

Descriptive Question of Oracle

1. Define primary and foreign key?

Answer: A **primary key** is a unique identifier in a table. A **foreign key** is a column in a table (child) that references to a **primary key** column in another table (parent). Relationships between two tables are normally established by defining primary or foreign keys.

2. What is a Database?

Answer: A collection of all tables under a single or many different schemas can be stored and maintained in a database. A database, infect, is a collection of objects such as tables, indexes, stored procedures, etc.

3. What is an ambiguous column?

Answer: An ambiguous column is a column that is not defined clearly. Having two tables with the same column name, you should reference them such that there is no ambiguity on their ownerships.

4. What is a Cartesian product?

Answer: A "Cartesian" product is caused by joining "N" number of tables while you have less than "N-1" joins condition in the query.

5. What is an inner join or Equi-join?

Answer: Joining two or more tables together using the WHERE clause with the equal sign (=) in a query. This type of query will retrieve records that have exact match and will be called inner join or equi-join.

6. What is a self join?

Answer: Self join is just like any other join, except that two instances of the same table will be joined in the query.

7. What is the difference between the delete statement and the truncate statement?

Answer: TRUNCATE commits after deleting entire table i.e., cannot be rolled back.

Database triggers do not fire on TRUNCATE

DELETE allows the filtered deletion. Deleted records can be rolled back or committed.

Database triggers fire on DELETE.

8. What are the advantages of view?

Answer:

- Provide an additional level of table security, by restricting access to a predetermined set of rows and columns of a table.
- Hide data complexity.
- Simplify commands for the user.
- Present the data in a different perspective from that of the base table.
- Store complex queries.

9. What is the inline view in the Oracle SQL statement?

Answer: If we have a sub-query in a FROM clause in the Oracle SQL statement, is called an inline view.

