Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Vishal Verma Academic Session: 2023-24

Class: BCA. 2nd Semester: 4th Subject: Relational Data Base Management System(BCA-344)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1.	Relational Model Concepts, Codd's Rules for Relational Model	**01 Jan to 07Jan**	
2.	Relational Algebra – Selection and Projection, Set Operation, Renaming, Join and Division	**08 Jan to 14 Jan**	
3.	Relational Calculus – Tuple Relational Calculus and Domain Relational Calculus	**15Jan to 21Jan**	
4.	Normalization – Purpose, Data Redundancy and Update Anomalies	**22 Jan to 28 Jan**	
5.	Functional Dependencies – Full Functional Dependencies and Transitive Functional Dependencies, Characteristics of Functional Dependencies	**29Jan to 04 Feb**	**Assignment – 1**
6.	Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF)	**05 Feb to 11 Feb**	
7.	SQL: Data Definition and data types, SQL Operators	**12Feb to 18Feb**	
8.	Specifying Constraints in SQL, Basic DDL, DML and DCL commands in SQL	**19 Feb to 25 Feb**	**Class Test**
9.	Simple Queries, Nested Queries, Tables	**26Feb to 03March**	
10.	Views, Indexes, Aggregate Functions, Clauses	**04 March to 10 March**	**Assignment – 2**
11.	PL/SQL architecture, PL/SQL and SQL*Plus, PL/SQL Basics, Advantages of PL/SQL	**11March to 17March**	
12.	The Generic PL/SQL Block: PL/SQL Execution Environment	**18 March to 24 March**	
13.	**HOLI Break**	**25 March to 31 March**	
14.	PL/SQL Character set and Data Types, Control Structure in PL/SQL	**01 April to 07 April**	
15.	Cursors in PL/SQL, Triggers in PL/SQL	**08 April to 14**	

		April	
16.	Programming using PL/SQL.	**15 April to 21 April**	
17.	Revision & Problems Handling	**22 April to 30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Vishal Verma Academic Session: 2023-24

Class: BCA. III Semester: 6th Subject: Advanced Programming with Visual Basic (BCA-365)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1.	Collections – Adding, Removing, Counting, Returning Items in a Collection, Processing a Collection	**01 Jan to 07Jan**	
2.	Working with Forms – Form Properties, Creating, Adding, Removing Forms in Project, Adding Multiple Forms	**08 Jan to 14 Jan**	
3.	Working with Forms – Managing Forms at Run Time, Hiding & Showing Forms, Load & Unload Statements	**15Jan to 21Jan**	
4.	Drag and Drop Operation, Activate & Deactivate events, Form-load event, Example using Forms, Programs in VB using Forms	**22 Jan to 28 Jan**	
5.	Working with Menu – Menu Designing in VB, Adding a Menu to a Form, Modifying and Deleting Menu Items	**29Jan to 04 Feb**	**Assignment – 1**
6.	Adding Access Characters, Adding Shortcut Keys, Manipulating Menus using Common Dialog Box, Attaching Code to Events, Creating Submenus, Dynamic Menu Appearance	**05 Feb to 11 Feb**	
7.	Advanced Controls in VB – Scroll Bar, Slider Control, Tree View,List View, Rich Text Box Control, Toolbar	**12Feb to 18Feb**	
8.	Status Bar,Progress Bar,Cool bar, Image List Program Development in VB using Menus and Advance Controls	**19 Feb to 25 Feb**	**Class Test**
9.	File Handling & File Controls – Sequential & Random files, Opening and Closing Data Files, Viewing the Data in a File, Performing Operations on a File	**26Feb to 03March**	
10.	Creating a Sequential Data File, Writing Data to a Sequential File, Reading the Data in a Sequential File	**04 March to 10 March**	**Assignment – 2**
11.	Finding the End of a Data File, Locating a File, Reading and Writing a Random File (get, put, LOF, seek)	**11March to 17March**	
12.	Working with Graphics – Using Paint, Line, Circle, Manipulating Graphics Program Development in VB using Files and Graphics	**18 March to 24 March**	
13.	**HOLI Break**	**25 March to 31 March**	
14.	Accessing Databases – Data Controls, Data-Bound Controls, DAO, RDO, ADO	**01 April to 07 April**	

15.	Creating the Database, Setting Properties, Applying Operations on Database, Viewing the Database, Updating the Database (adding, deleting records)	**08 April to 14 April**	
16.	Program Development in VB using Database and Advance Controls	**15 April to 21 April**	
17.	Revision & Problems Handling	**22 April to 30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Vishal Verma Academic Session: 2023-24

Class: :- M.Sc.- Semester: 2nd Subject: JAVA Programming (MS 15-21)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1.	Introduction to Java – Importance and features of Java, Java virtual machine, Byte code, JDK, Keywords, constants, variables and Data Types, Operators and Expressions	**01 Jan to 07Jan**	
2.	Decision Making, Branching and Looping, Jump statements – break, continue, return	**08 Jan to 14 Jan**	
3.	Introducing classes, objects and methods – defining a class, adding variables and methods, creating objects, constructors, class inheritance	**15Jan to 21Jan**	
4.	Arrays and String – Creating an array, one and two dimensional arrays, string array and methods	**22 Jan to 28 Jan**	
5.	Packages and interfaces	**29Jan to 04 Feb**	**Assignment – 1**
6.	Exception Handling – Fundamentals exception types, uncaught exceptions, throw exception, built in exception, creating your own exceptions	**05 Feb to 11 Feb**	
7.	Multithreaded Programming – Fundamentals, Java thread model: synchronization, messaging, thread classes	**12Feb to 18Feb**	
8.	Runnable interface, inter thread Communication, suspending, resuming and stopping threads.	**19 Feb to 25 Feb**	**Class Test**
9.	I/O Streams – String and String Buffer classes, Wrapper classes: Basics types, using super, Multilevel hierarchy abstract and final classes	**26Feb to 03March**	
10.	Input/Output Programming – Basics, Streams, Byte and Character Stream, predefined streams, Reading and writing from console and files	**04 March to 10 March**	**Assignment – 2**
11.	Event Handling – Different Mechanism, the Delegation Event Model	**11March to 17March**	
12.	Event Classes, Event Listener Interfaces, Adapter and Inner Classes	**18 March to 24 March**	
13.	**HOLI Break**	**25 March to 31 March**	
14.	Working with windows, Graphics and Text, using AWT controls, Layout managers and menus	**01 April to 07**	

		April	
15.	Handling Image, animation, sound and video, Java Applet.	**08 April to 14 April**	
16.	Beans – Introduction to Java Beans and Swings.	**15 April to 21 April**	
17.	Revision & Problems Handling	**22 April to 30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Priyanka Academic Session : 2023-24

