**Department of Information Technology**

**Gist of Lectures as per syllabus**

Session 2017-2018

Paper 6(a) - Relational Database Management System

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**Topic 1: Database System Concept & Architecture**

Database management system (DBMS) is a computer-software application that interacts with end-users, other applications, and the database itself to capture and analyze data. A general-purpose DBMS allows the definition, creation, querying, update, and administration of databases.

**Topic 2: Relational Algebra**

Relation Algebra has set of operations like projection, set difference, Project, select, Cartesian product, natural join, join, union, intersect, minus, division operations.

**Topic 3: Normalization**

There are set of normalization which gives proper and meaningful use of database as per requirement of projects. Types of normalization are 1NF, 2NF, 3NF, BCNF, multivalued dependency & 4NF.

**Topic 4: Transaction**

A transaction is one or more SQL statements that make up a unit of work performed against the database, and either all the statements in a transaction are committed as a unit or all the statements are rolled back as a unit. This unit of work typically satisfies a user request and ensures data integrity.

**Topic 5: Concurrency Control**

It is used to basically dealing with transaction so that one transaction cannot overwhelmed with other one for that various lock is used.

**Group- B**

**Topic 6: SQL**

Structured Query Language (SQL) is a programming language used for storing and managing data in RDBMS. SQL was the first commercial language introduced for E.F Codd's Relational model. We can manipulate database using DML commands, Permission with DCL and Definition with DDL commands. Today almost all RDBMS (MySQL, Oracle, MS Access) uses SQL as the standard database language.

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Paper 9(a) - **Web Technology**

Topic 1: Dynamic HTML

Dynamic HyperText Markup Language (DHTML) is a combination of Web development technologies used to create dynamically changing websites. Web pages may include animation, dynamic menus and text effects. The technologies used include a combination of HTML, JavaScript or VB Script, CSS and the Document Object Model (DOM).

Topic 2: JavaScript

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

Topic 3: Active Server Page

An Active Server Page (ASP) provides skills in server-side scripting technology that is used to create interactive Web applications. Using ADO objects of ASP, database connectivity with MS Access and Oracle can be established.