above given table to :

- To remove leading spaces from the column Name.
- Display the names of students who were born on Sunday.

OR

Predict the output of the following SQL queries from the given table :
SCHOOLDATA

- SELECT MAX(Percent) FROM SCHOOLDATA;**
- SELECT LEFT(Gender,1),Name FROM SCHOOLDATA WHERE YEAR (Dob)=2005;**

SECTION - B**(Each question carries 3 marks)**

8. Predict the output of the following SQL queries : **3**

- (i) **SELECT TRIM(" ALL THE BEST ");**
- (ii) **SELECT POWER(5,2);**
- (iii) **SELECT UPPER (MID("start up india",10));**

OR

Consider a table "MYPET" with the following data :

Table : MYPET

Pet_id	Pet_Name	Breed	LifeSpan	Price	Discount
101	Rocky	Labrador Retriever	12	16000	5
202	Duke	German Shepherd	13	22000	10
303	Oliver	Bulldog	10	18000	7
404	Cooper	Yorkshire Terrier	16	20000	12
505	Oscar	Shih Tzu	NULL	25000	8

Write SQL queries for the following :

- (i) Display the Breed of all the pets in uppercase.
 - (ii) Display the total price of all the pets.
 - (iii) Display the average life span of all the pets.
9. Write the names of SQL functions to perform the following operations : **3**
- (i) Display name of the Month from your date of birth.
 - (ii) Convert email-id to lowercase.
 - (iii) Count the number of characters in your name.

10. Consider the following table : **PRODUCT**

3

Table : PRODUCT

PID	PNAME	PRICE	QUANTITY
P1001	Eraser	10.50	5
P1002	Ball Pen	15.00	2
P1003	Gel Pen	25.10	3
P1004	Ruler	5.00	1

Find the output of the following SQL queries :

- (i) **SELECT 10+MOD(QUANTITY,3) FROM PRODUCT WHERE PNAME = "Eraser";**
- (ii) **SELECT ROUND(PRICE,2)*QUANTITY FROM PRODUCT WHERE QUANTITY > 2;**
- (iii) **SELECT UCASE(RIGHT(PNAME,2)) FROM PRODUCT;**

SECTION - C

(Each question carries 4 marks)

11. Consider the table : **ITEM**

4

Table : ITEM

SNo	Itemname	Type	Price	Stockdate
1	Chaises	Living	11500.58	2020-02-19
2	Accent Chairs	Living	31000.67	2021-02-15
3	Baker Racks	Kitchen	25000.623	2019-01-01
4	Sofa	Living	7000.3	2020-10-18
5	Nightstand	Bedroom	NULL	2021-07-23

Write SQL queries for the following :

- (i) Display all the records in descending order of Stockdate.
- (ii) Display the Type and total number of items of each Type.
- (iii) Display the least Price.
- (iv) Display the Itemname with their price rounded to 1 decimal place.

12. Consider the following table :

4

Table : SALESMAN

Scode	Sname	Area	Qtysold	Dateofjoin
S001	Ravi	North	120	2015-10-01
S002	Sandeep	South	105	2012-08-01
S003	Sunil	NULL	68	2018-02-01
S004	Subh	West	280	2010-04-01
S005	Ankit	East	90	2018-10-01
S006	Raman	North	NULL	2019-12-01

Predict the output for the following SQL queries :

- (i) **SELECT MAX(Qtysold), MIN(Qtysold) FROM SALESMAN;**
- (ii) **SELECT COUNT (Area) FROM SALESMAN;**
- (iii) **SELECT LENGTH (Sname) FROM SALESMAN WHERE MONTH(Dateofjoin)=10;**
- (iv) **SELECT Sname FROM SALESMAN WHERE RIGHT(Scode,1)=5;**

OR

Based on the given table **SALESMAN** write SQL queries to perform the following operations :

- (i) Count the total number of salesman.
- (ii) Display the maximum qtysold from each area.
- (iii) Display the average qtysold from each area where number of salesman is more than 1.
- (iv) Display all the records in ascending order of area.