Class : BCA III Semester : VI Subject : BCA-362: Operating System-II

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Process Synchronization: The Critical Section Problem – Single Process/Two Process Solutions; Semaphores – Types, Implementation, Deadlocks and Starvation;	**01 - 07 Jan**	
1	Classical Problems of Synchronization – The Bounded Buffer Problem, The Readers and Writers Problem, The Dining- Philosophers Problem, Critical Regions, Monitors	**08 - 14 Jan**	
1	Directory Structure: Single Level, Two Level, Tree Structures, Acyclic Graph, General Graph; Directory Implementation, Recovery	**15 - 21 Jan**	
2	Secondary Storage Structure: Disk Structure, Disk Scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Selection of Disk Scheduling Algorithm;	**22-28 Jan**	
2	Disk Management; Swap Space Management Network Operating Systems: Remote Login, Remote File Transfer	**29 Jan-4 Feb**	
2	Distributed Operating System: Data Migration, Computation Migration, Process Migration	**5-11 Feb**	

3	Distributed Operating System: Data Migration, Computation Migration, Process Migration	**12-18 Feb**	
3	Accessing Linux System, Login/Logout/Shutting Down, Comparison of Linux with other Operating Systems,	**19-25 Feb**	
3	Commands in Linux: General-Purpose Commands, File Oriented Commands	**26 Feb-3 Mar**	
3	Directory Oriented Commands, Communication Oriented Commands, Process Oriented Commands,	**4-10 Mar**	
3	Redirection of Input and Output, Pipes	**11-17 Mar**	
4	Linux File System: Types of Files in Linux, File Attributes, Structure of File System, inode, File Permission, File System Components, Standard File System, File System Types, Disk Related Commands	**18-24 Mar**	
	HOLI Break	**25-31 Mar**	
4	Processes in Linux: Introduction, Job Control in Linux using at, batch, corn & time commands	**1-7 April**	
4	The vi editor: Introduction, Modes of vi Editor, Command in vi Editor	**8-14 April**	

4	Shell Programming: Introduction, Shell Variables, Shell Keywords, Operators, Assigning Values to the Variables, I/O in Shell, Control Structures, Creating & Executing Shell Programs in Linux.	**15-21 April**	
	Revision of all Units	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Priyanka Academic Session : 2023-24

Class : B.Sc. Computer science Semester : IV Subject : PAPER II: Operating System

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction: operating system, architecture, functions, characteristics,	**01 - 07 Jan**	
1	historical evolution, types: Serial batch, multiprogramming, time sharing, real time, distributed and parallel. OS as resource Manager.	**08 - 14 Jan**	
1	Computer system structures: I/O structure, storage structure, storage hierarchy.	**15 - 21 Jan**	
1	Operating system structure: system components, services, system calls, system programs, system structures.	**22-28 Jan**	Assisgnment 1
2	Process management: process concepts, process state, process control block, operations,	**29 Jan-4 Feb**	
2	process scheduling, inter process communication	**5-11 Feb**	
2	CPU Scheduling: scheduling criteria, levels of scheduling, scheduling algorithms, multiple processor scheduling	**12-18 Feb**	

2	Deadlocks: Characterization, methods of handling, deadlock detection, prevention, avoidance, recovery	**19-25 Feb**	Assignment 2
3	Storage Management: memory management of single-user and multiuser operating system, partitioning, swapping,	**26 Feb-3 Mar**	
3	paging and segmentation, virtual memory, Page replacement Algorithms, Thrashing.	**4-10 Mar**	
3	Process synchronization: critical section problems,	**11-17 Mar**	
3	semaphores. Mutual exclusion	**18-24 Mar**	Test 1
	HOLI Break	**25-31 Mar**	
4	Device and file management: Disk scheduling, Disk structure, Disk management,	**1-7 April**	
4	File Systems: Functions of the system, File access and allocation methods,	**8-14 April**	
4	Directory Systems: Structured Organizations, directory and file protection mechanisms.	**15-21 April**	Test 2

	Revision of all Units	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Priyanka Academic Session : 2023-24

Class : B.Sc. Computer science Semester : VI Subject : Paper-I: Relational Data Base Management System

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Relational Model Concepts, Codd's Rules for Relational Model,	**01 - 07 Jan**	
1	Hierarchical Data Model– Introduction, Features, Components, Example, Network Data Model– Introduction, Features, Components, Example, Differences between Hierarchical Data Model and Network Data Model	**08 - 14 Jan**	
1	Comparison of Relational Data Model with Hierarchical Data Model and Network Data Model	**15 - 21 Jan**	
1	Relational Algebra:-Selection and Projection, Set Operation, Join and Division.	**22-28 Jan**	Assisgnment 1
2	Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus.	**29 Jan-4 Feb**	
2	Functional Dependencies and Normalization -- Purpose, Data Redundancy, Update Anomalies,	**5-11 Feb**	
2	Partial/Fully Functional Dependencies, Transitive Functional Dependencies, Characteristics of Functional Dependencies,	**12-18 Feb**	

2	Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF).	**19-25 Feb**	Assignment 2
3	SQL: Data Definition and data types, Create Table, Insert Data,	**26 Feb-3 Mar**	
3	Viewing Data, Filtering Table Data, Sorting data, Creating Table from a Table, Destroy table,	**4-10 Mar**	
3	Update, View, Delete, Join, Concatenating data from Table	**11-17 Mar**	
3	Specifying Constraints in SQL; Primary Key, Foreign Key, Unique Key, Check Constraint, Using Functions	**18-24 Mar**	Test 1
	HOLI Break	**25-31 Mar**	
4	PL/SQL-Introduction, Advantages of PL/SQL	**1-7 April**	
4	The Generic PL/SQL Block: PL/SQL Execution Environment; PL/SQL Character Set and Data Types, Declaration and Assignment of Variables	**8-14 April**	
4	Control Structure in PL/SQL: Conditional Control, Iterative Control, Sequential Control	**15-21 April**	Test 2
	Revision of all Units	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session : 2023-24

Class : BCA Ist Year Semester : 2nd Subject : Introduction to Web Technologies

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web, Web Pages and Contents, Web Clients, Web Servers,	**15-18 Feb**	
2	Web Browsers; Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools.	**19-25 Feb**	
3	Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Graphics Design, Steps For Developing website	**26 Feb-3 Mar**	
4	Creating a Website and Introduction to Mark up Languages (HTML and DHTML), HTML Document Features & Fundamentals, HTML Elements, Creating Links; Headers;	**4-10 Mar**	
5	Text styles; Text Structuring; Text colour and Background; Formatting text; Page layouts, Images; Ordered and Unordered lists;	**11-17 Mar**	Assignment 1
6	Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5	**18-22 Mar**	Test 1
	HOLI BREAK	**23 Mar-31 Mar**	
7	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance, Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning, and other useful Style Properties; Features of CSS3.	**1-7 April**	Assignment 2

