

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- ISHA BHATIA Computer Department Sub:-BBA – 506 : CYBER SECURITY (BBA IIIrd Year)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
Month1			Concept of information society, knowledge society	cyber space, digital economy	critical infrastructure, Critical information infrastructure
Month2	internet as global Information infrastructure	Cyber terrorism, terrorist atrocities	the role of IT by terrorist, the power of cyber terrorism	characteristic of cyber terrorism , factors contributing to the existence of cyber terrorism,	real examples of cyber terrorism, political orientation of terrorism REVISION
Month3	economic consequences, Cyber crime, types of cyber crime: hacking, virus	worm, Trojan horse, mall ware	Fraud and Theft, cyber homicide, Current Cyber Attack Methods	Criminal Threats to IT infrastructure, Web Security	Basic cyber forensics , Internal Penetration Revision
Month4	external penetration, your role on cyber attacks	Cyber crimes and law, cyber jurisdiction,	Indian IT ACT, Fundamental concepts of information security	information warfare, levels of information war	Revision
Month5	cost of information warfare, cyber disaster planning	why disaster planning, company wide disaster planning	Business impact analysis	DOUBT SESSION , REVISION	Revision

Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

(JULY 2025 to DEC 2025)

Name :-ISHA BHATIA Dept:-Computer Science Class:- B.SC CS IST YR. Subject: COMPUTER FUNDAMENTAL AND PROGRAMMING IN C

Month	1st Week	2nd Week	3rd Week	4th Week	5 th Week
Month 1	Data and information; Components of Computer: Hardware Input Device, Output Device	Components of CPU; Memory and Storage Devices; System Software and Application Software	Functions of Operating System. Machine, Assembly, High Level Language, 4GL	Language Translator; Linker, Loader; Micro, Mini ,Mainframe, Super computer. Pros and Cons of Computer	Applications of Computer,Computer Technology: Posit ive and Negat ive Impacts, Computer Crimes, Viruses and their remedial
Month 2	Problem Solving: Problem Ident ification, Analysis, Flowcharts	Decision Tables, Pseudo codes and algorithms, Program Coding	Program Testing and Execution. C Programming Fundamentals: Keywords, Variables	Constants, Structure of a C program. Operators & Expressions: Arithmetic, Unary, Logical, Bit-wise	Assignment & Conditional Operators, Library Functions, Looping using while, do...while,
Month 3	for statements, Nested loops; if...else, Else If Ladder; Switch, break, Continue and Goto statements	Arrays & Functions: Declaraion and Initialization; Multidimensional Arrays	String: Operations of Strings; Functions: Defining & Accessing User defined functions	Function Prototype, Passing Arguments, Passing array as argument, Recursion, Use of Library Functions	Macro vs. Functions Pointers Declarations, Operations, Passing to a function
Month 4	Pointers & Arrays, Array of Pointers, Array accessing through pointers	Pointer to functions, Function returning pointers, Dynamic Memory Allocations	Structures and Union: Defining and Initializing Structure	Array within Structure, Array of Structure, Nesting of Structure	Pointer to Structure, Passing structure and its pointer to Functions
Month 5	Files Handing: Opening and closing file in C; Create a file	Read and Write data to a file; Modes of Files	Operations on file using C Library Functions	Working with Command Line Arguments, Program Debugging and types of errors	Revision and Test.

TEACHING PLAN 2025-26 (ODD SEMESTER)

(JULY 2025 to DEC 2025)

