Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Preeti	
Class and Section:	**BCA**
Subject:	**Computer Graphics**
Paper:	**302**
Year/Semester:	**3rd year/5th semester.**

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	Graphics Primitives: Introduction to computer graphics, Basics of Graphics systems, Application areas of Computer Graphics, overview of graphics systems.
October (Week-3)	video-display devices, and raster-scan systems, random scan systems, graphics monitors and workstations and input devices.
October (Week-4)	Output Primitives: Points and lines, line drawing algorithms.
November (Week-1)	Mid-point circle and ellipse algorithms.

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	Filled area primitives: Scan line polygon fill algorithm, boundary fill and floodfill algorithms
November (Week-3)	2-D Geometrical Transforms: Translation, scaling, rotation.
November (Week-4)	reflection and shear transformations, matrix representations .

December (Week-1)	**Homogeneous coordinates, composite transforms, transformations between coordinate systems.**

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	**2-D Viewing: The viewing pipeline, viewing coordinate reference frame, window to viewport coordinate transformation, viewing functions.**
December (Week-3)	**Cohen-Sutherland and Cyrus-beck line clipping algorithms, Sutherland –Hodgeman polygon clipping algorithm represent by ppt.**
December (Week-4)	**3-D Object Representation: Polygon surfaces, quadric surfaces, spline representation.**
January (Week-1)	**spline representation, Hermite curve, Bezier curve and B-Spline curves, Bezier and B-Spline surfaces.**

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	**Basic illumination models, polygon-rendering methods.**
January (Week-3)	**Assignment work, Group discussion.**
January (Week-4)	**3-D Geometric Transformations: Translation, rotation.**
February (Week-1)	**Scaling, reflection and shear transformations, composite transformations.**

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	**3-D Viewing: Viewing pipeline, viewing coordinates.**
February (Week-3)	**view volume and general projection transforms and clipping.**
February (Week-4)	**Book review.**

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Preeti	
Class and Section:	**BCA**
Subject:	**Data Communication and Networking**
Paper:	**303**
Year/Semester:	**3rd year/5th semester.**

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	Introduction to Computer Communications and Networking Technologies; Uses of Computer Networks; Network Devices.
October (Week-3)	Nodes, and Hosts; Types of Computer Networks and their Topologies; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services.
October (Week-4)	Network Applications and Application Protocols; Computer Communications and Networking Models: Decentralized and Centralized Systems, Distributed Systems.
November (Week-1)	Client/Server Model, Peer-to-Peer Model, Web Based Model, Network Architecture and the OSI Reference Model.

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	OSI model represented by video. TCP/IP reference model, Example Networks: The Internet, X.25, Frame Relay, ATM. Group discussion on OSI and TCP/IP model.
November (Week-3)	Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate , maximum data-rate of channel, Representing Data as Analog Signals.

November (Week-4)	**Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Asynchrous and synchrous transmission, data encoding techniques.**
December (Week-1)	**Modulation techniques, Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites;**

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	**Switching and Multiplexing; Dialup Networking; Analog Modem Concepts; DSL Service.**
December (Week-3)	**Assignment work, Revise.**
December (Week-4)	**Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction; Sliding Window Protocols,**
January (Week-1)	**Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring; Introduction to LAN technologies: Ethernet, switched Ethernet.**

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	**VLAN, fast Ethernet, gigabit Ethernet, token ring, FDDI, Wireless LANs; Bluetooth;**
January (Week-3)	**Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards.**
January (Week-4)	**Bridges, Switches, Routers, Gateways, Revise.**
February (Week-1)	**Assignment work.** **Network Layer and Routing Concepts: Virtual Circuits and Datagrams.**

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	**Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Link State Routing, Hierarchical Routing; Congestion Control Algorithms; Internetworking;**

February (Week-3)	**Network Security Issues: Security threats; Encryption Methods; Authentication; Symmetric – Key Algorithms; Public-Key Algorithms.**
February (Week-4)	**Book Revise.**

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Nisha Suhag
Class and Section: BCA Computer Science
Subject: Object Technologies & Programming using Java
Paper: BCA-307
Year/Semester: 3rd year /6th sem

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	**Object Oriented Methodology-1:** Paradigms of Programming Languages, Evolution of OO Methodology, Basic Concepts of OO Approach.
March(Week-4)	Comparison of Object Oriented and Procedure Oriented Approaches, Benefits of OOPs, Introduction to Common OO Language, Applications of OOPs.
April (Week-1)	**Object Oriented Methodology-2**: Classes and Objects, Abstraction and Encapsulation, Inheritance, Method Overriding and Polymorphism.
April (Week-2)	**Java Language Basics*:*** Introduction To Java, Basic Features, Java Virtual Machine.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	Concepts, Primitive Data Type And Variables, Java Operators, Expressions, Statements and Arrays. **Object Oriented Concepts**: Class and Objects-- Class Fundamentals, Creating objects, Assigning object reference variables; Introducing Methods, Static methods.
April (Week-4)	Constructors ,Overloading constructors; This Keyword; Using Objects as Parameters, Argument passing, Returning objects , Method overloading, Garbage Collection, The Finalize ( ) Method.
May(Week-1)	**Inheritance and Polymorphism**: Inheritance Basics, Access Control, Multilevel Inheritance, Method Overriding, Abstract Classes, Polymorphism, Final Keyword.
May (Week-2)	**Packages** : Defining Package, CLASSPATH, Package naming, Accessibility of Packages, using Package Members.

