VCD / 27|10|23 **S.Y.B.Sc.(CS) SEM III Advanced Database Concepts 2¹/² Hrs 75 Marks**

Note. 1) All questions are compulsory.
2) Figures to the right indicate marks.
3) Mixing of sub-questions is not allowed.

Q. 1 Attempt the following. (Any FOUR) **(20M)**
(a) What are the advantages of using PL/SQL?
(b) What do you mean by Function? What are the different keywords and parameters used for creating database function? How do we call it?
(c) Explain with suitable example:
   i) IF..THEN..ELSIF statement
   ii) WHILE Loop
(d) What is Sequence? Explain its all parameters.
(e) What are benefits of Stored procedure?
(f) Consider table **Book (ISBN, title, author)**. Create a function to return the title of the book for a given ISBN. Use a PL/SQL block to execute the code.

Q. 2 Attempt the following. (Any FOUR) **(20M)**
(a) What do you mean by Collection? Explain its methods.
(b) How oracle handles exception? Explain with syntax.
(c) Write a note on Variable size array.
(d) List out the steps in order to execute dynamic SQL with DBMS_SQL package.
(e) Define Cursor. Explain all the steps involved in the explicit cursor execution.
(f) Consider table **Person (personid, fname, lname, city, salary)**. Write implicit cursor to update salary of each person by 5000/-

Q. 3 Attempt the following. (Any FOUR) **(20M)**
(a) Explain all the phases of ARIES Algorithm.
(b) What do you mean by deadlock? Explain the mechanism to detect a deadlock.
(c) What do you mean by Serializability? Explain View Serializability.
(d) Explain different states through which transaction goes during its execution.
(e) What do you mean by Trigger? Explain with its types.
(f) Consider a table **Employee(empno,ename,city)**. Create a trigger that displays a message 'Deleted Successfully' after deleting a row from an Employee table.

Q. 4   **Attempt the following. (Any FIVE)**   **(15M)**
(a)   Write short note on GOTO statement.
(b)   Explain the following –
1.   Datetime and Interval types
2.   Character types
3.   Numeric types
(c)   Explain the uses of %type and %rowtype attributes used in oracle.
(d)   Explain the concept of CURSOR FOR LOOP.
(e)   Write short note on Package Specification.
(f)   Write a note on Dirty Read problem.

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