

## Lesson Plan

September to December - 2022

Name of the Assistant Professor- Ms. Nancy

Subject- Computer Science

Month	B.A COMP.SC 5 <sup>TH</sup> SEM  DBMS	BCA 3 <sup>RD</sup> SEM  C++	B.COM CAV 1 <sup>ST</sup> SEM  BDP & PC S/W
<b>SEPTEMBER</b>	<p>Basic concepts: Data, Information, Records and file. Traditional file based system, limitations of file based approach, database Management System. Components of DBMS Environment, DBMS Functions and component, Advantages and disadvantages of DBMS</p> <p>Roles in Database Environment-Data and database Administrator. Database Designers, Application Developers and users</p> <p>Assignment 1 : Difference between file based approach and DBMS Components of DBMS</p>	<p>Object oriented Programming: Object-Oriented programming features and benefits.</p> <p>Object-Oriented features of C++, Class and Objects, Data Hiding &amp; Encapsulation, Structures, Data members and Member functions, Scope resolution operator and its significance, Static Data Members, Static member functions, Nested and Local Class, Function Overloading</p> <p>Accessing Members of Class and Structure.</p> <p>Assignment: features of oops and scope resolution operator</p> <p>Test of Assignment 1</p>	<p>Word processing: application of word processing, menus and toolbars, word processor:</p> <p>creating, entering, saving and printing the document, editing and formatting text, mail merge and macros</p> <p>Assignment 1 : Components of word processor and formatting text</p> <p>Test of given Assignment</p>
<b>OCTOBER</b>	<p>Database System Architecture-Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances</p> <p>Data Independence- Logical and Physical Independence</p>	<p>Constructor: Initialization using constructor, types of constructor- Default, Parameterized &amp; Copy Constructors, Constructor overloading, Default Values to Parameters.</p>	<p>Spreadsheet: application, menus and toolbar, preparing tables, charts, sorting, etc., running</p> <p>Statistical applications in Excel</p> <p>Libra Office Calc,</p>

	<p>Classification of Database Management System , Centralized and Client Server architecture to DBMS . Data Models : Records-based Data Models , Object - based Data Models , Physical Data Models and Conceptual Modeling</p> <p>Assignment of Data models Test</p>	<p>Destructors, Manipulators, Friend Function, Friend Class, Arrays, Array of Objects, Passing and Returning Objects to Functions, String Handling in C++</p> <p>Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations.</p> <p>Test of Constructors</p>	<p>creating formulae in spreadsheets.</p> <p>RDBMS</p> <p>Assignment: Test of assignment</p>
NOVEMBER	<p>Entity - Relationship Model - Entity Types . Entity Sets . Attributes Relationship Types . Relationship Instances and ER Diagrams . Basic Concepts of Hierarchical and Network Data Model .</p> <p>Revision</p>	<p>Dynamic Memory</p> <p>Management: Pointers, new and delete Operator, Array of Pointers to Objects, this</p> <p>Pointer, Passing Parameters to Functions by Reference &amp; pointers.</p> <p>Test</p> <p>Revision</p>	<p>Data processing, various business functions, use of computers in data processing and in carrying out business functions, concepts of data and information, characteristics of information, economics of business data processing, Impact of data processing on business organizations</p> <p>Revision</p>
DECEMBER	<p>Relational Data Model :- Brief History . Relational Model Terminology - Relational Data Structure . Database Relations , Properties of Relations . Keys .Domains . Integrity Constraints over Relations . Base Tables and Views .</p> <p>Revision</p>	<p>Polymorphism: Operators in C++, Precedence and Associativity Rules, Operator Overloading. Unary &amp; Binary Operators Overloading, Inline Functions</p> <p>Revision</p>	<p>Information and product flow in production environment, concepts of records and files, various types of file organizations, data capturing, data preparation, data verification and validation, and data editing.</p> <p>Revision</p>

*Dr. P. S. S.*