**PL SQL Descriptive**

**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 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

**3. 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.

**4. 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.

**5. 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.

**6. Name few schema objects that can be created using PL/SQL?**

Stored procedures and functions

Packages

Triggers

Cursors

**7. What does the colon sign (: ) implies in the following statement?**

:deficit := balance – loan;

The colon (: )sign implies that the variable :deficit is an external variable.

**8. What is the purpose of %type data type? Explain with example.**

It assigns a variable the same data type used by the column, for which the variable is created. For example,

dcode := dept.detpno%type;

The variable dcode is created with the same data type as that of the deptno column of the dept table.

**9. What is the purpose of %rowtype data type? Explain with example.**

It declares a composed variable that is equivalent to the row of a table. After the variable is created, the fields of the table can be accessed, using the name of this variable.

For example

emptype := emp%rowtype;

name := emptype.empname;

**10. What is a PL/SQL package?**

A package is a file that groups functions, cursors, stored procedures, and variables in one place.

**11. What is a trigger?**

A trigger is a PL/SQL program that is stored in the database and executed immediately before or after the INSERT, UPDATE, and DELETE commands.

**12. What are the PL/SQL cursors?**

Oracle uses workspaces to execute the SQL commands. In other words, when Oracle processes a SQL command, it opens an area in the memory called Private SQL Area. A cursor is an identifier for this area. It allows programmers to name this area and access it’s information.

**13. What is the difference in execution of triggers and stored procedures?**

A trigger is automatically executed without any action required by the user, whereas, a stored procedure needs to be explicitly invoked.

**14. What is the difference between function and procedure in PL/SQL?**

A function has a return type in its specification and must return a value specified in that type. A procedure does not have a return type in its specification and should not return any value, but it can have a return statement that simply stops its execution and returns to the caller.

**15. What are the datatypes available in PL/SQL?**

There are two types of datatypes in PL/SQL:

Scalar datatypes Example are NUMBER, VARCHAR2, DATE, CHAR, LONG, BOOLEAN etc.

Composite datatypes Example are RECORD, TABLE etc.

**16. What is the basic structure of PL/SQL?**

PL/SQL uses BLOCK structure as its basic structure. Each PL/SQL program consists of SQL and PL/SQL statement which form a PL/SQL block.

PL/SQL block contains 3 sections.

The Declaration Section (optional)

The Execution Section (mandatory)

The Exception handling Section (optional)

**17. What is the difference between FUNCTION, PROCEDURE AND PACKAGE in PL/SQL?**

Function: The main purpose of a PL/SQL function is generally to compute and return a single value. A function has a return type in its specification and must return a value specified in that type.

Procedure: A procedure does not have a return type and should not return any value but it can have a return statement that simply stops its execution and returns to the caller. A procedure is used to return multiple values otherwise it is generally similar to a function.

Package: A package is schema object which groups logically related PL/SQL types , items and subprograms. You can also say that it is a group of functions, procedure, variables and record type statement. It provides modularity, due to this facility it aids application development. It is used to hide information from unauthorized users.

**18. What are the advantages of stored procedure?**

Modularity, extensibility, reusability, Maintainability and one time compilation.