

# Advanced Database in PL/SQL

## Sample Questions

1. What are SQL and SQL PLUS? Write their functions. 7
2. What are DML and DDL statements? Describe the data types used in SQL. 8
3. Describe ALTER command to show its various usages on modifying an existing table. 8
4. What is integrity constraint? How do you drop an existing constraint? Illustrate with appropriate examples. 7
5. Write SQL queries to perform following operations:
  - a. To show total salary of an employee by deducting tax from base salary.
  - b. To show the details of employees salary ranging from 20000 to 50000.
  - c. To insert a new record of an employee.
  - d. To delete all entries from the table whose id is between 10 and 20.
  - e. To show all the details of employees sorted in descending order.

Table Structure:

EMPLOYEE

ID	NAME	ADDRESS	BASE SALARY	TAX
3	Hugh	Australia	28000	1200
5	Ramesh	Nepal	37000	2400
10	Giovani	Italy	50000	3000

6. How do you group data in SQL? Explain with proper example and output. 7
7. What are the sub-queries? Perform SQL sub-queries to get following result: 8
  - a. To show the details of student from 'student' table studying in semester 7.
  - b. To show the details of students ranked as top 3.

Table Structure:

STUDENT

ID	NAME	ADDRESS	AGE	MOBILE
2	Donald	Washington	24	9012892112
3	Vladimir	Moscow	21	9012984325

ENROLLMENT

ID	SEMESTER	RANK
2	7	4
4	3	1

8. What is Security Management in SQL? How can you GRANT and REVOKE privileges, explain with suitable examples. 8
9. What is PL/SQL? Write its advantages. 7
10. How is block structure of PL/SQL program is defined? Explain using a simple program. 7
11. What are the commonly used data types in PL/SQL? How a variable is declared in PL/SQL program? 7
12. Write a PL/SQL program illustrating IF ELSE condition behaviour. 8
13. What is an oracle transaction? Describe COMMIT, ROLLBACK and SAVEPOINT statements with examples. 7
14. How can concurrency be controlled in Oracle? Explain the types of locking. 8
15. What is a cursor? Write a PL/SQL program to show the total numbers of records affected using implicit cursor. 8
16. What is explicit cursor? Describe the steps to use an explicit cursor with examples. 8
17. Write a PL/SQL program to show the record of given customer using parameterized cursor passing customer id as parameter. (Table name: customer, columns: id, name, address) 8
18. What are procedures and functions? Write their differences. 7
19. Write a PL/SQL procedure to find the average of two numbers . 8
20. What are formal and actual parameters in PL/SQL subprograms? Write a PL/SQL program to calculate greater among 2 numbers using function. 7
21. Write a PL/SQL function to calculate factorial of a number using recursive function. 8
22. What is a PL/SQL package? Describe the parts of a package in detail with a example. 8
23. What are the private and public items in package? Describe STANDARD package. 8
24. Explain DBMS\_ALERT, DBMS\_OUTPUT, UTL\_FILE and UTL\_HTTP packages. 7
25. Write short notes:
  - a. Product specific PL/SQL packages.
  - b. Passing actual parameters in PL/SQL subprograms.
  - c. PL/SQL functions.
  - d. Oracle transactions and transaction properties.
  - e. Loop controls in PL/SQL.
  - f. SQL sub-queries.
  - g. DROP VS DELETE statement