Name :-NIDHI SHARMA Class:- B.SC CS IST MINOR & B.COM Subject: COMPUTER FUNDAMENTAL AND PROGRAMMING IN C

Month	1st Week	2nd Week	3rd Week	4th Week	5 th Week
Month 1	Data and information; Components of Computer: Hardware Input Device, Output Device	Components of CPU; Memory and Storage Devices; System Software and Application Software	Functions of Operating System. Machine, Assembly, High Level Language, 4GL	Language Translator; Linker, Loader; Micro, Mini ,Mainframe, Super computer. Pros and Cons of Computer	Applications of Computer,Computer Technology: Posit ive and Negat ive Impacts, Computer Crimes, Viruses and their remedial
Month 2	Problem Solving: Problem Ident ification, Analysis, Flowcharts	Decision Tables, Pseudo codes and algorithms, Program Coding	Program Testing and Execution. C Programming Fundamentals: Keywords, Variables	Constants, Structure of a C program. Operators & Expressions: Arithmetic, Unary, Logical, Bit-wise	Assignment & Conditional Operators, Library Functions, Looping using while, do...while,
Month 3	for statements, Nested loops; if...else, Else If Ladder; Switch, break, Continue and Goto statements	Arrays & Functions: Declaraion and Initialization; Multidimensional Arrays	String: Operations of Strings; Functions: Defining & Accessing User defined functions	Function Prototype, Passing Arguments, Passing array as argument, Recursion, Use of Library Functions	Macro vs. Functions Pointers Declarations, Operations, Passing to a function
Month 4	Pointers & Arrays, Array of Pointers, Array accessing through pointers	Pointer to functions, Function returning pointers, Dynamic Memory Allocations	Structures and Union: Defining and Initializing Structure	Array within Structure, Array of Structure, Nesting of Structure	Pointer to Structure, Passing structure and its pointer to Functions
Month 5	Files Handling: Opening and closing file in C; Create a file	Read and Write data to a file; Modes of Files	Operations on file using C Library Functions	Working with Command Line Arguments, Program Debugging and types of errors	Revision and Test.

Name :-NIDHI SHARMA
(BCA IInd Year)

Computer Department

Sub:-BCA – : Operating System

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Introduction to Operating System, its need and operating System services	Early systems, Structures - Simple Batch, Multi programmed	Types of Operating System : Timeshared, Personal Computer Revision
AUGUST	Types of Operating System : Parallel, Distributed Systems, Real-Time Systems	Process Management: Process Concept	Process Management: Operation on processes, Cooperating Processes	Process Management : Threads, and Inter-process Communication	CPU Scheduling: Basic concepts, Scheduling criteria REVISION
SEPTEMBER	CPU Scheduling: Scheduling algorithms : FCFS, SJF	CPU Scheduling: Round Robin & Queue Algorithms	Deadlocks: Deadlock characterization, Methods for handling deadlocks	Methods for handling deadlocks, Banker's Algorithm	Memory Management: Logical versus Physical address space
OCTOBER	Memory Management: Contiguous allocation, Swapping	Memory Management: Paging, Segmentation.	Virtual Memory: Demand paging, Performance of demand paging	Page replacement, Page replacement algorithms	Revision
NOVEMBER	Thrashing, File management: File system Structure, Allocation methods: Contiguous allocation, Linked allocation	Indexed allocation, Free space management: Bit vector, Linked List	Grouping, Counting, Device Management: Disk structure, Disk scheduling: FCFS, SSTF	LOOK, C-LOOK, SCAN, C-SCAN	Revision

Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- RADHA

Department:-Computer Science

Class: PGDCA 1st year

Sub:- Computer fundamental & Architecture

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Number Systems: Definition of Number system, necessity of binary number system, binary, decimal, octal and hexadecimal number system, interconversion of numbers	Representation of integers, fixed and floating points, BCD codes, Error detecting and correcting codes, character	Representation-ASCII, EBCDIC, Binary arithmetic
AUGUST	Input Devices, Historical evolution of computers, Classification of computers, Block Diagram along its components and characteristics,	Output Devices, Usefulness of Computers. Human being Vs computer, Computer as a tool, Applications of computers.	Memory & Mass Storage Devices	Optical disks - CD, CD-I, CD-ROM; Magnetic tapes	Concepts of Virtual and Cache memory
SEPTEMBER	Software Concepts	MS-OFFICE:MS-Word	Basic building blocks and Circuit Design: OR, AND , NOT, XOR Gates; De Morgan's theorem, laws and theorem of Boolean algebra	Simplifying logic circuits—sum of product and product of sum form, algebraic simplification, Karnaugh simplification	Adder, Subtractor, parallel Binary-adder/Subtractor, Binary Multiplier and Divider
OCTOBER	Decoders and Encoder, Multiplexer and De-multiplexer circuits, Design of code Converters.	Flip-flop-S-R, D, J-K, T, Clocked Flip-flop.	Flip-flop-S-R, D, J-K, T, Clocked Flip-flop.	Realization of One Flip-Flop using other Flip-Flop	Shift-Registers, Counters-Ripple, Modular Synchronous, Ring & Twisted-Ring Counter.
NOVEMBER	Register transfer and Micro-operations	Logic Micro-operations, Shift Micro-operations	Instruction and instructions codes, computer instructions, timing and control, instruction cycle, memory references instructions,	input- output reference instructions and interrupts	Revision test

Teacher's Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- RADHA

Department:-Computer Science

Class: MSC CS 1st year

Sub:- DSC-4

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Number Systems: Definition of Number system, necessity of binary number system, binary, decimal, octal and hexadecimal number system, interconversion of numbers	Representation of integers, fixed and floating points, BCD codes, Error detecting and correcting codes, character	Representation-ASCII, EBCDIC, Binary arithmetic
AUGUST	Input Devices, Historical evolution of computers, Classification of computers, Block Diagram along its components and characteristics,	Output Devices, Usefulness of Computers. Human being Vs computer, Computer as a tool, Applications of computers.	Memory & Mass Storage Devices	Optical disks - CD, CD-I, CD-ROM; Magnetic tapes	Concepts of Virtual and Cache memory
SEPTEMBER	Software Concepts	MS-OFFICE:MS-Word	Basic building blocks and Circuit Design: OR, AND , NOT, XOR Gates; De Morgan's theorem, laws and theorem of Boolean algebra	Simplifying logic circuits—sum of product and product of sum form, algebraic simplification, Karnaugh simplification	Adder, Subtractor, parallel Binary-adder/Subtractor, Binary Multiplier and Divider
OCTOBER	Decoders and Encoder, Multiplexer and De-multiplexer circuits, Design of code Converters.	Flip-flop-S-R, D, J-K, T, Clocked Flip-flop.	Flip-flop-S-R, D, J-K, T, Clocked Flip-flop.	Realization of One Flip-Flop using other Flip-Flop	Shift-Registers, Counters-Ripple, Modular Synchronous, Ring & Twisted-Ring Counter.
NOVEMBER	Register transfer and Micro-operations	Logic Micro-operations, Shift Micro-operations	Instruction and instructions codes, computer instructions, timing and control, instruction cycle, memory references instructions,	input- output reference instructions and interrupts	Revision test

Teacher's Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)**(JULY 2025 to DEC 2025)****Name :-RADHA****Class:- BCA 1ST SEC****Subject: COMPUTER FUNDAMENTAL AND PROGRAMMING IN C**

Month	1st Week	2nd Week	3rd Week	4th Week	5 th Week
Month 1	Data and information; Components of Computer: Hardware Input Device, Output Device	Components of CPU; Memory and Storage Devices; System Software and Application Software	Functions of Operating System. Machine, Assembly, High Level Language, 4GL	Language Translator; Linker, Loader; Micro, Mini ,Mainframe, Super computer. Pros and Cons of Computer	Applications of Computer,Computer Technology: Posit ive and Negat ive Impacts, Computer Crimes, Viruses and their remedial
Month 2	Problem Solving: Problem Ident ification, Analysis, Flowcharts	Decision Tables, Pseudo codes and algorithms, Program Coding	Program Testing and Execution. C Programming Fundamentals: Keywords, Variables	Constants, Structure of a C program. Operators & Expressions: Arithmetic, Unary, Logical, Bit-wise	Assignment & Conditional Operators, Library Functions, Looping using while, do...while,
Month 3	for statements, Nested loops; if...else, Else If Ladder; Switch, break, Continue and Goto statements	Arrays & Functions: Declaraion and Initialization; Multidimensional Arrays	String: Operations of Strings; Functions: Defining & Accessing User defined functions	Function Prototype, Passing Arguments, Passing array as argument, Recursion, Use of Library Functions	Macro vs. Functions Pointers Declarations, Operations, Passing to a function
Month 4	Pointers & Arrays, Array of Pointers, Array accessing through pointers	Pointer to functions, Function returning pointers, Dynamic Memory Allocations	Structures and Union: Defining and Initializing Structure	Array within Structure, Array of Structure, Nesting of Structure	Pointer to Structure, Passing structure and its pointer to Functions
Month 5	Files Handling: Opening and closing file in C; Create a file	Read and Write data to a file; Modes of Files	Operations on file using C Library Functions	Working with Command Line Arguments, Program Debugging and types of errors	Revision and Test.

