

- Note: i) All questions are compulsory.
ii) Figures to the right indicate full marks.
iii) Give query example wherever necessary.

Q.1 Attempt any Two.**[10]**

- What is the use of database indexes? Explain its types. Give suitable example of it.
- What do you mean by join? Explain Equi-join, Right Join and Full outer Join with proper example.
- What do you mean by sequence? Explain the keywords and parameters used in it.
- Consider following tables-

Student(rollno, sname, city, marks, classid)Class(classid, classname, capacity)

Solve following queries –

- How many students enrolled in each class?
- Display the details of students along with their class details.
- Display the classes whose name starts with 'S' and third letter is 'C'.
- Display the name of a student whose marks are maximum.
- How many students are enrolled for S.Y.B.Sc(IT) class?

Q.2 Attempt any Two.**[10]**

- Explain WITH clause with suitable example.
- Which are the different SET operators used in oracle?
- Write a short note on-
 - Granting privileges
 - ROLLUP operator
- Write a short note on hierarchical retrieval.

Q.3 Attempt any Two.**[10]**

- Write a short note on substitution variable. Explain with proper example.
- What are the disadvantages of SQL? How PL/SQL overcomes it?
- Write a short note on %TYPE attribute used in PL/SQL as data type.
- Consider a table Supplier(sno,sname,city,contactno) . Write a PL/SQL block to display the name and city of a particular supplier whose supplier number is entered by the user.

Q.4 Attempt any Two.**[10]**

- Explain following with proper code block –
 - FOR loop
 - WHILE loop
- What are the steps involved in explicit cursor management?
- What is a cursor? What are the attributes used in Explicit cursor?

d) Consider a table Room(roomid, type, capacity). Update the capacity of a room whose roomid is entered by the user. Using implicit cursor, display appropriate message if the data updated, otherwise not.

Q.5 Attempt any Two.

[10]

- a) Explain the advantages of using functions.
- b) What do you mean by procedure? What are the different keywords and parameters used for creating database procedure?
- c) What is the different between anonymous block and subprogram?
- d) Consider a table Student(rollno, sname, city). Create a function to return the name of student for a given rollno.

Q.6 Attempt any Two.

[10]

- a) Explain following steps to execute dynamic SQL with DBMS_SQL package-
 - i) Open a cursor
 - ii) Parse SQL statement
 - iii) Execute the SQL statement.
- b) Write a short note on Instead of trigger for a view.
- c) Explain all types of Trigger.
- d) Consider a table Employee(empno,ename,city). Create a trigger that displays a message 'Deleted Successfully' after deleting a row in the Employee table.

Q.7 Attempt any Three

[15]

- a) Write a short note on-
 - i) GROUP BY clause
 - ii) HAVING clause
 - iii) ORDER BY clause
- b) Explain any five date time functions used in oracle.
- c) Explain the role of commit and rollback with respect to transaction. Also explain the concept of savepoint in it.
- d) What do you mean by parameterised cursor? Explain its syntax. Give proper PL/SQL code block example.
- e) How to create, call and remove a stored function?
- f) What is dynamic SQL?