8	The Nature of JavaScript: Evolution of Scripting Languages, JavaScript-Definition, Programming for Non-Programmers, Introduction to Client–Side Programming, Enhancing HTML Documents with JavaScript. Static and Dynamic web pages	**8-14 April**	Test 2
9	**Revision**	**15-21 April**	
10	**Revision**	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session : 2023-24

Class : BCA II Semester : 4th Subject : E-Commerce

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to E-Commerce:-Business operations; E-commerce practices vs. traditional business practices; concepts of b2b, b2c,c2c,b2g,g2h,g2c; Features of E-Commerce,	**01 - 07 Jan**	
2	Types of Ecommerce Systems, Elements of E-Commerce, principles of E-Commerce, Benefits and Limitations of E-Commerce.	**08 - 14 Jan**	
3	Management Issues relating to e-commerce. Operations of E-commerce: Credit card transaction; Secure Hypertext Transfer Protocol (SHTP) ;	**15 - 21 Jan**	
4	Electronic payment systems; Secure electronic transaction (SET) ; SET`s encryption; Process; Cybercash; Smart cards; Indian payment models.	**22-28 Jan**	
5	Applications in governance: EDI in governance; E-government; E-Governance applications of Internet; concept of government –to-business, business-to-government and citizen-to-government; E-governance models;	**29 Jan-4 Feb**	Assignment 1
6	Private sector interface in Egovernance. Applications in B2C: Consumers shopping procedure on the Internet	**5-11 Feb**	Test 1
7	; Impact on disinter mediation and re-intermediation; Global market; Strategy of traditional department stores.	**12-18 Feb**	
8	Products in b2c model; success factors of e-brokers; Broker-based services on-line; Online travel tourism services; Benefits and impact of e-commerce on travel industry;	**19-25 Feb**	

9	Deal estate market; online stock trading and its benefits; Online banking and its benefits; Online financial services and their future; E-auctions – benefits, implementation and impact.	**26 Feb-3 Mar**	
10	Applications in B2B: Key technologies for b2b; architectural models of b2b, characteristics of the supplier –oriented marketplace, buyer-oriented marketplace and intermediary-oriented marketplace;	**4-10 Mar**	
11	Just In Time delivery in b2b; Internet-based EDI from traditional EDI; Marketing Issues in b2b.	**11-17 Mar**	
12	Emerging Business models: Retail model; Media model; advisory model, made-to-order manufacturing model; Do-it- yourself model; Information service model;	**18-22 Mar**	
13	**HOLI Break**	**23-31 Mar**	Assignment 2
14	Emerging hybrid models; Emerging models in India, Internet & E-Commerce scenario in India; Internet security Issues; Legal aspects of E-commerce	**1-7 April**	Test 2
	Revision	**8-14 April**	
	Revision	**15-21 April**	
	Revision	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Neha Saini Academic Session : 2023-24

Class : M.Sc Ist Year Semester : 2nd Subject : Theory of Computation

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Computability and Non-computability and examples of non-computable problems, Russel's paradox	**01 - 07 Jan**	
2	Finite State System, Extended Transition Function, Designing of DFA and NDFA, Finite Automata with E-Transitions, Equivalence of DFA and NFA with proof	**08 - 14 Jan**	
3	Regular Expression, Laws of Regular Expressions, Kleene's Theorem 1 and 2, Properties and Limitations of FSM, FSM with Output: Moore and Mealy Machines	**15 - 21 Jan**	
4	Arden's Theorem with proof, Closure Properties of Regular Sets, Application of Pumping Lemma, Myhill-Nerode Theorem, Minimization of FA.	**22-28 Jan**	
5	Grammar: Definition, Chomsky Classification of Grammars, Construction of Context Free Grammar	**29 Jan-4 Feb**	Assignment 1
6	Derivation, Parse Trees, Ambiguity, Removal of Ambiguity, Simplification of Context Free Grammar, CNF and GNF, Closure properties of CFL, Pumping Lemma for CFL.	**5-11 Feb**	Test 1
7	Pushdown Automaton: Introduction, Types of PDA, Designing of PDA's, Conversion from PDA to CFG and vice-versa, Applications	**12-18 Feb**	

8	Parsing: Early's, Cook-Kasami-Young, Tomito's, top-down and bottom-up methods. Linear Bounded Automata (LBA), Turing machines, variants of TMs, Restricted TMs, TMs and Computers	**19-25 Feb**	
9	Recursive and recursively- enumerable languages and Properties. Decidability: Post's correspondence problem, Rice's theorem, decidability of membership, emptiness and equivalence problems of languages.	**26 Feb-3 Mar**	
10	Random Access Machines, Decidable languages, decidable problems, The halting problem, Diagonalization method,	**4-10 Mar**	
11	Undecidable problems for Regular expressions, Turing machines and other undecidable problems.	**11-17 Mar**	
12	Reducibility: The Set NP and Polynomial Verifiability, Polynomial-Time Reductions and NP-Completeness, The Cook-Levin Theorem, Some Other NP-Complete Problems, Reduction, mapping reducibility	**18-22 Mar**	
13	**HOLI Break**	**23-31 Mar**	
14	Computational Complexity: Primitive recursive functions, computable functions, examples, Recursion theorem. Tractable and Intractable problems, Theory of Optimization	**1-7 April**	Assignment 2 Test 2
	Revision	**8-14 April**	
	Revision	**15-21 April**	

	Revision	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Ms. Sandeepi Academic Session : 2023-24

Class : BCA 2nd year Semester : 4th Subject : MIS

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to system and Basic System Concepts, Types of Systems, The Systems Approach	**01 - 07 Jan**	
2	Information System: Definition & Characteristics. Types of information, Role of Information in Decision-Making	**08 - 14 Jan**	
3	Sub-Systems of an Information system: EDP and MIS management levels, EDP/MIS/DSS.	**15 - 21 Jan**	
4	An overview of Management Information System: Definition & Characteristics	**22-28 Jan**	
5	Components of MIS, Frame Work for Understanding MIS. Information requirements & Levels of Management	**29 Jan-4 Feb**	Assignment 1
6	Simon's Model of decision-Making, Structured Vs Un-structured decisions, Formal vs. Informal systems.	**5-11 Feb**	Test 1

	Developing Information Systems: Analysis & Design of Information Systems.	**12-18 Feb**	
	Implementation & Evaluation, Pitfalls in MIS Development, Functional MIS: A Study of Personnel	**19-25 Feb**	
	Financial and production MIS, Introduction to e-business systems, ecommerce – technologies, applications	**26 Feb-3 Mar**	
	Decision support systems – support systems for planning, control and decision-making	**4-10 Mar**	Assignment 2 Test 2
	Revision		
	Revision	**18-24 Mar**	
	HOLI Break	**25-31 Mar**	
	Revision	**1-7 April**	
	Revision	**8-14 April**	

