Chapter- 2

Structured Query Language

Sub-Topic: SQL & MYSQL

Level-1 (Easy) 1 Mark Questions

1. What is SQL? Why is it used?
2. Write some basic elements of MySQL SQL elements.
3. List out some major data types used in MySQL.
4. Differentiate between char and varchar.
5. Write the different types of SQL commands.
6. Differentiate between DDL and DML commands with example.

Sub-Topic: SQL Commands

Level-1 (Easy) 1 Mark Questions

7. Write a command to create a database named school.
8. Write a command to open the database school for use and write a command to see the list of tables created under the database school.
9. Write a command to delete the database student.
10. Create a table student with the attributes NAME, ROLL, PERCENTAGE, GENDER, DATE_OF_BIRTH.
11. List out the constraints can be used in create table command.
12. Insert a row to the student table with the values {“Sushant”,23,85.5,”m”,”06.02.2000”}
13. Write a command to list out the students NAME, ROLL and DATE_OF_BIRTH from the student table.
14. Write a command to display the details of all the girl students.

Sub-Topic: SQL Commands

Level-1 (Medium) 1 Mark Questions

15. Write a command to list the students name and percentage of all the boys scoring percentage more than equal to 75.
16. Write a command to list the students who are born before 01.01.2000.
17. Write the commands with their outputs for the questions 17 to 29 based on the information given in the following table EMPLOYEE.

    Write a command to display the EMPLOYEE table.

Empid	*Salary*	*Benefits*	*Designation*
010	75000	15000	Manager
105	65000	15000	Manager
152	80000	25000	Director
215	75000	12500	Manager
244	50000	12000	NULL
300	45000	10000	Clerk
335	40000	10000	NULL
400	32000	7500	Salesman
441	28000	7500	Salesman

18. Display the different designations from the EMPLOYEE table.
19. Display the designation column of the EMPLOYEE table.
20. Display the employee id and salary of those employees whose salary falls within 60000 to 75000.
21. Display the employee id and designation of those employees whose benefits does not fall within 10000 to 25000.
22. To list the employee id and total salary of all the employees where total salary is calculated as salary+benefit.
23. To list the employee information of all the clerks whose salary is less than 50000.
24. To list the employee information other than all the salesman with benefit more than 13000.

25. Display the employees whose designation is null.
26. Display the employee id and designation of those employees whose designation is not null and salary is less than 40000.
27. (i) display the employees whose designation starts with sal.
    (ii) display the employees whose designation contains 5 characters ending with k.
28. Display the employee table in ascending order of the employee salary.
29. Display the employee id and salary from Employee table in descending order of their benefit.
30. To list the designation and total salary of the employees designation wise.
31. To list the designation and maximum benefit of the employees designation wise with number of employees more than 2.
32. Differentiate between where clause and having clause.
33. Which clause is used to divide a table into multiple groups?
34. Write a command to add a new column PHONENO to the table Employee.
35. Write a command to delete a table named student.
36. Delete all the employees working as clerk.
37. Increase the salary of managers by 2000.

Sub-Topic: SQL Commands

Level-1 (Difficult) 1 Mark Questions

38. With reference to the table below, answer the questions that follow:

Table : Employees

Empid	Firstname	Lastname	Address	City
010	Ravi	Kumar	Raj nagar	GZB
105	Harry	Waltor	Gandhi nagar	GZB
152	Sam	Tones	33 Elm St.	Paris
215	Sarah	Ackerman	440 U.S. 110	Upton
244	Manila	Sengupta	24 Friends street	New Delhi
300	Robert	Samuel	9 Fifth Cross	Washington
335	Ritu	Tondon	Shastri Nagar	GZB
400	Rachel	Lee	121 Harrison	New York

			St.	
441	Peter	Thompson	11 Red Road	Paris

Table : EmpSalary

Empid	*Salary*	*Benefits*	*Designation*
010	75000	15000	Manager
105	65000	15000	Manager
152	80000	25000	Director
215	75000	12500	Manager
244	50000	12000	Clerk
300	45000	10000	Clerk
335	40000	10000	Clerk
400	32000	7500	Salesman
441	28000	7500	Salesman

Write the SQL commands for the following using above tables :

(i) To show firstname, lastname, address and city of all employees living in Pairs
(ii) To display the content of Employees table in descending order of Firstname.
(iii) To display the firstname, lastname and total salary of all managers from the tables Employes and EmpSalary, where total salary is calculated as Salary + Benefits.
(iv) To display the maximum salary among managers and clerks from the table EmpSalary.