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	**Interfaces:** Implementing Interfaces, Interface and Abstract Classes, Extends and Implements together.
May (Week-4)	**Exceptions Handling** : Exception , Handling of Exception, Using try-catch , Catching Multiple Exceptions.
June (Week-1)	Using finally clause , Types of Exceptions, Throwing Exceptions, Writing Exception Subclasses.
June (Week-2)	**Multithreading** : Introduction , The Main Thread, Java Thread Model, Thread Priorities, Synchronization in Java, Inter thread Communication.

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	**I/O in Java** : I/O Basics, Streams and Stream Classes ,The Predefined Streams, Reading from, and Writing to, Console,

	Reading and Writing Files , The Transient and Volatile Modifiers , Using Instance of Native Methods.
June (Week-4)	**Strings and Characters** : Fundamentals of Characters and Strings, The String Class , String Operations , Data Conversion using Value Of ( ) Methods , String Buffer Class and Methods.
July (Week-1)	Book Revision

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Dr. Ramesh Saini
Class and Section: BCA-6th Semester
Subject: E-Commerce
Paper: BCA-306
Year/Semester: 6th

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	Traditional Commerce vs. Electronic Commerce, Impact of E-Commerce, Test
March(Week-4)	Electronic Markets, Internet Commerce, e-commerce in perspective
April (Week-1)	Application of E Commerce in Direct Marketing and Selling, Test
April (Week-2)	Obstacles in adopting E-Commerce Applications; Future of E-Commerce, Assignment.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	Organizational value chains, Strategic Business unit chains, Test
April (Week-4)	Industry value chains. Security Threats to E-commerce: Security Overview
May(Week-1)	Computer Security Classification, Test, Copyright and Intellectual Property
May (Week-2)	security Policy and Integrated Security, Intellectual, Assignment.

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	Property Threats, electronic Commerce Threats, Clients Threats, Test
May (Week-4)	Communication Channel Threats, server Threats, Implementing
June (Week-1)	security for E-Commerce: Protecting E-Commerce Assets
June (Week-2)	Test, Protecting Intellectual Property, Protecting Client Computers, Assignment.

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	Insuring Transaction Integrity, Protecting the Commerce Server, Test, Electronic Payment System: Electronic Cash, Test, Electronic Wallets, Smart Card
June (Week-4)	Credit and Change Card, Assignment, Business to Business E-Commerce: Inter-organizational Transitions, Test, Credit Transaction Trade Cycle, a variety of transactions. Electronic Data Interchange (EDI)
July (Week-1)	Introduction to EDI, Test, Benefits of EDI, EDI Technology, EDI standards, EDI Communication, Test, EDI Implementation, EDI agreement, EDI security, Assignment.

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Dr. Ramesh Saini
Class and Section: BCA-5th Sem.
Subject: Management Information System
Paper: BCA-301
Year/Semester: 5th

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	Introduction to system and Basic System Concepts, Types of Systems
October (Week-3)	Test, The Systems Approach, Information System: Definition & Characteristics
October (Week-4)	Types of information, Role of Information in Decision-Making, test
November (Week-1)	Sub-Systems of an Information system: EDP and MIS management levels, EDP/MIS/DSS, Assignment.

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	An overview of Management Information System: Definition & Characteristics
November (Week-3)	Components of MIS, Test, Frame Work for Understanding MIS: Information requirements & Levels of Management
November (Week-4)	Test, Simon's Model of decision-Making
December (Week-1)	Structured Vs Un-structured decisions, Formal vs. Informal systems, Assignment.

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	Developing Information Systems
December (Week-3)	Analysis & Design of Information Systems
December (Week-4)	Implementation & Evaluation
January (Week-1)	Pitfalls in MIS Development.

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	Functional MIS
January (Week-3)	A Study of Personnel, Financial and production MIS
January (Week-4)	Introduction to e-business systems, Test, ecommerce – technologies
February (Week-1)	applications, Decision support systems – support systems for planning, control and decision-making, Assignement.