	Revision	**15-21 April**	
	Revision	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Ms. Sandeepi Academic Session : 2023-24

Class : BCA 3rd year Semester : 6th Subject : INTERNET TECHNOLOGY

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Computability and Non-computability and examples of non-computable problems, Russel's paradox,	**01 - 07 Jan**	
2	Finite State System, Extended Transition Function, Designing of DFA and NDFA, Finite Automata with E-Transitions, Equivalence of DFA and NFA with proof	**08 - 14 Jan**	
3	Regular Expression, Laws of Regular Expressions, Kleene's Theorem 1 and 2, Properties and Limitations of FSM, FSM with Output: Moore and Mealy Machines	**15 - 21 Jan**	
4	Arden's Theorem with proof, Closure Properties of Regular Sets, Application of Pumping Lemma, Myhill-Nerode Theorem, Minimization of FA.	**22-28 Jan**	
5	Grammar: Definition, Chomsky Classification of Grammars, Construction of Context Free Grammar,	**29 Jan-4 Feb**	Assignment 1
6	Derivation, Parse Trees, Ambiguity, Removal of Ambiguity, Simplification of Context Free Grammar, CNF and GNF, Closure properties of CFL, Pumping Lemma for CFL.	**5-11 Feb**	Test 1

	Pushdown Automaton: Introduction, Types of PDA, Designing of PDA's, Conversion from PDA to CFG and vice-versa, Applications,.	**12-18 Feb**	
	Parsing: Early's, Cook-Kasami-Young, Tomito's, top-down and bottom-up methods. Linear Bounded Automata (LBA), Turing machines, variants of TMs, Restricted TMs, TMs and Computers	**19-25 Feb**	
	Recursive and recursively- enumerable languages and Properties. Decidability: Post's correspondence problem, Rice's theorem, decidability of membership, emptiness and equivalence problems of languages.	**26 Feb-3 Mar**	
	Random Access Machines, Decidable languages, decidable problems, The halting problem, Diagonalization method,	**4-10 Mar**	
	Undecidable problems for Regular expressions, Turing machines and other undecidable problems.	**11-17 Mar**	
	Reducibility: The Set NP and Polynomial Verifiability, Polynomial-Time Reductions and NP-Completeness, The Cook-Levin Theorem, Some Other NP-Complete Problems, Reduction, mapping reducibility	**18-24 Mar**	
	HOLI Break	**25-31 Mar**	
	Computational Complexity: Primitive recursive functions, computable functions, examples, Recursion theorem. Tractable and Intractable problems, Theory of Optimization	**1-7 April**	Assignment 2 Test 2
	Revision	**8-14 April**	

	Revision	**15-21 April**	
	Revision	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Ms. Sandeepi Academic Session : 2023-24

Class : Msc. !st year Semester : 2nd Subject : Compiler Design

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Compilers and Translators, Need of Translators, Tools used for compilation, Structure and Phases of Compiler, Single-Pass and Multi-Pass Compilers.	**01 - 07 Jan**	
2	Bootstrapping, Compiler Construction Tools. Bootstrap compilers, Phases of Compilation process. Lexical Analysis: Design of Lexical Analyzer	**08 - 14 Jan**	
3	Finite Automata and Regular Expressions, Lex package on UNIX systems. Process of Lexical Analysis. Test 1	**15 - 21 Jan**	
4	Recognition of Regular Expressions. Syntax-Directed Translation: Translation Schemes, Implementation of Syntax-Directed Translators, Intermediate code and its need, Postfix Notation	**22-28 Jan**	
5	Parse Trees and Syntax Trees, Three-address code and its representations, Boolean Expressions	**29 Jan-4 Feb**	
6	Flow of Control. Symbol Table: Contents of Symbol Table, Data Structures used for symbol table, Representing scope information.	**5-11 Feb**	

7	Run Time Storage Administration: Types of Storage Allocation Schemes, Implementation of Stack Allocation Scheme.	**12-18 Feb**	Assignment 1
	Implementation of Block Structured Languages. Storage Allocation in Block Structured Languages.	**19-25 Feb**	Test 1
	Error Detection and Recovery: Errors, Lexical-Phase Errors, Syntactic Phase Errors, Semantic Errors. Test 2	**26 Feb-3 Mar**	
	Parsing Techniques: Top down & Bottom-up parsing,Shift Reduce parsing, Operator Precedence parsing, Predictive Parsers. Left Recursion and its removal.	**4-10 Mar**	
	Recursive Descent parser, Automatic Construction of efficient Parsers: LR parsers, the Canonical Collection of LR(0) items, Constructing SLR parsing tables, Constructing Canonical LR parsing tables	**11-17 Mar**	
	Constructing LALR parsing tables Using Ambiguous Grammars, An Automatic Parser Generator,	**18-24 Mar**	
	Holi Break	**25-31 Mar**	
	Implementation of LR parsing tables, Constructing LALR sets of items. YACC package on UNIX system., Intermediate Code Generation: Object programs, Issues in the design of a code generator, Intermediate languages.	**1-7 April**	Assignment 2
	Quadruples, Generating intermediate code for declarative statement, Register Allocation and Assignment statement, Boolean expression, and case statement, peephole optimization.	**8-14 April**	Test 2

	Code Optimization: Principle sources of Optimization, optimization of basic blocks, Loop Optimizations, DAG Representation of Basic Blocks	**15-21 April**	
	Loop Invariant Computation, Reducible Flow Graphs, Global Data Flow Analysis, code improving transformation.	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dinesh Parkash Academic Session : 2023-24

Class : BCA Semester : 4th Subject : ADVANCED DATA STRUCTURE

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Tree: Introduction, Definition, Representing Binary tree in memory.	**01 - 07 Jan**	
2	Traversing binary trees with examples.	**08 - 14 Jan**	
3	Traversal algorithms using stacks with examples.	**15 - 21 Jan**	
4	Binary search trees: introduction, storage, Searching, Insertion and deletion in a Binary search tree with examples.	**22-28 Jan**	
5	Huffman's algorithm, General trees. Graph: Introduction, Graph theory terminology with examples.	**29 Jan-4 Feb**	
6	Sequential and linked representation of graphs with examples.	**5-11 Feb**	

7	operations on graphs with examples.	**12-18 Feb**	
8	traversal algorithms in graphs and their implementation.	**19-25 Feb**	
9	Warshall's algorithm for shortest path with examples.	**26 Feb-3 Mar**	Assignment 1
10	Dijkstra algorithm for shortest path with examples.	**4-10 Mar**	Test 1
11	Sorting: Internal & external sorting, Radix sort with examples.	**11-17 Mar**	
12	Quick sort, Heap sort with examples.	**18-24 Mar**	
13	**HOLI Break**	**25-31 Mar**	
14	Merge sort, Tournament sort with examples.	**1-7 April**	
15	Comparison of various sorting and searching algorithms on the basis of their complexity.	**8-14 April**	Assignment 2