Give the Output of following SQL commands :

(i) Select firstname, Salary from Employees, Empsalary where Designation = 'Salesman' and Employees.Empid = Empsalary.Empid ;
(ii) Select count(distinct designation) from EmpSalary ;
(iii) Select designation, sum(salary) from EmpSalary group by designation having count(*) >2 ;
(iv) Select sum(Benefits) from EmpSalary where Designation = 'Clerk' ;

39. Consider the following tables STORE and SUPPLIERS and answer (*a*) and (*b*) parts of this question.

Table : STORE

ItemNo	*Item*	*Scode*	*Qty*	*Rate*	*LastBuy*
2005	Sharpener Classic	23	60	8	31-Jun-09
2003	Ball Pen 0.25	22	50	25	01-Feb-10
2002	Gel Pen Premium	21	150	12	24-Feb-10
2006	Gel Pen Classic	21	250	20	11-Mar-09
2001	Eraser Small	22	220	6	19-Jan-09

2004	Eraser Big	22	110	8	02-Dec-09
2009	Ball Pen 0.5	21	180	18	03-Nov-09

Table : SUPPLIERS

Scode	*Sname*
21	Premium Stationers
23	Soft Plastics
22	Tetra Supply

(a)Write SQL commands for the following statements :

(i) To display details of all the items in the Store table in ascending order of LastBuy.

(ii) To display ItemNo and Item name of those items from Store table whose Rate is more than 15 Rupees.

(iii) To display the details of those items whose Suppliers code (Scode) is 22 or Quantity in Store (Qty) is more than 110 from the table Store.

(iv) To display Minimum Rate of items for each Supplier individually as per Scode from the table Store.

(b)Give the output of the following SQL queries :

(i) SELECT COUNT (DISTINCT Scode) FROM Store ;

(ii) SELECT Rate*Qty FROM Store WHERE ItemNo = 2004 ;

(iii) SELECT Item, Sname FROM Store S, Suppliers P WHERE S.Scode = P.Scode AND Item No = 2006 ;

(iv) SELECT MAX (LastBuy) FROM Store ;

40. Consider the following tables. Write SQL commands for the statements (*i*) to (*iv*) and give outputs for SQL queries (*v*) to (*viii*)

TABLE : SENDER

SenderID	*SenderName*	*SenderAddress*	*SenderCity*
ND01	R Jain	2, ABC Appts	New Delhi
MU02	H Sinha	12, Newtown	Mumbai
MU15	S Jha	27/A, Park Street	Mumbai
ND50	T Prasad	122-K, SDA	New Delhi

TABLE : RECIPIENT

RecID	*SenderID*	*RecName*	*RecAddress*	*RecCity*
KO05	ND01	R Bajpayee	5, Central Avenue	Kolkata
ND08	MU02	S Mahajan	116, A Vihar	New Delhi
MU19	ND01	H Singh	2A, Andheri East	Mumbai
MU32	MU15	P K Swamy	B5, C S Terminus	Mumbai
ND48	ND50	S Tripathi	13, B1 D, Mayur Vihar	New Dehli

(i) To display the names of all Senders from Mumbai

(ii) To display the RecID, SenderName, SenderAddress, RecName, RecAddress for every Recipient

(iii) To display Recipient details in ascending order of RecName

(iv) To display number of Recipients from each city

(v) SELECT DISTINCT SenderCity FROM Sender ;

(vi) SELECT A. SenderName, B.RecName FROM Sender A, Recipient B WHERE A. SenderID = B.SenderID AND B.RecCity = `Mumbai' ;

(vii) SELECT RecName, RecAddress FROM Recipient WHERE RecCity NOT IN(`Mumbai', `Kolkata') ;

(viii) SELECT RecID, RecName FROM Recipient WHERE SenderID = `MU02' OR SenderID = `ND50' ;

****