1. What is the difference between Procedure and Function?

1) Function must return a value and procedure need not.

2) Function can be used in SQL with some restrictions. Procedure cannot be called directly from SQL.

2. What is the difference between DELETE and TRUNCATE?

1) DELETE is a DML command and TRUNCATE is a DDL command.

2) TRUNCATE re-set the memory blocks after execution and much faster than DELETE in most of the circumstances.

3. What is the difference between PRIMARY KEY and UNIQUE KEY constraints?

1) UNIQUE KEY columns can have null values but PRIMARY KEY column cannot accept null values.

2) A table can have only one PRIMARY KEY column (composite primary key is ok) but many UNIQUE KEY columns allowed.

3) When we declare the primary key, unique index is automatically created. Index is not created in unique key.

4. What is Cartesian product?

1) If two or more tables are joining without join condition will result into Cartesian products.

2) If table A has 2 rows and table B has 4 rows then Cartesian product between A and B will return 8 rows (2 multiply by 4)

5. What is a Transaction?

1) Transaction is a logical unit of work which will end in a consistent status

2) In Oracle we can control transactions using save points, Commit, rollback etc.

6. What is a Package, why do we go for packages?

1) Package is a collection of one more program units having Procedure, Function etc.

2) Depends on business logic, all related program units can be tied into a single package for better maintenance, readability etc.

7. What is triggers, where we use triggers?

1) Procedural code which automatically executes based on an event like insert, update, delete etc.

2) Auditing, Logging etc.

8. How to do sql performance tuning?

1) Basic sql performance starts with EXPLAIN PLAN

2) Explain cost, index, access methods, plan etc.

9. What is the most challenging/difficult feature in Oracle?

1) This is the most tricky question, answer based on your experience.

2) Do not answer with a trivial problem, try something advanced feature

10. What is a materialized view?

1) A materialized view, also called as snapshot, which contains the results of a query.

2) Generally used to create summary tables based on aggregations of a table data.

11. What is the difference between Anonymous blocks and sub programs?

a) Anonymous blocks are unnamed blocks which are not stored anywhere while sub programs are compiled and stored in database.

b) Anonymous blocks compile at run time.

12. What is Implicit Cursor and Explicit Cursor?

a) Implicit Cursor is defined and controlled by Oracle Internally.

b) Explicit Cursor is defined and controlled programmatically.

5. Difference between DECODE and CASE

CASE is an extended version of decode.

1. In CASE we can use relational operators but in decode only equality can be checked.

2. CASE is a block and it can be directly used in PLSQL. Decode is a function so it has to be used through SQL.

**13. How to find nth highest salary?**

Ans :- Click here

14. Difference between UNION and UNION ALL clause

1. Union removes the duplicates

2. Union all is faster than union

15. What is Autonomous Transaction?

An autonomous transaction is an independent transaction to the main or parent transaction. If an autonomous transaction is started by another transaction it is not nested, but independent of parent transaction. It is used to maintain logs even if the parent transaction fails.

**16. Difference between REPLACE and TRANSLATE functions**

Ans:- Click here

**17. What is LEAD and LAG function used for?**

Ans:- Click here

18. Explain function or procedure overloading

Inside a package if there are more than one functions/procedures with same name but different arguments then it is called overloading.

19. What is MERGE used for?

Merge is used to combine one or more DML statements into one.

20. What is GREATEST and LEAST function used for?

Greatest function used to find the maximum value within the numbers specified. Least function used to find the number value within the numbers specified. Both are single-row mathematical functions. It is used to find MIN or MAX horizontally in a table. If there is sal for 12 months for each employee, then we can find min and max using greatest and least.

All the data types of the arguments should be same. If there is null in any of the values then null will be the output.

select greatest(-1,0,1,2,3) from dual;

select least(0,1,2,3) from dual;

21. Where we use SOUNDEX function ?

SOUNDEX function help you to find words matching phonetically ( By pronunciation ).SOUNDEX is very useful for finding similar pronouncing names. For example say I need to find all employee sound “Daniel”. Phonetically Daniel,Danial and Daniyal are same. So below query will find all “Daniel's.

select empno,empname from emp where soundex(empname) = soundex(‘danial’);

22. What is COALESCE function ?

The COALESCE function returns first not null expression among the arguments. Minimum 2 arguments required. If all expressions are null then it returns null.

23. Difference between TRUNC and ROUND function

Trunc will just remove the decimal part. Round will round off.

