

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
MCAL32	Database Management System Lab	--	--	4	--	--	2	2
		Examination Scheme						
		Term Work		Practical		Oral		Total
		40		10		10		60

Pre-requisite Course Codes	-	
Course Outcomes	CO1	Design database schema using SQL.
	CO2	Write various queries using SQL.
	CO3	Demonstrate cursor, trigger and constraint using PL/SQL.
	CO4	Demonstrate functions, procedures and packages using PL/SQL.

Exp. No.	Experiment details	Ref	Marks
1	SQL Practical Data Definition Language: Create, Alter, Drop, Rename, Truncate Data Manipulation Language: Insert, Update, Delete, Select Data Control Language: Grant, Revoke, Roles Transaction Control Language: Commit, Rollback, Save point	1,2,3	5
2	SQL SELECT Statements: Selecting All Columns, Selecting Specific Columns, Column Alias, Concatenation Operator, Arithmetic Operators, Comparison Conditions, Logical Conditions, ORDER BY Clause	1,2,3	5
3	Functions: Single Row Functions, Character Functions, Number Functions, Date, Functions, Conversion Functions, General Functions, Multiple Row Functions, Group Function Subquery: Subquery, Types of Subquery, Group Function, Having Clause	1,2,3	5
4	Joins: Equijoins, Non-Equijoins, Joining Three Tables, Self Joins, Left Outer Joins, Right Outer Joins, Full Outer Joins, Cross Joins, Natural Joins Other Concepts: Sequence, View, Index, Synonyms Constraints: Not Null, Unique Key, Primary Key, Foreign Key, Check, Dropping a Constraint, Enabling & Disabling	1,2,3	5
5	PL/SQL Practical Programming: Variables, Identifiers, Comment, PL/SQL Block Structure IF Statements: Simple IF Statements, Compound IF Statements IF-THEN-ELSE Statements Loop: Basic Loop, WHILE Loop, FOR Loop	1,2,3	5
6	Cursor: Types of Cursor, Explicit Cursor Life Cycle, Explicit	1,2,3	5

	Cursor Attributes Trigger: Trigger, Statement Trigger, Row Trigger, Using Conditional Operations,		
7	Exceptions: Block Structure, Exception Handlers, Types of Exceptions Records: Table-Based, Cursor-Based, Programmer-Defined	1,2,3	5
8	Functions: Create Function, Function with Arguments, Executing Function, Dropping Function Procedures: Block Structure of Subprogram, Types of Subprograms, Procedure with Parameters, Executing Procedures, Dropping Procedures. Packages: Package Specification, Package Body, Creating Package, Execution, Dropping Package	1,2,3	5
Total Marks			40

References:

- [1] Dr. P.S. Deshpande, "SQL & PL/SQL for Oracle 11g", Dreamtech Press.
- [2] Kevin Loney, "Oracle Database 11g The complete Reference", Oracle Press.
- [3] Ivan Bayross, "SQL, PL/SQL: The programming language of Oracle", BPB Publication, Second revised edition.