1.What is PL SQL ?

PL SQL is a procedural language which has interactive SQL, as well as procedural programming language constructs like conditional branching and iteration.

2.Explain uses of cursor.

Cursor is a named private area in SQL from which information can be accessed. They are required to process each row individually for queries which return multiple rows.

3.Show code of a cursor for loop.

Cursor declares %ROWTYPE as loop index implicitly. It then opens a cursor, gets rows of values from the active set in fields of the record and shuts when all records are processed.

Eg. FOR smp_rec IN C1 LOOP

totalsal=totalsal+smp_recsal;

ENDLOOP;

4.Explain the uses of database trigger.

A PL/SQL program unit associated with a particular database table is called a database trigger. It is used for :

1) Audit data modifications.

2) Log events transparently.

3) Enforce complex business rules.

4) Maintain replica tables

5) Derive column values

6) Implement Complex security authorizations

5.What are the two types of exceptions.

Error handling part of PL/SQL block is called Exception. They have two types : user_defined and predefined.

6.How is a process of PL SQL compiled?
Compilation process includes syntax check, bind and p-code generation processes.

Syntax checking checks the PL SQL codes for compilation errors. When all errors are corrected, a storage address is assigned to the variables that hold data. It is called Binding. P-code is a list of instructions for the PL SQL engine. P-code is stored in the database for named blocks and is used the next time it is executed.

6.Explain Commit, Rollback and Savepoint.

For a COMMIT statement, the following is true:

Other users can see the data changes made by the transaction.
The locks acquired by the transaction are released.
The work done by the transaction becomes permanent.

A ROLLBACK statement gets issued when the transaction ends, and the following is true.

The work done in a transition is undone as if it was never issued.
All locks acquired by transaction are released.

It undoes all the work done by the user in a transaction. With SAVEPOINT, only part of transaction can be undone.

7.Define Implicit and Explicit Cursors.

A cursor is implicit by default. The user cannot control or process the information in this cursor.

If a query returns multiple rows of data, the program defines an explicit cursor. This allows the application to process each row sequentially as the cursor returns it.

8.When is a declare statement required?

DECLARE statement is used by PL SQL anonymous blocks such as with stand alone, non-stored procedures. If it is used, it must come first in a stand alone file.

9.How many triggers can be applied to a table?

A maximum of 12 triggers can be applied to one table.

10.If a cursor is open, how can we find in a PL SQL Block?

the %ISOPEN cursor status variable can be used.

11.Explain 3 basic parts of a trigger.

A triggering statement or event.
A restriction
An action

12.Show the cursor attributes of PL/SQL.

%ISOPEN : Checks if the cursor is open or not

%ROWCOUNT : The number of rows that are updated, deleted or fetched.

%FOUND : Checks if the cursor has fetched any row. It is true if rows are fetched

%NOT FOUND : Checks if the cursor has fetched any row. It is True if rows are not fetched.

13.How would you reference column values BEFORE and AFTER you have inserted and deleted triggers?

Using the keyword "new.column name", the triggers can reference column values by new collection. By using the keyword "old.column name", they can reference column vaues by old collection.

14.What are the uses of SYSDATE and USER keywords?

SYSDATE refers to the current server system date. It is a pseudo column. USER is also a pseudo column but refers to current user logged onto the session. They are used to monitor changes happening in the table.

15.What does fetching a cursor do?

Fetching a cursor reads Result Set row by row.

16.What does closing a cursor do?

Closing a cursor clears the private SQL area as well as de-allocates memory

17.Differ between Anonymous blocks and sub-programs.

Anonymous blocks are unnamed blocks that are not stored anywhere whilst sub-programs are compiled and stored in database. They are compiled at runtime.

18.What is the location of Pre_defined_functions.

They are stored in the standard package called "Functions, Procedures and Packages"

19.Can 2 queries be executed simultaneously in a Distributed Database System?

Yes, they can be executed simultaneously. One query is always independent of the second query in a distributed database system based on the 2 phase commit.

20.What is out parameter used for eventhough return statement can also be used in pl/sql?

Out parameters allows more than one value in the calling program. Out parameter is not recommended in functions. Procedures can be used instead of functions if multiple values are required. Thus, these procedures are used to execute Out parameters.

21.Mention what PL/SQL package consists of?

A PL/SQL package consists of

PL/SQL table and record TYPE statements
Procedures and Functions
Cursors
Variables (tables, scalars, records, etc.) and constants
Exception names and pragmas for relating an error number with an exception
Cursors

22.Mention what are the benefits of PL/SQL packages?

It provides several benefits like

Enforced Information Hiding: It offers the liberty to choose whether to keep data private or public
Top-down design: You can design the interface to the code hidden in the package before you actually implemented the modules themselves
Object persistence: Objects declared in a package specification behaves like a global data for all PL/SQL objects in the application. You can modify the package in one module and then reference those changes to another module
Object oriented design: The package gives developers strong hold over how the modules and data structures inside the package can be used
Guaranteeing transaction integrity: It provides a level of transaction integrity
Performance improvement: The RDBMS automatically tracks the validity of all program objects stored in the database and enhance the performance of packages.

23.Explain how exception handling is done in advance PL/SQL?

For exception handling PL/SQl provides an effective plugin PLVexc. PLVexc supports four different exception handling actions.

Continue processing
Record and then continue
Halt processing
Record and then halt processing

For those exceptions that re-occurs you can use the RAISE statement.

24.Define SQL and state the differences between SQL and other conventional programming Languages?

SQL is a nonprocedural language that is designed specifically for data access operations on normalized relational database structures. The primary difference between SQL and other conventional programming languages is that SQL statements specify what data operations should be performed rather than how to perform them.

25.What are stored-procedures? And what are the advantages of using them.

Stored procedures are database objects that perform a user defined operation. A stored procedure can have a set of compound SQL statements. A stored procedure executes the SQL commands and returns the result to the client. Stored procedures are used to reduce network traffic

26.Which function is used to find the largest integer less than or equal to a specificvalue?
FLOOR

27.What is the use of DESC in SQL?
DESC has two purposes. It is used to describe a schema as well as to retrieve rows from table in descending order.The query SELECT * FROM EMP ORDER BY ENAME DESC will display the output sorted on ENAME in descending order

28.What is the use of the DROP option in the ALTER TABLE command?
It is used to drop constraints specified on the table.

29.What is the advantage of specifying WITH GRANT OPTION in the GRANT command?
The privilege receiver can further grant the privileges he/she has obtained from the owner to any other user.

30.Which date function is used to findthe difference between two dates?
MONTHS_BETWEEN

31.What the difference isbetween TRUNCATE and DELETE commands?
TRUNCATE is a DDL
command whereas DELETE is a DML command. Hence DELETE operation can be rolled back, but TRUNCATE operation cannot be rolled back. WHERE clause can be used with DELETE and not with TRUNCATE.

32.State true or false. !=, <>, ^= all denote the sameoperation.
True

33.What are the wildcards used for pattern matching?
Forsingle character substitution and % for multi-character substitution