24. What is PRAGMA ?

PRAGMA is Oracle keyword to telling the compiler to do some special work. Pragmas are processed at compile time and not runtime.

PRAGMA AUTONOMOUS TRANSACTION

PRAGMA EXCEPTION\_INIT

PRAGMA SERIALLY\_REUSABLE

PRAGMA RESTRICT\_REFERENCES

25. What is Constraint ? How many constraints are available ?

Constraint is a rule imposed on tables to restrict the values stored in. Oracle has five different type of constraints.

26. Clustered and non-clustered index

Clustered – requires reordering of the table. Only one clustered index in a table.

Non clustered- Doesn’t need to reorder

27.

23) What is the difference between clustered and non clustered index in SQL?

There are mainly two type of indexes in SQL, Clustered index and non clustered index. The differences between these two indexes is very important from SQL performance perspective.

1. One table can have only one clustered index but it can have many non clustered index.(approximately 250).
2. clustered index determines how data is stored physically in table. Actually clustered index stores data in cluster, related data is stored together so it makes simple to retrieve data.
3. reading from a clustered index is much faster than reading from non clustered index from the same table.
4. clustered index sort and store data rows in the table or view based on their key value, while non cluster have a structure separate from the data row.
5. **1. Shared Lock**
6. When a shared lock is applied on data item, other transactions can only read the item, but can't write into it.
7. **2. Exclusive Lock**
8. When an exclusive lock is applied on data item, other transactions can't read or write into the data item.
9. **1. First Normal Form (1NF)**
10. A relation is said to be in first normal form if and only if all underlying domains contain atomic values only. After 1NF, we can still have redundant data.
11. **2. Second Normal Form (2NF)**
12. A relation is said to be in 2NF if and only if it is in 1NF and every non key attribute is fully dependent on the primary key. After 2NF, we can still have redundant data.
13. **3. Third Normal Form (3NF)**
14. A relation is said to be in 3NF, if and only if it is in 2NF and every non key attribute is non-transitively dependent on the primary key.

**Write an SQL Query to check whether date passed to Query is the date of given format or not**.  
  
Read more: <http://www.java67.com/2013/04/10-frequently-asked-sql-query-interview-questions-answers-database.html#ixzz4akCLoJug>

Check for alphabet or digit

Using translate function.

Write SQL Query to find duplicate rows in a database? and then write SQL query to delete them?

1.Using row id  
2. Using self join(rowid)

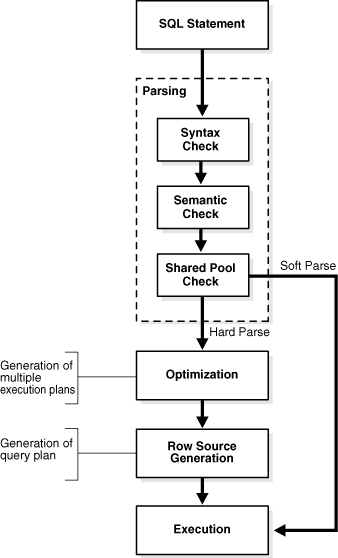
3.Analytic function(dense\_rank,row\_number)

Read more: <http://www.java67.com/2013/04/10-frequently-asked-sql-query-interview-questions-answers-database.html#ixzz4akCdH4zu>

Disadvantages of indexes

1. Indexes slows down the performance of insert and update statements. So always we need follow best practice of disabling indexes before insert and update the table

2. Indexes takes additional disk space so by considering memory point indexes are costly.



**Invisible Index**

Oracle 11g introduces a new feature for indexes, invisible indexes, that is useful in several different situations.  An invisible index is an index that is maintained by the database but ignored by the optimizer unless explicitly specified.  The invisible index is an alternative to dropping or making an index unusable.  This feature is also functional when certain modules of an application require a specific index without affecting the rest of the application.

Unix commands

LS, CP, MV, WC, GREP, PG, MORE, CAT, VI, SORT, PS, TOP, FG, KILL, PING, TELNET, CLEAR, UNAME, WHO, FINGER, EXIT, MAN, SU, UPTIME

CD, MKDIR, RMDIR, PWD, RM

UNAME – OS VERSION

UPTIME – how long server is up and running and no. of users connected

How to create file in unix

Cat, touch, echo, text editor (vi)

touch file.txt – changes modification time to current time

touch –a changes access time.