16	Files: Introduction Attributes of a file, Classification of files, File operations, Comparison of various types of files,	**15-21 April**	Test 2
17	File organization: Sequential, Indexed-sequential, Random-access file. Hashing: Introduction, Collision resolution.	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dinesh Parkash Academic Session : 2023-24

Class : B.Sc. CS Semester : 4th Subject : Object Oriented Programming with C++

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Object oriented Programming: Object-Oriented programming features and benefits.	**01 - 07 Jan**	
2	Object-Oriented features of C++, Class and Objects with examples.	**08 - 14 Jan**	
3	Data Hiding & Encapsulation, Structures with examples.	**15 - 21 Jan**	
4	Data members and Member functions, Scope resolution operator and its significance with examples.	**22-28 Jan**	
5	Static Data Members, Static member functions, Nested and Local Class, Accessing Members of Class and Structure.	**29 Jan-4 Feb**	
6	Constructor, Initialization using constructor with examples.	**5-11 Feb**	

7	Types of constructor– Default, Parameterized & Copy Constructors, Constructor overloading, Default Values to Parameters, Destructors	**12-18 Feb**	
8	Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations.	**19-25 Feb**	
9	Manipulators, Friend Function, Friend Class with examples.	**26 Feb-3 Mar**	Assignment 1
10	Arrays, Array of Objects, Passing and Returning Objects to Functions, String Handling in C++ with examples.	**4-10 Mar**	Test 1
11	Dynamic Memory Management: Pointers, new and delete Operator with examples.	**11-17 Mar**	
12	Array of Pointers to Objects, this Pointer, Passing Parameters to Functions by Reference & pointers.	**18-24 Mar**	
13	**HOLI Break**	**25-31 Mar**	
14	Static Polymorphism: Operators in C++ with examples.	**1-7 April**	
15	Precedence and Associativity Rules, Operator Overloading with examples.	**8-14 April**	Assignment 2

16	Unary & Binary Operators Overloading, Function Overloading with examples.	**15-21 April**	Test 2
17	Inline Functions, Merits/Demerits of Static Polymorphism with examples.	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dinesh Parkash Academic Session : 2023-24

Class : B.Sc. CS Semester : 6th Subject : Computer Networks

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Data Communication and Computer Networks; Uses of Computer Networks.	**01 - 07 Jan**	
2	Types of Computer Networks and their Topologies.	**08 - 14 Jan**	
3	Network Hardware Components: Connectors, Transceivers.	**15 - 21 Jan**	
4	Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways.	**22-28 Jan**	
5	Network Software: Network Design issues and Protocols.	**29 Jan-4 Feb**	
6	Connection-Oriented and Connectionless Services; OSI Reference Model; TCP/IP Model.	**5-11 Feb**	

7	Analog and Digital Communications Concepts: Analog and Digital data and signals.	**12-18 Feb**	
8	Bandwidth and Data Rate, Capacity, Baud Rate; Guided and Wireless Transmission Media.	**19-25 Feb**	
9	Communication Satellites; Switching and Multiplexing; Modems and modulation techniques.	**26 Feb-3 Mar**	
10	Data Link Layer Design issues; Error Detection and Correction methods.	**4-10 Mar**	Assignment 1
11	Sliding Window Protocols: One-bit, Go Back N and Selective Repeat.	**11-17 Mar**	Test 1
12	Media Access Control: ALOHA, Slotted ALOHA, CSMA, Collision free protocols.	**18-24 Mar**	
13	**HOLI Break**	**25-31 Mar**	
14	Introduction to LAN technologies: Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet; Token Ring; Introduction to Wireless LANs and Bluetooth.	**1-7 April**	
15	Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Link State Routing.	**8-14 April**	Assignment 2

16	Hierarchical Routing; Congestion Control; Traffic shaping; Choke packets; Load shedding.	**15-21 April**	Test 2
17	Application Layer: Introduction to DNS, E-Mail and WWW services; Network Security Issues: Security attacks; Encryption methods; Firewalls; Digital Signatures.	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dinesh Parkash Academic Session : 2023-24

Class :M.Sc. Semester : 4th Subject : CLOUD COMPUTING

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Cloud Computing: Definition, roots of clouds, characteristics, Cloud Architecture – public, private, hybrid, community, advantages & disadvantages of Cloud Computing.	**01 - 07 Jan**	
2	Migrating into a Cloud: broad approaches, seven-step model to migrate.	**08 - 14 Jan**	
3	Virtualization: benefits & drawbacks of virtualization, virtualization types – operating system virtualization, platform virtualization, storage virtualization, network virtualization, application virtualization, virtualization technologies.	**15 - 21 Jan**	
4	Cloud Services & Platforms: Compute services, Storage services Database services, Application Services, Queuing services.	**22-28 Jan**	
5	E-mail services, Notification services, Media services, Content delivery services.	**29 Jan-4 Feb**	
6	Analytics services, Deployment & management services, Identity & access management services.	**5-11 Feb**	

7	Case studies of these services. Federated & Multimedia.	**12-18 Feb**	
8	Cloud Computing: architecture, features of federation types, federation scenarios.	**19-25 Feb**	
9	layers enhancement of federation; Multimedia Cloud.	**26 Feb-3 Mar**	
10	SLA Management in Cloud Computing: traditional approaches to SLA management.	**4-10 Mar**	Assignment 1
11	Types of SLA, life cycle of SLA, SLA management in cloud.	**11-17 Mar**	Test 1
12	Cloud Security: challenges, automated policy-based management.	**18-24 Mar**	
13	**HOLI Break**	**25-31 Mar**	
14	CSA cloud security architecture, authentication, authorization, identity & access management, data security, auditing.	**1-7 April**	
15	Developing for Cloud: Design considerations for cloud applications, reference architectures for cloud applications, Legal Issues in Cloud Computing: data privacy and security issues, cloud contracting models.	**8-14 April**	Assignment 2

16	Cloud application design methodologies, data storage approaches, Python for Cloud: Python characteristics, data types & data structures.	**15-21 April**	Test 2
17	Control flows, functions, modules, packages, file handling, date/time operations, classes, Python web application framework – Django.	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dinesh Parkash Academic Session : 2023-24

