SQL Syllabus

1) **What is DBMS?**
2) **What is RDBMS?**
3) **Examples of RDMS?**
4) **What we can do with the help of SQL?**
5) **Classification of SQL commands**
   - I) DDL (Data Definition Language)
   - II) DML (Data Manipulation Language)
   - III) DCL (Data Control Language)
6) **Data types in SQL**
7) **Different types of Constraints**
   - a) Primary Key
   - b) Foreign Key
   - c) Unique Key
   - d) Default
   - e) Not Null
   - f) Check
8) **Table Creation**
   - a) Table Creation without Constraint
   - b) Table Creation with constraint
   - c) Table creation from existing table
   - d) How to view the structure of table
9) **Data insertion into table**
   - a) Full insert
   - b) Partial insert
   - c) Copy the data from another table and insert
   - d) Insert from file
   - e) Data transaction commands (commit, rollback)
10) **Display the data from table**
    - a) Displaying all the records
    - b) Displaying unique or distinct records
    - c) Display the records Based on Condition
    - d) Display the records in Ascending or Descending
    - e) Displaying the records using alias concept
11) **Operators used to apply the condition**

No	Operator Name	Symbol
1	Equal to	=
2	Not equal to	!= , <>
3	Less than	<
4	Greater than	>

5	Less than or equal to	<=
6	Greater than or equal to	>=
7	Between	
8	Not Between	
9	IS NULL	
10	IS NOT NULL	
11	IN	
12	NOT IN	
13	AND	
14	OR	

12) **SQL Function**
   a) **Single row Function**
      i) Character Functions
      ii) Number Functions
      iii) Date Functions
      iv) Conversion Functions
      v) General Functions
   b) **Multi Row Function**
13) **Single Row Function**
   a) Character Functions
      i) Lower
      ii) Upper
      iii) InitCap
      iv) Concat
      v) Substring
      vi) Length
      vii) Instr
      viii) Lpad
      ix) Rpad
      x) Trim
      xi) Replace
   b) **Date Functions**
      i) Sysdate
      ii) Arithmetic with date
      iii) MONTH_BETWEEN
      iv) ADD_MONTH
      v) NEXT_DAY
      vi) LAST_DAY

       vii) TRUNC

       viii) ROUND

c) Numeric Functions

    i) Round

    ii) Trunc

    iii) Mod

d) Conversion Functions

    i) Varchar or char to Number Conversion

    ii) Varchar to Date Conversion

    iii) Number to Varchar Conversion

    iv) Date to Varchar Conversion

e) General Functions

    i) NVL

    ii) NVL2

    iii) NULLIF

    iv) COALESCE

    v) CAE

    vi) Decod

c) Multi Row Function (Also Called Aggregate Functions)

    i) Sum

    ii) Avg

    iii) Count

    iv) Min

    v) Max

14) Group by Clause

15) Having Clause

16) Deleting records from table

17) Truncate statement

18) Updating records of table

19) Changing structure of table or alter the table Structure

    i)   Change the name of table

    ii)   Change the name of column

    iii)   Change the data type of column

    iv)   Change add new column

    v)   Delete column of table

    vi)   Add constraint to column

    vii) Delete constraint of column

    viii) Enable or disable constraint

20) Different types of Joins (Obtaining Data from Multiple tables)

    a) Inner Join

    b) Left Outer Join or Left Join

    c) Right Outer Join or Right Join

    d) Full outer Join or Full Join

    e) Self-Join

21) Set Operators
   a)   UNION
   b)   UNION ALL
   c)   INTERSECT
   d)   MINUS

22) Creating other schemas
   a)   What is view and how to Create View?
   b)   What is sequence and how to create sequence?
   c)   What is index and how to create Index?
   d)   Synonyms

23) Managing the Objects with Data Dictionary view

24) Controlling the user Access
   i)   Creating User
   ii)   Privileges
   iii) Grant Privilege
   iv) Revoking Privilege
   v)   Changing password

25) Interview questions

26) Two mini-Projects

27) Linux commands

28) Software required
   1)   Oracle
   2)   Mysql
   3)   Linux