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	Revision
February (Week-3)	Class Test
February (Week-4)	House Examination

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Dr. Ramesh Saini
Class and Section: BCA 5th Sem.
Subject: Visual Basic Theory and Practical
Paper: BCA-304
Year/Semester: 5th Sem

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	Introduction to VB: Visual & non-visual programming, Procedural
October (Week-3)	Object-oriented and event driven programming languages, Test
October (Week-4)	The VB environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties window
November (Week-1)	Test, Form designer, Form layout, Immediate window. Visual Development and Event Driven programming, Assignment.

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	Basics of Programming: Variables: Declaring variables

November (Week-3)	Types of variables, Converting variables types, Test, User-defined data types, Forcing variable declaration
November (Week-4)	Scope & lifetime of variables. Constants: Named & intrinsic, Test, Operators: Arithmetic
December (Week-1)	Relational & Logical operators. I/O in VB: Various controls for I/O in VB, Message box, Input Box, Print statement, Assignment.

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	Programming with VB: Decisions and conditions: If statement, If-then-else, Select-case.
December (Week-3)	Do-loops, Test, For-next, While-wend, Exit statement. Nested control structures.
December (Week-4)	Arrays: Declaring and using arrays, one-dimensional and multi-dimensional arrays, Test, Static & dynamic arrays, Arrays of array.
January (Week-1)	Collections: Adding, Removing, Counting, Test, Returning items in a collection, Processing a collection, Assignment.

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	Programming with VB: Procedures: General & event procedures, Test, Subroutines, Functions
January (Week-3)	Calling procedures, Arguments- passing mechanisms, Optional arguments, Named arguments, Functions returning custom data types
January (Week-4)	Test, Functions returning arrays. Working with forms and menus : Adding multiple forms in VB, Hiding & showing forms, Test, Load & unload statements
February (Week-1)	creating menu, submenu, popup menus, Activate & deactivate events, Test, Form-load event, menu designing in VB Simple programs in VB, Assignment.

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	Revision
February (Week-3)	Class Test
February (Week-4)	House Examination

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Kavita
Class and Section: BCA Computer Science
Subject: Artificial Intelligence
Paper: BCA-308
Year/Semester: 3rd year/ 6th sem

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	**Overview of A.I:** Introduction to AI, Importance of AI, AI and its related field, AI techniques, Criteria for success.
March(Week-4)	**Problems, problem space and search**: Defining the problem as a state space search
April (Week-1)	Production system and its characteristics, Issues in the design of the search problem. Assignment on AI techniques.
April (Week-2)	**Heuristic search techniques** : Generate and test, hill climbing, best first search technique, problem reduction, constraint satisfaction.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	**Knowledge Representation**: Definition and importance of knowledge, Knowledge representation.
April (Week-4)	Various approaches used in knowledge representation, Issues in knowledge representation.
May(Week-1)	**Using Predicate Logic** : Represent ting Simple Facts in logic, Representing instances and Is a relationship
May (Week-2)	Computable function and predicate. Class presentation on Knowledge Representation.

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	**Natural language processing** : Introduction syntactic processing,
May (Week-4)	Semantic processing, Discourse and pragmatic processing.
June (Week-1)	**Learning**: Introduction learning, Rote learning, Learning by taking advice,
June (Week-2)	Learning in problem solving, Learning from example-induction, Explanation based learning.

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	**Expert System**: Introduction, Representing using domain specific knowledge
June (Week-4)	Expert system shells. Class test on Expert System.
July (Week-1)	Book Revision

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Preeti	
Class and Section:	**BCA**
Subject:	**INTRODUCTION TO .NET**
Paper:	**309**
Year/Semester:	**3rd year/6th semester.**

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	The Framework of .Net: Building blocks of .Net .
March(Week-4)	.Net Platform (the CLR, CTS and CLS), Features of .Net.
April (Week-1)	Deploying the .Net Runtime, Architecture of .Net platform.
April (Week-2)	Introduction to namespaces & type distinction. Types & Object in .Net, the evolution of Web development.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	Class Libraries in .Net, Introduction to Assemblies & Manifest in .Net, Metadata & attributes.
April (Week-4)	Introduction to C#: Characteristics of C#, Data types.
May(Week-1)	Value types, reference types, default value, constants, variables, scope of variables, boxing and unboxing.

May (Week-2)	**Revise, Test.**

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	**Operators and expressions: Arithmetic, relational, logical, bitwise, special operators, evolution of expressions.**
May (Week-4)	**Operator precedence & associativity, Control constructs in C#: Decision making, loops.**
June (Week-1)	**Classes & methods: Class, methods. Assignment work.**
June (Week-2)	**Constructors, destructors, overloading of operators & functions.**

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	**Inheritance & polymorphism: visibility control, overriding, abstract class & methods, sealed classes & methods, interfaces.**
June (Week-4)	**Advanced features of C#: Exception handling & error handling, automatic memory management, Input and output (Directories, Files, and streams).**
July (Week-1)	**Book revises.**