Class : PGDCA Subject : Data Structures

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Data Structures: Elementary data organization, Data structure operations.	**01 - 07 Jan**	
2	Algorithm complexity and time-space tradeoff, Classification of data structures.	**08 - 14 Jan**	
3	String Processing: Storing strings, String operations, Pattern matching algorithms.	**15 - 21 Jan**	
4	Arrays: Linear arrays, Operations on arrays, Multidimensional arrays, Storage of arrays, Matrices, Sparse Matrices.	**22-28 Jan**	
5	Linked Lists: Representation of linked list in memory, Traversal, Searching, Insertion, Deletion, Sorted Linked List, Header List.	**29 Jan-4 Feb**	
6	Two – Way List; Stacks, Queues, Linked and Array representation of Stacks.	**5-11 Feb**	

7	Queues, and Dequeues, Priority Queues, Operations on stacks and queues.	**12-18 Feb**	
8	Applications of stacks: Recursion, Polish Notation, Quicksort.	**19-25 Feb**	
9	Trees: Binary Trees, Representation of binary trees in memory.	**26 Feb-3 Mar**	
10	Threaded Binary Trees, Balanced Tree, Different tree traversal algorithms.	**4-10 Mar**	Assignment 1
11	Binary Search Tree: Searching, Insertion, and deletion in a Binary search tree, Heap Sort.	**11-17 Mar**	Test 1
12	Representation of Graphs and Applications: Adjacency Matrix.	**18-24 Mar**	
13	**HOLI Break**	**25-31 Mar**	
14	Path Matrix, Warshall's Algorithm.	**1-7 April**	
15	Linked Representation of a Graph.	**8-14 April**	Assignment 2

16	Traversing a Graph; Sorting and Searching: Radix Sort, Merge Sort.	**15-21 April**	Test 2
17	Linear Search, Binary Search, Insertion Sort, Selection Sort, Bubble Sort.	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Navneet Garg Academic Session: 2023-24

Class: BCA. 1st Semester: 2nd Subject: SEC (Cloud Computing)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Basic Concepts of Cloud Computing Computer Network Basics.	**15 Feb to 17**	
1	Concepts of Distributed Systems. Concepts of Cloud Computing and its Necessity.	**19 Feb to 24**	Test1
1	Cloud Service Providers in use and their Significance.	**26 Feb to 2 March**	Test 2
2	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models. Cloud Deployment Models.	**4 March to 9**	Assignment 1
3	Cloud Storage Management Concept of Virtualization and Load Balancing.	**11 March to 16**	Test 3
3	Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information.	**18 March to 22**	Test 4
3	Identifying the problems of scale and management in big data.	**1 April to 6**	Test 5
4	Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service.	**8 April to 13**	Assignment 2
4	Amazon Web Services (AWS). Google Cloud Platform.	**15 April to 20**	Test 6
10	**Revision**	**22 April to 30**	Test 7

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Navneet Garg Academic Session: 2023-24

Class : BCA- I Semester : 2nd Subject : Operating System

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introductory Concepts: Operating System, Functions and Characteristics, Historical Evolution of Operating Systems, Operating System Structure. Types of Operating System: Real-time, Multiprogramming, Multiprocessing, Batch processing.	**14-18 Feb**	
1	Operating System Services, Operating System Interface, Service System Calls, and System Programs.	**19-25 Feb**	
1	Process Management: Process Concepts, Operations on Processes, Process States, and Process Control Block. Inter-Process Communication.	**26 Feb-3 Mar**	
2	CPU Scheduling: Scheduling Criteria, Levels of Scheduling, Scheduling Algorithms, Multiple Processor Scheduling, Algorithm Evaluation.	**4-10 Mar**	
2	Deadlocks: Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery.	**11-17 Mar**	
2	Synchronization: Critical Section Problem, Semaphores, Classical Problem of Synchronization, Monitors.	**18-24 Mar**	
	HOLI Break	**25-31 Mar**	

3	Memory Management Strategies: Memory Management of Single-user and Multiuser Operating Systems, Partitioning, Swapping, Contiguous Memory Allocation, Paging and Segmentation;	**1-7 April**	
3+4	Virtual Memory Management: Demand Paging, Page Replacement Algorithms, Thrashing. Implementing File System: File System Structure, File System Implantation, File Operations, Type of Files,	**8-14 April**	
4	Allocation Methods, and Free Space Management. Disk Scheduling algorithm - SSTF, Scan, C- Scan, Look, C-Look. SSD Management.	**15-21 April**	
	Revision of all Units	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Navneet Garg Academic Session : 2023-24

Class :M.Sc. Semester : 4th Subject : ADVANCED COMPUTER ARCHITECTURE

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Computational Model: Basic computational models, evolution and interpretation of computer architecture, concept of computer architecture as a multilevel hierarchical framework.	**01 - 07 Jan**	
1	Classification of parallel architectures, Relationships between programming languages and parallel architectures Parallel Processing:: Types and levels of parallelism, Instruction Level	**08 - 14 Jan**	
1	Parallel (ILP) processors, dependencies between instructions, principle and general structure of pipelines, performance measures of pipeline, Scheduling for ILPProcessors - Basic block scheduling, loop scheduling, global scheduling	**15 - 21 Jan**	
1	Pipelined processing of integer, Boolean, load and store instructions, VLIW architecture, Code	**22-28 Jan**	
2	Superscalar Processors: Emergence of superscalar processors, Tasks of superscalar processing – parallel decoding,	**29 Jan-4 Feb**	
2	comparison of VLIW & superscalar processors Branch Handling: Branch problem,	**5-11 Feb**	

7	Approaches to branch handling – delayed branching, branch detection and prediction schemes,	**12-18 Feb**	
8	Branch penalties and schemes to reduce them, multiway branches, guarded execution	**19-25 Feb**	
9	superscalar instruction issue, shelving, register renaming, parallel execution, preserving sequential consistency of instruction execution and exception processing	**26 Feb-3 Mar**	
10	MIMD Architectures: Concepts of distributed and shared memory MIMD architectures	**4-10 Mar**	Assignment 1
11	UMA, NUMA, CCNUMA & COMA models, problems of scalable computers.	**11-17 Mar**	Test 1
12	Problems of scalable computers.	**18-24 Mar**	
13	HOLI Break	**25-31 Mar**	
14	Dynamic interconnection networks: single shared buses, comparison of bandwidths of locked, pended & split transaction buses, arbiter logics, crossbar, multistage networks – omega, butterfly	**1-7 April**	
15	Cache coherence problem, hardware based protocols – snoopy cache protocol, directory schemes	**8-14 April**	Assignment 2

16	Hierarchical cache coherence protocols, software based protocols.	**15-21 April**	Test 2
17	Revisions	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Navneet Garg Academic Session : 2023-24

