

(2½ Hours)

[Total Marks: 75]

- N.B.:** 1) All questions are **compulsory**.
 2) **Figures** to the right **indicate marks**.
 3) **Illustrations**, in-depth **answers** and **diagrams** will be **appreciated**.
 4) Mixing of **sub-questions** is not **allowed**.

1. Attempt All (Each of 5 Marks) :

(15)

(a) Multiple Choice Questions

- 1) The difference between rollback and commit is -----.
 A. commit saves transaction, rollback undoes it
 B. commit undoes the transaction, and rollback saves it
 C. commit loads transaction and rollback saves it
 D. none of the above
- 2) PL/SQL is a procedural language that has following advantages -----.
 A. Integration with database
 B. Better performance
 C. Support for Transaction Processing
 D. All of the mentioned above
- 3) SQL statements that must end transaction are of type -----.
 A. 2 types
 B. 3 types
 C. 4 types
 D. 5 types
- 4) Term that is known to commit current transaction, is -----.
 A. Rollback work
 B. Commit work
 C. Trace work
 D. Transit work
- 5) A term that consists of a sequence of query and/or update statements, is known as -----.
 A. Transactions
 B. Data commit
 C. Data rollback
 D. Data automation

- (b) Fill in the blanks (currval, drop index, Binary large object, rowid, ||)
1. In sequence, the recent value is seen by -----
 2. Data type BLOB stands for
 3. To drop an index we use ----- statement.
 4. Compound symbols..... are use in dbms_output.put_line as a separator.
 5. In Sequence the current value is seen by
- (c) Answer in 1 – 2 sentences
1. How to declare a function?
 2. Give an example where : old and :new are used.
 3. What is the use of EXIT statement?
 4. Define views.
 5. Define Primary index.

2. Attempt the following (Any THREE)

(15)

- (a) Generate the trigger to generate the primary key values for product_id in the products (prod_id, pname, p_price) table and display the values in the table.
- (b) How to create an index? Explain with an example.
- (c) Employees of the testing department in the Perpetual Systems does testing of the software and result is taken as test-id, test-name, date_of_testing, test_result. Execute the procedure to insert the values in the table “test_specifications”.
- (d) Explain heap file organization.
- (e) How to create and execute stored procedure?
- (f) Write a short note on using DDL statements in trigger by giving an example

3. Attempt the following (Any THREE)

(15)

- (a) Write a PL/SQL block that will accept an account number from the user, check if the users balance is less than minimum balance, then deduct Rs. 1000/- from the balance. Refer the table accts(acctno, current_balance, updt_balance)
- (b) Explain declaration and assignment in PL/SQL along with explanation of Begin block.
- (c) Explain PL/SQL data types.
- (d) Explain case statement with an example.
- (e) Write a PL/SQL block that calculate the area of circle for a value of radius varying from 3 to 7. Store the radius and the corresponding values of calculated area in an empty table name areas (radius, area).
- (f) Explain GOTO and NULL statement with an example.

4. Attempt the following (Any THREE)

(15)

- (a) Define and explain ACID.
- (b) Explain two phase commit protocol.
- (c) What is lock? Explain it along with its types.
- (d) Differentiate between serial schedule and serializable schedule with example.
- (e) Explain shadow paging and log based recovery scheme.
- (f) Describe Aries Algorithm.

5. Attempt the following (Any THREE)

(15)

- (a) Create table simple interest (p_amt, no_of_yr, rate_int, simp_int) calculate simple interest and update table using for loop for 3 values.
- (b) Explain the concept of transaction.
- (c) Describe Features of PL/SQL.
- (d) Explain cluster file organization.
- (e) Define indexes? Explain with an example creating and dropping of indexes.