Ex. SQL> SELECT ename, job, sal
FROM (SELECT ename, job, sal

```
FROM emp
WHERE sal > (SELECT SUM(sal) * .1
             FROM emp)
ORDER BY 3)
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10. What does the UNION statement in the SQL statement?

Answer: It will query all the records that match or not match with the base table.

11. Why it is important to eliminate duplicate records?

Answer: keep your database integrity.

12. What is schema?

Answer: A schema is collection of database objects of a user.

13. What is an Oracle sequence?

Answer: A sequence generates a serial list of unique numbers for numerical columns of a database's tables.

14. What is a synonym?

Answer: A synonym is an alias for a table, view, sequence or program unit.

15. What is an Oracle index?

Answer: An index is an optional structure associated with a table to have direct access to rows, which can be created to increase the performance of data retrieval. Index can be created on one or more columns of a table.

16. What is a join? Explain the different types of joins?

Answer:

Join is a query, which retrieves related columns or rows from multiple tables.

Self Join - Joining the table with itself.

Equi Join - Joining two tables by equating two common columns.

Non-Equi Join - Joining two tables by equating two common columns.

Outer Join - Joining two tables in such a way that query can also retrieve rows that do not have corresponding join value in the other table.

17. What is the sub-query?

Answer: Sub-query is a query whose return values are used in filtering conditions of the main query.

18. What is referential integrity constraint?

Answer: Maintaining data integrity through a set of rules that restrict the values of one or more columns of the tables based on the values of primary key or unique key of the referenced table.

19. What is the usage of SAVEPOINTS?

Answer: SAVEPOINTS are used to subdivide a transaction into smaller parts. It enables rolling back part of a transaction. Maximum of five save points are allowed.

20. What is ON DELETE CASCADE?

Answer: When ON DELETE CASCADE is specified Oracle maintains referential integrity by automatically removing dependent foreign key values if a referenced primary or unique key value is removed.

21. What are the data types allowed in a table?

Answer: CHAR, VARCHAR2, NUMBER, DATE, RAW, LONG and LONG RAW.

22. When do you use WHERE clause and when do you use HAVING clause?

Answer: The WHERE condition lets you restrict the rows selected to those that satisfy one or more conditions. Use the HAVING clause to restrict the groups of returned rows to those groups for which the specified condition is TRUE.

23. What is the difference between & and &&?

Answer: "&" is used to create a temporary substitution variable and will prompt you for a value every time it is referenced.

"&&" is used to create a permanent substitution variable as with the DEFINE command and the OLD_VALUE or NEW_VALUE clauses of a COLUMN statement.

24. What is a deadlock?

Answer: Two processes waiting to update the rows of a table, which are locked by other processes then deadlock arises.

In a database environment this will often happen because of not issuing the proper row lock commands. Poor design of front-end application may cause this situation and the performance of server will reduce drastically.

These locks will be released automatically when a commit/rollback operation performed or any one of this processes being killed externally.

25. What is the difference between the JOIN syntax and the NATURAL JOIN syntax?

Answer: In the NATURAL JOIN syntax, we don't need the ON clause if the column's names are the same.

26. Difference between SUBSTR and INSTR?

INSTR (String1, String2 (n, (m))),

INSTR returns the position of the m-th occurrence of the string 2 in string1. The search begins from nth position of string1.

SUBSTR (String1 n, m)

SUBSTR returns a character string of size m in string1, starting from n-th position of string1.

27. What do you mean by RDBMS?

Answer: A **relational database management system (RDBMS)** is a database management system (DBMS) that is based on the relational model as introduced by E. F. Codd. Most popular databases currently in use are based on the relational database model.

A short definition of an RDBMS is: a DBMS in which data is stored in tables and the relationships among the data are also stored in tables. The data can be accessed or reassembled in many different ways without having to change the table forms.

28. What do you mean by Trunc function?

Answer: the **trunc** function returns a date truncated to a specific unit of measure.

The syntax for the **trunc** function is:

trunc (date, [format])

date is the date to truncate.

format is the unit of measure to apply for truncating. If the *format* parameter is omitted, the **trunc** function will truncate the date to the day value, so that any hours, minutes, or seconds will be truncated off.

the **trunc** function also returns a number truncated to a certain number of decimal places.

The syntax for the **trunc** function is:

`trunc(number, [decimal_places])`

number is the number to truncate.

decimal_places is the number of decimal places to truncate to. This value must be an integer. If this parameter is omitted, the **trunc** function will truncate the number to 0 decimal places.

29. Why we use NVL function?

Answer: the **NVL** function lets you substitute a value when a null value is encountered.

The syntax for the **NVL** function is:

`NVL(string1, replace_with)`

string1 is the string to test for a null value.

replace_with is the value returned if *string1* is null.

30. What happens after a COMMIT statement?

Answer: After commit statement, all changed data will be saved in permanent database.

After commit all the locks on the database tables are leased.

31. What is the state of the data after ROLLBACK?

Answer: In rolling back **an entire transaction**, without referencing any savepoints, the following occurs:

1. Oracle undoes all changes made by all the SQL statements in the transaction by using the corresponding undo tablespace or rollback segment.
2. Oracle releases all the transaction's locks of data.
3. The transaction ends.

32. What is data dictionary?

Answer: **Data dictionary** provides information that Oracle needs to perform its tasks. This information consists of *definition*, *allocated* and *used* storage size for database objects, default column values, integrity constraints, names of and privileges granted to users, auditing information and more.

33. What is Role?

Answer: A **role** is a set or group of privileges that can be granted to users or another role. This is a great way for database administrators to save time and effort.

34. What is function of CASCADE CONSTRAINTS?

Answer: Dropping primary key constraint will succeed only if the foreign key is first dropped otherwise we have to first drop the foreign key and then drop the primary key. If we want to drop primary key along with the foreign key in one statement then can use CASCADE CONSTRAINT statement like this

Alter table emp drop constraint emppk cascade;

35. What is the function of NULLIF?

Answer: the **NULLIF** function compares *expr1* and *expr2*. If *expr1* and *expr2* are equal, the **NULLIF** function returns NULL. Otherwise, it returns *expr1*.

The syntax for the **NULLIF** function is:

`NULLIF(expr1, expr2)`

expr1 and *expr2* must be either numeric values or values that are of the same datatype.