Class : PGDCA Semester : II Subject : Operating System

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introductory Concepts: Operating System, Functions and Characteristics,	**1 Jan to 7 Jan**	
1	historical evolution of operating systems, Real time systems, Distributed systems,	**8 jan to 15**	
1	O/S services, system calls, system programs.	**16 jan to 31 jan**	
1	CPU Scheduling: Process concept, Process scheduling, scheduling criteria, Scheduling algorithms.	**1 feb to 7 feb**	
2	Deadlocks: Deadlock characterization, Deadlock prevention and avoidance, Deadlock detection and recovery.	**8 feb to 16 feb**	
2	Storage Management: Storage allocation methods: Single contiguous allocation, Multiple contiguous allocation,	**17 feb to 22 feb**	
2	Paging; Segmentation, Virtual memory concepts, Demand Paging,	**23 feb to 29 feb**	

3	File Systems: File concept, File access and allocation methods, Directory Systems: Structured Organizations.	**1 march to 7 march**	
3	Hardware Management: Disk scheduling policies.	**8 march to 15 march**	
3	Protection: Goals of protection, principles of protection, domain of protection, access matrix & its implementation, revocation of access rights.	**16 march to 24 march**	
	HOLI Break	**25-31 Mar**	
4	Windows: Features of Windows; Various versions of Windows & its use; My Computer & Recycle bin;	**1-7 April**	
4	Desktop, Icons and Windows Explorer; Dialog Boxes & Toolbars; Working with Files & Folders; simple operations like copy, delete, moving of files and folders from one drive to another, Accessories and Windows Settings using Control Panel.	**8-14 April**	
4	Linux: Linux architecture, Features of Linux, Simple Commands in Linux.	**15-21 April**	
	Revision of all Units	**22-30 April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Amarpreet Singh Academic Session: 2023-24

Class: B.C.A. Semester: VI Subject: Computer Oriented Statistical Method(BCA-245)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Basic Statistics: Preparing Frequency Distribution Table and Cumulative frequency, Measure of Central Tendency, Types: Arithmetic mean	01 Jan to 07 Jan	
2	Geometric Mean, Harmonic Mean, Median, Mode.	08 Jan to 14 Jan	
3	Measure of Dispersion: Range, Quartile Deviation, mean deviation, Coefficient of mean Deviation, Standard Deviation	15 Jan to 21 Jan	
4	Moments: Moments About mean, Moments about any point, Moment about origin, Moment about mean in terms of moment about any point, Moment about any point in terms of Moment about mean.	22 Jan to 28 Jan	
5	Probability Distribution: Random Variable- Discrete Random and Continuous Random variable, Probability Distribution of a Random Variable	29 Jan -4 Feb	Test1 & Assignment 1
6	Mathematical Expectation Types: Binomial, Poisson, Normal Distribution, Mean and Variance of Binomial, Poisson, and Normal Distribution.	5 Feb to 11 Feb	

7	Correlation: Introduction, Types, Properties, Methods of Correlation: Karl Pearson's Coefficient of Correlation,	12 Feb-18 Feb	
8	Rank Correlation and Concurrent Deviation method, Probable error.	19 Feb-25 Feb	
9	Regression: Introduction, Aim of Regression Analysis, Types of Regression Analysis, Lines of Regression,	26 Feb-3 March	Test 2 & Assignment 2
10	Properties of Regression Coefficient and Regression Lines, Comparison with Correlation.	4-10 March	
11	Curve Fitting: Straight Line, Parabolic curve, Geometric Curve and Exponential Curve	11-17 March	
12	Baye's Theorem in Decision Making, Forecasting Techniques	18-24 March	
13	Sample introduction, Sampling: Meaning, methods of Sampling, Statistical Inference: Test of Hypothesis, Types of hypothesis	25-31 March	Test 3
14	Types of hypothesis, Procedure of hypothesis Testing, Type I and Type II error, One Tailed and two tailed Test,	1-7April	
15	Types of test of Significance: Test of significance for Attribute-Test of No. of success and test of proportion of success, Test of significance for large samples -	8-15 April	

16	Test of significance for single mean and Difference of mean, Test of significance for small samples (t-test) – test the significance between the mean of a random sample, between the mean of two independent samples	16-22 April	
17	Revision	23-30 April	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Amarpreet Singh Academic Session: 2023-24

Class: B.C.A. Semester: VI Subject : Computer Graphics

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Computer Graphics; Interactive and Passive Graphics; Applications of Computer Graphics;	01 Jan to 07 Jan	
2	Display Devices: CRT; Random Scan, Raster Scan, Color CRT Monitor, DVST	08 Jan to 14 Jan	
3	Refresh Rate and Interlacing, Bit Planes, Color Depth, Color Palette,	15 Jan to 21 Jan	
4	Graphical Input: Pointing and Positioning Devices and Techniques Point-Plotting Techniques	22 Jan to 28 Jan	
5	Scan Conversion, Scan-Converting a Straight Line: The Symmetrical DDA, The Simple DDA	29 Jan -4 Feb	Test1 & Assignment 1
6	Bresenham's Line Algorithm; Scan-Converting a Circle: Circle drawing using Polar Coordinates	5 Feb to 11 Feb	

7	Bresenham's Circle Algorithm, Scan-Converting an Ellipse: Polynomial Method, Trigonometric Method;	12 Feb-18 Feb	
8	Polygon Area Filling: Scan-line Fill and Flood Fill Algorithms;	19 Feb-25 Feb	
9	Two-Dimensional Graphics Transformation: Basic Transformations: Translation, Rotation, Scaling; Matrix Representations and Homogeneous Coordinates;	26 Feb-3 March	Test 2 & Assignment 2
10	Other Transformations: Reflection, Shearing; Coordinate Transformations;	4-10 March	
11	Composite Transformations; Inverse Transformation; Affine Transformations; Raster Transformation	11-17 March	
12	Two-Dimensional Viewing: Window and Viewport, 2-D Viewing Transformation Clipping: Point Clipping;	18-24 March	
13	Line Clipping: Cohen-Sutherland Line Clipping Algorithm, Mid-Point Subdivision Line Clipping Algorithm	25-31 March	Test 3
14	Polygon Clipping: Sutherland-Hodgman Polygon Clipping Algorithm	1-7April	
15	Three-Dimensional Graphics: Three-Dimensional Display Methods; 3-D Transformations: Translation, Rotation, Scaling; Composite Transformations;	8-15 April	

16	Revision	16-22 April	
17	Revision	23-30 April	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Dr. Bhawna Sharma Academic Session: 2023-24

