DATABASE MANAGEMENT SYSTEMS LAB

Course Code	23IT3452	Year	II	Semester	II
Course Category	Professional Core	Branch	IT	Course Type	Practical
Credits	1.5	L – T – P	0-0-3	Prerequisites	Computer Programming Lab
Continuous Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes	
Upon successful completion of the course, the student will be able to:	
CO1	Apply database management techniques to solve problems	L2
CO2	Conduct experiments by using modern tools like MYSQL, Oracle	L3
CO3	Develop an effective report based on various constructs implemented.	L3
CO4	Apply technical knowledge for a given problem and express with an effective oral communication	L3
CO5	Analyze outputs of queries for a given problem	L4

ContributionofCourseOutcomestoachievementofProgramOutcomes&Strength of correlations(3:Substantial,2:Moderate,1:Slight)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1													1	
CO2					1				2					
CO3										2				
CO4										3			1	1
CO5		3												1
Avg.														

Syllabus		
EXP	**CONTENTS**	**Mapped CO**
I	Creation, altering and dropping of tables and inserting rows into a table (use constraints while creating tables).	CO1,CO2,CO3,CO4,CO5
II	Queries using i)DML Commands. INSERT, UPDATE and DELETE ii)DCL Commands: COMMIT , ROLLBACK and SAVEPOINT.	CO1,CO2,CO3,CO4,CO5

III	Queries using i)SELECT statement ii) SELECT statement with where clause(Comparison Operators, AND, OR, NOT, IN, BETWEEN,LIKE) iii) ORDER BY clause(sort by column name) iv) LIMIT clause	CO1,CO2,CO3,CO4,CO5
IV	Queries using Aggregate functions (COUNT, SUM, AVG, MAX and MIN), GROUP BY, HAVING and Creation and dropping of Views.	CO1,CO2,CO3,CO4,CO5
V	Queries using Conversion functions (to_char, to_number and to_date), string functions (Concatenation, lpad, rpad, ltrim, rtrim, lower, upper, initcap, length, substr and instr), date functions (Sysdate, next_day, add_months, last_day, months_between, least, greatest, trunc, round, to_char, to_date)	CO1,CO2,CO3,CO4,CO5
VI	Queries (along with sub Queries) using ANY, ALL, IN, EXISTS, NOTEXISTS, UNION, INTERSECT.	CO1,CO2,CO3,CO4,CO5
VII	Queries using Inner join, outer join using USING and NATURAL Keywords.	CO1,CO2,CO3,CO4,CO5
VIII	Programs development using creation of procedures, passing parameters IN and OUT of PROCEDURES.	CO1,CO2,CO3,CO4,CO5
IX	Program development using creation of stored functions, invoke functions in SQL Statements.	CO1,CO2,CO3,CO4,CO5
X	Develop programs using features parameters in a CURSOR, FOR UPDATE CURSOR, WHERE CURRENT of clause and CURSOR variables.	CO1,CO2,CO3,CO4,CO5
XI	Develop Programs using BEFORE and AFTER Triggers, Row and Statement Triggers and INSTEAD OF Triggers.	CO1,CO2,CO3,CO4,CO5
XII	Case Study Using Real World Database Applications	CO1,CO2,CO3,CO4,CO5
XIII	i)Write a Java program that connects to a database using JDBC ii)Write a Java program to connect to a database using JDBC and insert values into it iii)Write a Java program to connect to a database using JDBC and delete values from it	CO1,CO2,CO3,CO4,CO5

Learning Resources
Text Books

1. Murach‟s MySQL by JOEL MURACH, Shroff Publishers & Distributors Pvt. Ltd, June 2012.
2. The Complete Reference MYSQL, Vikram Vaswani, 2017, McGraw Hill Education.
3. Oracle: The Complete Reference by Oracle Press
4. Nilesh Shah, "Database Systems Using Oracle", PHI, 2007
5. Rick F Vander Lans, "Introduction to SQL", Fourth Edition, Pearson Education, 2007