TEACHING PLAN 2025-26 (ODD SEMESTER)**Name :- Dr.. Rajni Sharma****Department:-Computer Science****Class: M.Sc(CS) - II****Subject: Computer Security : 25CSC203DS03**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
Month 1	Fundamentals of Computer Security: Overview of Computer Security	Key Concepts and Importance, Security Threats and Vulnerabilities: Malware, Phishing	Ransomware, Access Control Models: Discretionary, Mandatory, and	Role-Based Access Control (RBAC), Cryptographic Principles: Symmetric and Asymmetric Encryption	Digital Signatures, Case Studies: Notable Cyber Attacks and their Impact Presentation on Topics Covered
Month 2	Secure Systems and Applications:Secure Software Development Practices	Operating System Security: Process Isolation, Secure Boot, Anti-malware Tools	Database Security: SQL Injection Prevention, Role-based Access	Application Security: OWASP Top 10 and Secure APIs	Penetration Testing and Vulnerability Assessment Class Test
Month 3	Network and Wireless Security: Network Security Fundamentals	Firewalls, IDS/IPS, VPNs, Wireless Network Security: WEP, WPA/WPA2, Emerging Protocols	Diwali Vacations	Secure Network Design: Zero Trust Architecture , Threat Monitoring and Incident Response	Case Studies: Securing IoT Devices Class Test Presentation on Topics Covered
Month 4	Advanced Topics and Legal Aspects: Emerging Threats: Quantum Computing in Cryptography	AI in Cyber security, Block chain for Secure Transactions, Digital Forensics and Cybercrime Investigation,	Cyber security Laws and Frameworks: GDPR, HIPAA, NIST	Security Management: ISO 27001 Standards. Revision of all the Topics Covered and Doubt Session	Revision of all the Topics Covered and Doubt Session

Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- Dr.. Rajni Sharma Department:-Computer Science Class: M.Sc(CS) - I Subject:- Computer Fundamentals And Programming in C - 24CSC201DS03

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
Month 1		Computer Fundamentals: Concept of data and information, Components of Computer: Hardware Input Device, Output Device	CPU: Components of CPU, Memory and Storage Devices; Computer Software: System Software and Application Software	Functions of Operating System, Programming Languages: Machine, Assembly, High Level Language, 4GL; Language Translator; Linker, Loader	Classification of Computers: Micro, Mini, Mainframe, Super computer. Advantages of Computer, Limitations of Computer, Range of Applications of Computer Class Test
Month 2	Social concerns of Computer Technology: Positive and Negative Impacts, Computer Crimes, Viruses and their remedial solutions.	Problem Solving: Problem Identification, Analysis, C Programming Fundamentals: Keywords, Variables and Constants	Structure of a C program. Operators & Expressions: Arithmetic, Unary, Logical, Bit-wise, Assignment & Conditional Operators	Library Functions, Control Statements, Looping using while, do...while, for statements, Nested loops Presentation on Topics Covered	decision making using if...else, Else If Ladder; Switch, break, Continue and Goto statements. Class Test
Month 3	Arrays & Functions: Declaration and Initialization; Multidimensional Arrays. String: Operations of Strings.	Functions: Defining & Accessing User defined functions, Function Prototype, Passing Arguments	Diwali Vacations	Passing array as argument, Recursion, Use of Library Functions; Macro vs. Functions.	Pointers: Declarations, Operations on Pointers, Passing to a function, Pointers & Arrays, Array of Pointers Class Test
Month 4	Array accessing through pointers, Pointer to functions, Function returning pointers, Dynamic Memory Allocations.	Structures and Union: Defining and Initializing Structure, Array within Structure, Array of Structure, Nesting of Structure	Pointer to Structure, Passing Structure and its pointer to Functions; Unions: Introduction to Unions and its Utilities	Files Handling: Opening and closing file in C; Create, Read and Write data to a file; Modes of Files, Operations on file using C Library Functions	Working with Command Line Arguments. Program Debugging and types of errors Revision of all the Topics Covered and Doubt Session

Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)**(AUG 2025 to DEC 2025)****Name :-Richa Bansal****Department:- Computer Science****Class:- M.Sc. CS III Sem****Subject: Design And Analysis of Algorithm**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
July	Time and Space Complexity	Recurrence Relations	Recurrence Relation	Asymptotic Notation	Asymptotic Notation
August	General Methods	Binary search and Quick Sort	Merge Sort And Strassen's Matrix Multiplication	Greedy Techniques	Greedy Techniques
September	Greedy Techniques	Graphs	Graphs	Dynamic Programming	Dynamic Programming
October	Backtracking Concepts	Backtracking Concepts	DIWALI BREAK	Least Cost Search	Branch and Bound
November	Branch and Bound	NP hard problems	NP complete Problems	Presentations	REVISION

TEACHING PLAN 2025-26 (ODD SEMESTER)**(AUG 2025 to DEC 2025)****Name :-Richa Bansal****Department:- Computer Science****Class:- M.Sc. CS III Sem****Subject: Design And Analysis of Algorithm**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
July	Introduction	Graphics System	Graphics System	Input/Output Devices	Color Models
August	2 D Transformations	2 D Transformations	Window to viewport Transformation	Clipping Algorithms	Clipping Algorithms
September	Picture Construction techniques	Picture Construction techniques	Picture Construction techniques	Interactive Graphics	Interactive Graphics
October	3 D Primitives	3 D Primitives	DIWALI BREAK	3D Transformations	3D Transformations
November	Lighting and Shading	Lighting and Shading	Blender Techniques	Blender Techniques	REVISION

TEACHING PLAN 2025-26 (ODD SEMESTER)**(JULY 2025 to DEC 2025)****Name :-Ritu Sharma****Department:- Computer Science****Class:- B.Sc IInd Year****Subject: Data Structures and Algorithms**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
July	Introduction	Classification of Data Structures, Application of Data Structure	Role of algorithms in computing, Complexity of algorithms	analysing algorithms, designing algorithms,.	Asymptotic Notation
August	One Dimensional Arrays, Two Dimensional Arrays	d Multi- Dimensional Arrays, Sparse Matrice	Merge Sort And Strassen's Matrix Multiplication	Linear and Binary Search, Sorting: Selection	Insertion, Bubble, Merge Sort and Quick Sort, Radix Algorithms
September	Definition, Implementation of Stacks and its Operations	Evaluation of Infix, Prefix and Postfix Expression	Inter-conversion of Infix, Prefix and Postfix Expression	Definition, Sequential Implementation of Linear Queues and its Operations,	Circular Queue, Dequeue and Priority Queues and its Implementation, Application of Queues.
October	Need of Dynamic Data structures, Singly Linked list; Operations on list	Linked Stack and Queues. Polynomial representation and manipulation using linked lists	DIWALI BREAK	. Traversing, Insertion, Deletion Operations on Single Link Lists. Comparison between Static and Dynamic, Implementation of Linked List.	Circular linked list, doubly linked lists, Dynamic implementation of Primitive Operation on Circular and Doubly Link Lists
November	Binary tree, External and Internal Nodes, Static and Dynamic Implementation of a Binary tree, Primitive Operations on Binary trees.	Binary Tree Traversal: Pre-Order, In-order and Post Order Traversal. Representation of Infix, Post-fix and Prefix Expression using Trees.	: B++ trees, AVL Trees, Threaded Binary trees, Balanced multi-way search trees, Implementation of Heap Sort Algorithm.	Basic Terminology, Definition of Undirected and Directed Graphs, Minimum -Spanning Trees, Warshal Algorithm, Graph Traversal Algorithms: Breath First and Depth first.	REVISION

