Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Preeti	
Class and Section:	**BCA**
Subject:	**DATA STRUCTURES – I**
Paper:	**202**
Year/Semester:	**2nd year/3rd semester.**

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	Introduction: Elementary data organization, Data Structure definition.
October (Week-3)	Data type vs. data structure, Categories of data structures, Data structure operations.
October (Week-4)	Applications of data structures, Algorithms complexity and time-space tradeoff, Big-O notataion.
November (Week-1)	Strings: Introduction, Storing strings, String operations, Pattern matching algorithms.

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	Arrays: Introduction, Linear arrays, Representation of linear array in memory.
November (Week-3)	Address calculations, Traversal, Insertions, Deletion in an array,
November (Week-4)	Multidimensional arrays, Parallel arrays, Sparse arrays.
December (Week-1)	Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal.

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	Insertion, Deletion, Searching in a linked list.
December (Week-3)	Circular linked list, Two-way linked list.
December (Week-4)	Threaded lists, Garbage collection, Applications of linked lists.
January (Week-1)	Stack: Introduction Represent by PPT.

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	Array and linked representation of stacks, Operations on stacks
January (Week-3)	Applications of stacks: Polish notation, Recursion.
January (Week-4)	Queues: Introduction, Array and linked representation of queues, Operations on queues.
February (Week-1)	Deques, Priority Queues, Applications of queues.

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees.
February (Week-3)	Traversal algorithms using stacks.
February (Week-4)	Graph theory terminology, Sequential and linked representation of graphs.

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Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Kavita
Class and Section: BCA 2nd Year
Subject: Operating system
Paper: BCA201
Year/Semester: 2nd year/3rd sem

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	Fundamentals of Operating system: Introduction to Operating System, its need and operating System services
October (Week-3)	Early systems, Structures - Simple Batch, Multi programmed, timeshared, Personal Computer
October (Week-4)	Parallel, Distributed Systems, Real-Time Systems. Process Management: Process concept
November (Week-1)	Operation on processes, Cooperating Processes , Test

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	Threads, and Inter-process Communication
November (Week-3)	CPU Scheduling: Basic concepts, Scheduling criteria
November (Week-4)	Scheduling algorithms : FCFS, SJF

December (Week-1)	Round Robin & Queue Algorithms. Assignment on scheduling algorithm.

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	Deadlocks: Deadlock characterization, Methods for handling deadlocks,
December (Week-3)	Banker's Algorithm. Assignment on Deadlock handling
December (Week-4)	Memory Management: Logical versus Physical address space,
January (Week-1)	Swapping, Contiguous allocation, Paging, Segmentation, Test

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	Virtual Memory: Demand paging, Performance of demand paging,
January (Week-3)	Page replacement, Page replacement algorithms, Thrashing.
January (Week-4)	File management: File system Structure, Class presentation on page replacement algorithms.
February (Week-1)	Allocation methods: Contiguous allocation, Linked allocation, Indexed allocation

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	Free space management: Bit vector, Linked list, Grouping, Counting.
February (Week-3)	Device Management: Disk structure, Disk scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK, C-LOOK.
February (Week-4)	Book Revision

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Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Preeti	
Class and Section:	**BCA**
Subject:	**DATA STRUCTURE – II**
Paper:	**207**
Year/Semester:	**2nd year/4th Semester**

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	: Header nodes, Threads, Binary search trees, Searching, Insertion and deletion in a Binary search tree.
March(Week-4)	AVL search trees, Insertion and deletion in AVL search tree, m-way search tree, Searching.
April (Week-1)	Insertion and deletion in an m-way search tree, B-trees, Searching, Insertion and deletion in a B-tree,
April (Week-2)	B+ tree, Huffman's algorithm, General trees.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	Graphs: Warshall's algorithm for shortest path.
April (Week-4)	Dijkstra algorithm for shortest path by ppt

May(Week-1)	**Operations on graphs, Traversal of graph, Topological sorting.**
May (Week-2)	**Assignment work,Revise.**

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	**Sorting: Internal & external sorting, Radix sort, Quick sort.**
May (Week-4)	**Heap sort, Merge sort, Tournament sort, Searching: Liner search, binary search, merging.**
June (Week-1)	**Comparison of various sorting and searching algorithms on the basis of their complexity.**
June (Week-2)	

