TECNIA INSTITUTE OF ADVANCED STUDIES

Grade 'A' Institute

Department of Information, Communication & Technology

Master Of Computer Applications (MCA)

Scheme and Syllabus (w.e.f. Academic Session 2020-21 onwards)

Course Code: MCA- 108   **L T C**
Course Name: Advanced Database Management Systems   **3 1 4**

LEARNING OBJECTIVES:

ln this course, the learners will be able to develop expertise related to the following: -

1. Expertise related to EER concepts, normalization, query processing & optimization and transaction processing.
2. Fair knowledge about implementation of NoSQL databases and its applications, structure and storage of XML data.
3. Fundamental knowledge of Big data and its applications, client server architecture and emerging database models and applications and other advanced data models like multimedia and web databases.
4. Knowledge of Object-Oriented databases and concurrency control techniques, database recovery techniques in distributed databases.

PRE-REQUISITES:

1. Data Base Management systems
2. Basics of Object-Oriented Concepts
3. Working knowledge of SQL/PL-SQL

COURSE OUTCOMES (COs):

After completion of this course, the learners will be able to:

CO#	Detailed Statement of the CO	BT Level	Mapping to PO #
CO1	**Apply EER concepts and normalization f or specific cases.**	BTL3	PO1, PO2, PO3, PO, PO5, PO6, PO10, PO11
CO2	Make use of query processing, query optimization and advanced transaction processing for specific problem scenarios.	BTL3	PO1, PO2, PO3, PO4, PO5, PO6, PO10
CO3	Analyze object-oriented paradigm in database design along with OODBMS and ORDBMS	BTL4	PO1, PO2, PO3, PO4, PO6, PO10
CO4	Evaluate various concurrency control mechanisms and recovery techniques for Distributed Databases	BTL5	PO1, PO2, PO3, PO4, PO6, PO10
CO5	Appraise advanced database models and their applications	BTL5	PO1, PO2, PO3, PO4, PO5, PO7, PO9, PO10
CO6	Design and create appropriate NoSQL Databases for specific applications	BTL6	PO1, PO2, PO3, PO4, PO5, PO7, PO9, PO10, PO11