COURSE TITLE	**DBMS – II**
COURSE CODE	**05DS0204**
COURSE CREDITS	**5**

Course Outcomes: After completion of this course, student will be able to:

1. Student will be able to get familiarize with the basic concepts of PL/SQL
2. Student will be able to understand the process of cursor management
3. Student will be able to trace and correct the errors by using the concepts of exception handling
4. Student will be able to create and manage subprograms like stored procedures and functions
5. Students will be able to develop and implement database triggers

Pre-requisite of course:1. Knowledge of Fundamental Database Management System Concepts 2. Working Knowledge Query Processing using SQL.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
3	0	4	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	**PL/SQL Essentials** PL/SQL Block Structure, Architecture of PL/SQL, Advantages of PL/SQL, Lexical Units, Data types, Declarations, Assignment, Database Value, Conditional Control Statements, Iterative Statements, GOTO statement	10
2	**CURSOR Management** SELECT…INTO Statement, Cursor Declaration, Opening a Cursor, Fetching Rows from cursor, Closing a cursor, Using cursor FOR Loop, Cursor Attributes, Implicit Cursor Attributes, Cursor Variables, Transaction Control Statements, Class Test – 1	10
3	**Exception Handling** Introduction to Exceptions, Utility of Exceptions, Utility of Exceptions, Built-in Exceptions, Built-in Exceptions, User-defined Exceptions, User-defined Exceptions, Pragma EXCEPTION_INIT, RAISE_APPLICATION_ERROR procedure, SQLCODE and SQLERRM	10

Contents : Unit	Topics	Contact Hours
4	**Subprograms** Introduction to Procedure and Functions, Subprogram Declaration, Subprogram Declaration in Package, Stored Subprograms, Parameters, Overview of Package, Advantages of Package, Package Specification, Referencing Package Element, Package Body	10
5	**Database Triggers** Brief overview of Triggers, Types of triggers, Creating DML Triggers, Row trigger, Statement triggers, Before trigger, After trigger, using OLD and NEW qualifier, Dropping a Trigger, Applications of Triggers, Class Test – 2	10
Total Hours		**50**

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**PL/SQL Essentials** Practical 1 & 2 From Practical List, Practical 3 & 4 From Practical List, Practical 5 & 6 From Practical List, Practical 7 & 8 From Practical List, Practical 9 & 10 From Practical List	10
2	**CURSOR Management** Practical 1 From Practical List, Practical 2 From Practical List, Practical 3 From Practical List, Practical 4 From Practical List, Practical 5 From Practical List	10
3	**Exception Handling** Practical 1 From Practical List, Practical 2 From Practical List, Practical 3 From Practical List, Practical 4 From Practical List, Practical 5 From Practical List	10
4	**Subprograms** Practical 1 & 2 From Practical List, Practical 3 From Practical List, Practical 4 From Practical List, Practical 5 From Practical List, Practical 6 From Practical List	10
5	**Database Triggers** Practical 1 From Practical List, Practical 2 From Practical List, Practical 3 From Practical List, Practical 4 From Practical List, Practical 5 From Practical List	10
Total Hours		**50**

Textbook :

1 SQL/PLSQL for Oracle 9i, P. S. Deshpande, Dreamtech Press, 2008

2 SQL, PL/SQL the programming Language of Oracle, Ivan Byross, BPB Publication, 2010

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking**

Instructional Method:

1 PPTs
2 Practical Experiments

Supplementary Resources:

1 https://www.plsqltutorial.com/
2 https://www.techonthenet.com/oracle/index.php
3 https://www.guru99.com/pl-sql-tutorials.html

Digitally signed by (Name of HOD) **Digitally signed by (Name of Dean/ Principal)**