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	**Files: Physical storage devices and their characteristics, Attributes of a file viz fields, records, Fixed and variable length records, Primiry and secondary keys, Classification of files, File operations, Comparison of various types of files**
June (Week-4)	**File organization: Serial, Sequential, Indexed-sequential, Random-access/Direct, Inverted, Multilist file organization. Hashing: Introduction, Hashing functions and Collision resolution methods .**
July (Week-1)	**Book revise.**

Kanya Mahavidyalaya, Kharkhoda (Sonepat)

Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Kavita
Class and Section: BCA 2nd year
Subject: WEB DESIGNING
Paper: BCA – 206
Year/Semester: 2nd year/4th sem

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	Introduction to Internet and World Wide Web; Evolution and History of World Wide Web
March(Week-4)	Basic features; Web Browsers; Web Servers
April (Week-1)	Hypertext Transfer Protocol, Overview of TCP/IP and its services; URLs
April (Week-2)	Searching and Web-Casting Techniques; Search Engines and Search Tools. Assignment on TCP/IP

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	Web Publishing: Hosting your Site; Internet Service Provider; Web terminologies
April (Week-4)	Phases of Planning and designing your Web Site; Steps for developing your Site
May(Week-1)	Choosing the contents; Home Page; Domain Names, Front page views, Adding pictures, Links, Backgrounds
May (Week-2)	Relating Front Page to DHTML. Creating a Website and the Markup Languages (HTML, DHTML). Assignment on

	Phases of Planning and Designing.

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	Web Development: Introduction to HTML; Hypertext and HTML; HTML Document Features
May (Week-4)	HTML command Tags; Creating Links; Headers; Text styles; Text Structuring
June (Week-1)	Text colors and Background; Formatting text; Page layouts
June (Week-2)	Images; Ordered and Unordered lists; Inserting Graphics. Presentation on HTML commands on Projector.

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	Table Creation and Layouts ; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes
June (Week-4)	DHTML: Dynamic HTML, Features of DHTML, CSSP (cascading style sheet positioning) and JSSS (JavaScript assisted style sheet), Layers of net scape, The ID attributes, DHTML events.
July (Week-1)	Book Revision

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Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Dr. Ramesh Saini

Class and Section: BCA-4th Semester
Subject: Object Oriented Programming Using C++ Theory & Practical
Paper: BCA-208
Year/Semester: 4th

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	**Object Oriented Programming Concepts :** Procedural Language and Object Oriented approach, Characteristics of OOP
March(Week-4)	Test, user defined types, polymorphism and encapsulation, Test, Getting started with C++: syntax
April (Week-1)	data types, variables, string, function, namespace and exception, operators, flow control
April (Week-2)	recursion, array and pointer, structure, Assignment.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	**Abstracting Mechanism:** classes, private and public, Test
April (Week-4)	Constructor and Destructor , member function
May(Week-1)	static members, references; Test, **Memory Management:** new
May (Week-2)	delete, object copying, copy constructer, Assignment

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	Assignment operator, this input/output, Derived Class and Base Class, Test, Different types of Inheritance, Test
May (Week-4)	Overriding member function, Abstract Class, Assignment. Public and Private Inheritance, Ambiguity in Multiple inheritance
June (Week-1)	Test, Virtual function, Friend function, Static function, Exception and derived class, function exception declaration, Test
June (Week-2)	unexpected exception, exception when handling exception, resource capture and release, Assignment.

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	**Template and Standard Template Library:** Template classes
June (Week-4)	Declaration, template functions, Test, namespace, string, iterators
July (Week-1)	Hashes, iostreams and other types, Rivision, Assignment.

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Lesson Plan Session 2020-21

Name of the Assistant/Associate Professor: Mrs. Nisha Suhag
Class and Section: BCA Computer Science
Subject: Software Engineering
Paper: BCA-209
Year/Semester:2nd year/ 4th sem

16 March 2021 to 15 April 2021

Month/Week	Topic
March(Week-3)	**Introduction:** Software Crisis, Software Processes & Characteristics.
March(Week-4)	Software life cycle models, Waterfall, Prototype, Evolutionary and Spiral Models.
April (Week-1)	**Software Requirements Analysis & Specifications:** Requirement engineering, requirement elicitation techniques like FAST, QFD, requirements analysis using DFD.
April (Week-2)	Data dictionaries & ER Diagrams, Requirements documentation, Nature of SRS, Characteristics & organization of SRS.

