Name of the Assistant Professor- Ms. Nancy   Subject- Computer Science

Lesson Plan April –June (2021-2022)

Month	B.Com (2nd sem) E-COMMERCE	BCA (4TH Sem) ADVANCED C++	B.A 2ND SEM LOC
April	Introduction to internet: concept, application and uses of Internet, Internet services Information Technology and Business: concepts of data, information and information system, effects of IT on business: Types of information system: Transaction Processing System (TPS), Management Information System (MIS). Assignment 1: define Internet and ways to connect Internet at home? Test of assignment	Different Forms of Inheritance – Single, Multiple, Multilevel, Hierarchical and Multipath Inheritance Roles of Constructors and Destructors in Inheritance, Dynamic Polymorphism: Function Overriding, Virtual Function and its Need, Pure Virtual Function, Abstract Class, Virtual Derivation, Virtual Destructor. Assignment 1 : Difference between simple and multiple inheritance Virtual function and its need Test 1 of assignment	Information Representation: Number Systems, Binary Arithmetic, Fixed-point and Floating point representation of numbers, BCD Codes, Error detecting and correcting codes, Character Representation – ASCII, EBCDIC. Assignment 1 : Binary number system conversion Test
May	Introduction to E-commerce, e-commerce and world wide web; e-commerce application services; e commerce models: B2B, B2C, C2C; Assignment : E-Commerce Models Test	Genericity in C++: Templates in C++, Function templates.Class templates in C++, Exception Handling in C++: try, throw and catch, Files I/O in C++: Class Hierarchy for Files I/O, Text versus Binary Files, Opening and Closing Files, Assignment 2: Explain function template with example Test of Assignment	Binary Logic: Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions, Simplification of Boolean Functions – Venn Diagram, Karnaugh Maps. Digital Logic: Basic Gates – AND, OR, NOT, Universal Gates – NAND, NOR, Other Gates – XOR, XNOR etc. Assignment on k maps Test

June			
Electronic data interchange: benefits, components of EDI, EDI implementation, security issues in e-commerce M-commerce and e-governance: an overview	File Pointers, Operation on files Type Conversion: Basic Type Conversion, Conversion between objects and basic types, Conversion between objects of different classes, Inheritance: Rules of Derivations – Private, Protected and Public Derivations. Assignment on conversion		Combinational Circuits: Half-Adder, Full-Adder, Half Subtractor, Full-Subtractor, Encoders, Decoders, Multiplexers, Demultiplexers, Comparators, Code Converters Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK, T type and Master Slave flip-flops. State table, state diagram. Flip-flop excitation tables Shift registers : serial in parallel out and parallel in parallel out. Designing counters – Asynchronous and Synchronous Binary Counters. Modulo-N Counters and Up-Down Counters Assignment 2 : half Adder and Full adder

Subject/Month	April	May	June
B.A (4TH Sem) C++	Object oriented Programming: Object-Oriented programming features and benefits. Object-Oriented features of C++, Class and Objects, Data Hiding & Encapsulation, Structures, Data members and Member functions, Scope resolution operator and its significance, Static Data Members, Static member functions, Nested and Local Class, Accessing Members of Class, Class and Structure	Constructor, Initialization using constructor, types of constructor– Default, Parameterized & Copy Constructors, Constructor overloading, Default Values to Parameters, Destructors, Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations Manipulators, Friend Function, Friend Class, Arrays, Array of Objects, Passing and Returning Objects to Functions, String Handling in C++, Function Overloading, Inline Functions	Dynamic Memory Management: Pointers, new and delete Operator, Array of Pointers to Objects, this Pointer, Passing Parameters to Functions by Reference & pointers. Operators in C++, Precedence and Associativity Rules, Polymorphism: Operator Overloading, Unary Operator Overloading, & Binary Operators Overloading.
	Assignment on Features of C++ Test	Assignmnet on constructors Test	