

## MCA-16 Database Management System Lab.

### General Course Information

Course Code: MCA-16 Course Credits: 2 Type: Professional Core Lab. Course Contact Hours: 2 hours/week Mode: Lab practice and assignments	<b>Course Assessment Methods (internal: 30; external:70)</b> The internal and external assessment is based on the level of participation in lab. sessions and the timely submission of lab experiments/assignments, the quality of solutions designed for the assignments, the performance in VIVA-VOCE, the quality of lab. file and ethical practices followed. The internal examination is conducted by the course coordinator. The external examination is conducted by external examiner (appointed by the Controller of Examination) in association with the internal examiner appointed by the Chairperson of the Department.
--	--

**Pre-requisites:** Exposure to a programming language, MS Access.

### About the Course:

This lab. course on DBMS involves a rigorous training on Oracle programming. It provides a strong formal foundation in database concepts, technology and practice to the students to groom them into well-informed database application developers. The objective of the lab course is to develop proficiency in the execution of commands of the database design and query using Oracle.

### Course Outcomes: By the end of the course students will be able to:

- CO1. **Implement** database problems using DML/DDDL commands.
- CO2. **Enforce** integrity constraints on a database using a state-of-the-art RDBMS.
- CO3. **Analyse** the design of a relational database.
- CO4. **Design** a relational database for a given schema.
- CO5. **Create** lab assignment record that includes problem definitions, solutions, results and conclusions.
- CO6. **Demonstrate** ethical practices, self-learning and team spirit.

### List of experiments/assignments:

1. Use oracle software and login with valid userid and password. Explore its GUI and practice some basic commands of it.
2. Three assignments related to creation of database with tables having different fields and data types.
3. Two assignments on the creation of table with different types of constraints.
4. Two assignments on insert, delete and modify records from the tables.
5. Two assignments on modifying the table using the alter command.
6. Two assignments on exploring select statement using various clauses like where, order by, group by, having and aggregate functions.
7. Two assignments on the use of set operations to query the tables.
8. Two assignments on creating joins and views on the tables.
9. One assignment on generating sub-queries.

### Note:

The actual experiments/assignments will be designed by the course coordinator. One assignment should be designed to be done in groups of two or three students. The assignments must meet the objective of the course and the levels of the given course outcomes. The list of assignments and schedule of submission will be prepared by the course coordinator at the beginning of the semester.