Class: B.C.A. Semester: VI Subject : PROGRAMMING IN CORE JAVA (BCA-366)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Basic Principles of Object Oriented Programming, Introduction to Java, History and Features of Java, Java Virtual Machine (JVM), Java's Magic Bytecode; The Java Runtime Environment; Basic Language Elements: Lexical Tokens, Identifiers, Keywords, Literals, Comments, Primitive Data types, Operators, Assignments; Input/output in Java: Basics, I/O Classes, Reading Console Input, Control Structures in Java: Decision and Loop Control Statements	**1st Jan to 15th Jan**	
2	Class and Object in Java: Defining Class in Java, Creating Objects of a Class, Defining Methods, Argument Passing Mechanism, Using Class and Objects, Constructors, Nested Class, Inner Class, Abstract Class, Dealing with Static Members; Array & String in Java: Defining an Array, Initializing & Accessing Array, Multi –Dimensional Array,	**15th Jan to 31st Jan**	
3	Defining String, Operation on Array and String, Creating Strings using String Class, Creating Strings using StringBuffer Class,; Polymorphism in Java: Basic Concept, Types, Overriding vs. Overloading, Implementation, Extending Classes and Inheritance in Java: Benefits of Inheritance	**2nd Feb to 15th Feb**	
4	Types of Inheritance in Java, Access Attributes, Inheriting Data Members and Methods, Role of Constructors in Inheritance, Use of "super"; Packages & Interfaces: Basic Concepts of Package and Interface	**16th Feb to 29th Feb**	
5	Organizing Classes and Interfaces in Packages, Defining Package, Adding Classes from a Package to Your Program, CLASSPATH Setting for Packages, Import Package, Naming Convention For Packages , Access Protection in Packages, Standard Packages	**1st March to 15th March**	Test1 & Assignment 1

6	Exception Handling in Java: The Idea behind Exception, Types of Exception, Use of try, catch, finally, throw, throws in Exception Handling, In-built and User Defined Exceptions, Checked and Un-Checked Exceptions, Catching more than one Exception;	**16th March to 31st March**	
7	User Defined Exceptions, Checked and Un-Checked Exceptions, Catching more than one Exception; Applet in Java: Applet Basics, Applet Architecture, Applet Life Cycle, Applet Tag, Parameters to Applet, Embedding Applets in Web page, Creating Simple Applets	**1st April to 15th April**	
8	GUI Programming: Designing Graphical User Interfaces in Java, Components and Containers, Using Containers, Layout Managers, AWT Components, AWT Classes, AWT Controls, Revision	**16th April to 25th April**	

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Priya Rani Academic Session: 2023-24

Class: B.A. 1st Semester: 2nd Subject: SEC (Cloud Computing)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Basic Concepts of Cloud Computing Computer Network Basics.	**15 Feb to 17**	
1	Concepts of Distributed Systems. Concepts of Cloud Computing and its Necessity.	**19 Feb to 24**	Test1
1	Cloud Service Providers in use and their Significance.	**26 Feb to 2 March**	Test 2
2	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models. Cloud Deployment Models.	**4 March to 9**	Assignment 1
3	Cloud Storage Management Concept of Virtualization and Load Balancing.	**11 March to 16**	Test 3
3	Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information.	**18 March to 22**	Test 4
3	Identifying the problems of scale and management in big data.	**1 April to 6**	Test 5
4	Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service.	**8 April to 13**	Assignment 2
4	Amazon Web Services (AWS). Google Cloud Platform.	**15 April to 20**	Test 6
10	**Revision**	**22 April to 30**	Test 7

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Priya Rani Academic Session: 2023-24

Class: B.A. 1st Semester: 2nd Subject: MDC (Web Technologies Fundamentals)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web, Web Pages and Contents	**15 Feb to 17**	
1	Web Clients, Web Servers, Web Browsers; Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools.	**19 Feb to 24**	Test1
2	Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Graphics Design, steps for Developing website	**26 Feb to 2 March**	Test 2
2	Creating a Website and Introduction to Markup Languages (HTML and DHTML)	**4 March to 9**	Assignment 1
3	HTML Document Features & Fundamentals, HTML Elements, Creating Links; Headers; Text styles; Text Structuring; Text colour and Background;	**11 March to 16**	Test 3
3	Formatting text; Page layouts, Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts;	**18 March to 22**	Test 4
3	Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5	**1 April to 6**	Test 5
4	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance	**8 April to 13**	Assignment 2
4	Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning, and other useful Style Properties; Features of CSS3. Introduction to Client–Side Programming	**15 April to 20**	Test 6
10	**Revision**	**22 April to 30**	Test 7

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Parveen Kumar Academic Session: 2023-24

Class: B.Sc. 1st Semester: 2nd Subject: SEC (Cloud Computing)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Basic Concepts of Cloud Computing Computer Network Basics.	**15 Feb to 17**	
1	Concepts of Distributed Systems. Concepts of Cloud Computing and its Necessity.	**19 Feb to 24**	Test1
1	Cloud Service Providers in use and their Significance.	**26 Feb to 2 March**	Test 2
2	Cloud Infrastructure Cloud Pros and Cons. Cloud Delivery Models. Cloud Deployment Models.	**4 March to 9**	Assignment 1
3	Cloud Storage Management Concept of Virtualization and Load Balancing.	**11 March to 16**	Test 3
3	Overview on Virtualization used for Enterprise Solutions. Key Challenges in managing Information.	**18 March to 22**	Test 4
3	Identifying the problems of scale and management in big data.	**1 April to 6**	Test 5
4	Building Cloud Networks Designing and Implementing a Data Center-Based Cloud Installing Open Source Cloud service.	**8 April to 13**	Assignment 2
4	Amazon Web Services (AWS). Google Cloud Platform.	**15 April to 20**	Test 6
10	**Revision**	**22 April to 30**	Test 7

Government College, Chhachhrauli

Summary of Lesson Plan

Name of Teacher: Parveen Kumar Academic Session: 2023-24

Class: B.A. 1st & B.Com 1st Semester: 2nd Subject: MDC (Web Technologies Fundamentals)

Unit	Topic/Chapters to be covered	Duration	Assignment and Tests
1	Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web, Web Pages and Contents	**15 Feb to 17**	
1	Web Clients, Web Servers, Web Browsers; Hypertext Transfer Protocol, URLs; Searching, Search Engines and Search Tools.	**19 Feb to 24**	Test1
2	Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Graphics Design, steps for Developing website	**26 Feb to 2 March**	Test 2
2	Creating a Website and Introduction to Markup Languages (HTML and DHTML)	**4 March to 9**	Assignment 1
3	HTML Document Features & Fundamentals, HTML Elements, Creating Links; Headers; Text styles; Text Structuring; Text colour and Background;	**11 March to 16**	Test 3
3	Formatting text; Page layouts, Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts;	**18 March to 22**	Test 4
3	Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes, HTML5	**1 April to 6**	Test 5
4	Introduction to CSS (Cascading Style Sheets): Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance	**8 April to 13**	Assignment 2
4	Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning, and other useful Style Properties; Features of CSS3. Introduction to Client–Side Programming	**15 April to 20**	Test 6
10	**Revision**	**22 April to 30**	Test 7