16 April 2021 to 15 May 2021

Month/Week	Topic
April (Week-3)	**Software Project Management Concepts:** The Management spectrum, The People The Problem, The Process, The Project.
April (Week-4)	**Software Project Planning:** Size Estimation like lines of Code & Function Count.
May(Week-1)	Cost Estimation Models, COCOMO, Risk Management.
May (Week-2)	**Software Design:** Cohesion & Coupling, Classification of Cohesiveness & Coupling, Function Oriented Design, Object Oriented Design.

16 May 2021 to 15 June. 2021

Month/Week	Topic
May (Week-3)	Software Metrics: Software measurements: What & Why, Token Count, Halstead Software Science Measures, Design Metrics.
May (Week-4)	Data Structure Metrics **Software Implementation**: Relationship between design and implementation.
June (Week-1)	Implementation issues and programming support environment, Coding the procedural design, Good coding style.

June (Week-2)	**Software Testing:** Testing Process, Design of Test Cases, Types of Testing, Functional Testing, Structural Testing, Test Activities.

16 June 2021 to 06 July 2021

Month/Week	Topic
June (Week-3)	Unit Testing, Integration Testing and System Testing, Debugging Activities.
June (Week-4)	**Software Maintenance:** Management of Maintenance, Maintenance Process, Reverse Engineering, Software Re-engineering, Configuration Management, Documentation.
July (Week-1)	(Book Revision)

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: DBMS
Paper: 203
Year/Semester: 2nd Year/3rd sem.

06 Oct. 2020 to 05 Nov. 2020

Month/Week	Topic
October (Week-2)	**Basic Concepts – Data, Information, Records and files. Traditional file –based Systems-File**

	Based Approach-Limitations of File Based Approach, Database Approach-Characteristics of Database Approach.
October (Week-3)	**Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users by presentation.**
October (Week-4)	**Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances. Data Independence – Logical and Physical Data Independence.**
November (Week-1)	**Classification of Database Management System, Centralized and Client Server architecture to DBMS.**

06 Nov. 2020 to 05 Dec. 2020

Month/Week	Topic
November (Week-2)	**Entity-Relationship Model – Entity Types, Entity Sets, Attributes Relationship Types.** Relationship Instances and ER Diagrams,
November (Week-3)	**Basic Concepts of Hierarchical and Network Data Model, Relational Data Model:-Brief History, Relational Model Terminology-Relational Data Structure.**
November (Week-4)	**Database Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations.**
December (Week-1)	**Relational algebra, Relational calculus.**

06 Dec. 2020 to 05 Jan. 2021

Month/Week	Topic
December (Week-2)	**Relational database design: Functional dependencies.**
December (Week-3)	**Modification anomalies.(Test)**

December (Week-4)	**Ist to 3rd NFs**
January (Week-1)	**BCNF, 4th and 5th NFs.(Group discussion)**

05 Jan. 2021 to 06 Feb. 2021

Month/Week	Topic
January (Week-2)	**Computing closures of set and revision.**
January (Week-3)	**Concurrency and recovery.(Assignment work and Group discussion)**
January (Week-4)	**SQL: Data types, Basic Queries in SQL, Insert, Delete and Update Statements, Views.**
February (Week-1)	**Query processing: General strategies of query processing. (BY PRESENTATION)**

06 Feb. 2021 to 25 Feb. 2021

Month/Week	Topic
February (Week-2)	**Query optimization, query processor, concept of security.**
February (Week-3)	**Revision concurrency and recovery (BY PRESENTATION)**
February (Week-4)	**Book revision**

Name of the Assistant/Associate Professor: Ms. Sarika
Class and Section: BCA
Subject: English
Paper: Bca- 204
Year/Semester: 3rd

Sr. No.	Month	Topics to be Covered
1.	October	**Communication and its types**: Introduction, definitions, Process of communication, types of Communication, upward, downward, horizontal, Vertical and diagonal, verbal, nonverbal and oral and written Interpersonal communication – one way/ two way, Mediums of communication
2.	November	**Communication:** Seven C's of effective communication, ethical context of communication. Aids and Barriers to Communication, Reading skills, listening skills: Need and importance, types of listening.
3.	December	**Oral Communication Skills**: Advantages and disadvantages, suitability (when and where to use), Articulation and delivery, drafting a speech, presentations, Personal grooming, Introducing yourself, telephone etiquettes, persuasive speaking, communication in hospitality field.
4.	January	**Pronunciation & Body language**: pronunciation, stress, invocation, rhythm, greeting, handshakes, some polite expressions, apologies, remarks, etiquette and manners, gestures.
5.	February	Revision Class Test House Examination
6.	March	**Semester Examination**