Course: 502: Relational Database Management System – II

Course Code	502
Course Title	Relational Database Management System – II
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation, holidays etc.)
Last Review / Revision	June 2018
Purpose of Course	To impart knowledge of Database Architecture and PL/SQL programming.
Course Objective	This course provides knowledge about Oracle Database Architecture and Oracle PL/SQL programming concepts.
Pre-requisite	DBMS, SQL
Course Out come	Students will understand Oracle Database Architecture and will be able to write different PL/SQL programs.
Course Content	**Unit : 1 : Overview of Oracle Architecture** 1.1 Oracle Physical Architecture 1.2 Oracle Instance Architecture **Unit : 2 : Oracle PL/SQL** 2.1 The PL/SQL Block 2.2 Lexical Units: Identifiers, Delimiters, Literals, Comments 2.3 Variables, PL/SQL Types 2.4 Expression, Operators and Control Structures 2.5 Records 2.6 Cursors 2.6.1 Definition of Cursor 2.6.2 Explicit & Implicit Cursors 2.6.3 Cursor for loops 2.6.4 Cursor Variables 2.6.5 Parameterized Cursor 2.7 Sub Program 2.7.1 Procedures 2.7.2 Functions 2.7.3 Subprogram Creation, Parameter Modes 2.7.4 Procedure Versus Functions 2.8 Packages 2.8.1 Package Specification 2.8.2 Package Body 2.8.3 Packages and Scope, Package Objects 2.9 Database Triggers 2.9.1 Use of Database Triggers 2.9.2 Types of Triggers 2.9.3 Creating Triggers 2.9.4 Deleting a Trigger 2.10 Error Handling 2.10.1 Declaring Exception 2.10.2 Raising Exception, Handling Exception 2.10.3 Exception Propagation, Scope of Exception 2.11 Sequences & Pseudo columns 2.11.1 CURRVAL & NEXTVAL 2.11.2 ROWID

	2.11.3 ROWNUM **Unit : 3 : Transaction Control and Locks** 3.1 Transaction Control Statements 3.1.1 Commit 3.1.2 Savepoint 3.1.3 Rollback 3.2 Locks 3.2.1 Types of Locks 3.2.2 Levels of Locks **Unit : 4 : Index, User, Role and Profile** 4.1 Indexes 4.1.1 Simple Index, Composite Index 4.1.2 Bitmap Index, Function Based Index 4.1.3 Key Compressed Index 4.2 User 4.3 Role 4.4 Profile **Unit : 5 : Programming with Objects** 5.1 Object Types 5.2 Nested Tables 5.3 Varying Array 5.4 Large Objects 5.5 References 5.6 Object Views
Reference Book	1 SQL, PL/SQL THE PROGRAMMING LANGUAGE OF ORACLE - 4TH REVISED EDITION - Ivan Bayross - BPB Publications 2 Oracle Database 12c The Complete Reference (Oracle Press) (1st Edition) - Bob Bryla, Kevin Loney - McGraw-Hill Education 3 Oracle Database 12c PL/SQL Programming(Oracle Press) 1st Edition - Michael McLaughlin - McGraw-Hill Education 4 Oracle PL/SQL Language Pocket Reference, 5E - Steven Feurstein, Bill Pribyl, Chip Dawes - O'Reilly 5 Oracle PL/SQL Programming: Covers Versions Through Oracle Database 12c 6th Edition - Steven Feuerstein - O'Reilly Media 6 SQL and PL/SQL for Oracle 11g Black Book - Dr. P.S. Deshpande – Dreamtech Press 7 Oracle for Beginners - Sharanam Shah & Vaishali Shah - SPD
Teaching Methodology	Lectures, Discussion, Independent Study, Seminars and Assignment
Evaluation Method	30% Internal assessment 70% External assessment