TEACHING PLAN 2025-26 (ODD SEMESTER)**(JULY 2025 to DEC 2025)****Name :-Ritu Sharma****Department:- Computer Science****Class:- BCA IInd Year****Subject: Object-Oriented Programming using C++**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
July	Introduction	Procedural Vs. Object-Oriented Programming, Principles of OOP and their benefits	Object, classes, Inheritance, Abstraction, Encapsulation Polymorphism	Syntax and structure of C++ programs, Data types	variables, and constants in C++, Control structures: decision making and looping constructs
August	Classes and objects:	Functions and parameter passing in C++, Arrays and strings in C++,	Inheritance: Derived class and Base class, Types of inheritance: single, multiple, multilevel	Pointer, Constructors and destructors.	hierarchical, Access control in inheritance
September	function overloading	Operator overloading, Virtual functions	dynamic polymorphism	Abstract classes and pure virtual functions	Encapsulation and data hiding, Friend functions, static function
October	Dynamic Memory Allocation	new, delete	DIWALI BREAK	Object Creation at run timeThrowing, Catching, Re-throwing an exception,	specifying exception: processing unexpected exceptions;
November	Templates: class and function templates, Standard Template Library	benefits of STL and generic programming Stream Classes	File input and output Operations in C++	Error handling during file operations	REVISION

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :-Dr. Ruchika Arora

Class:-M.Sc (Comp. Sc) 2 year

Sub:-Java Programming 25CSC203DS02

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
MONTH-1	History and Evolution of Java, Its Features, Java Development Kit (JDK) and Java Runtime Environment (JRE), Understanding JVM and Bytecode.	Java Syntax and Structure, Identifiers, Keywords, Literals, Comments, Operators Assignments, Data Types, Variables and its types, Constants, Expressions, Control Flow Statements: if-else, switch, loops (for, while, do-while).	Object & Object reference, Object Life time & Garbage Collection, Creating and Operating Objects, Constructor & initialization code block,	Access Control, Modifiers, methods Nested, Inner Class & Anonymous Classes, Abstract Class & Interfaces Defining Methods, Argument Passing Mechanism, Method	Overloading, Recursion, Dealing with Static Members, Finalize() Method, Native Method. Use of Access Modifiers with Classes & Methods, Design of Accessors.
MONTH-2	Initializing & Accessing Array, Multi –Dimensional Array, Operation on String, Mutable & Immutable String,	Using Collection, Bases Loop for String, Creating Strings using StringBuffer. Inheritance: Use and Benefits of Inheritance in OOPs, Types of Inheritance in Java, Inheriting Data members and Methods	Role of Constructors in inheritance, Overriding Super Class Methods, Use of “super”, Polymorphism in Java.	. Interface: Purpose of interface, defining an interface, implementing interfaces, Interface reference variables, Interface with variables, Extending interfaces	Exception Handling: Types of Errors in Java, Try-Catch Blocks and Finally Clause, Throw and Throws Keywords, Creating Custom Exceptions.
MONTH-3	Packages: Package as Access Protection, Defining Package, CLASSPATH Setting for Packages, Import and Naming Convention for Packages.	Multithreading and Concurrency: Introduction to Threads and Processes, Creating and Managing Threads, Thread Synchronization and Inter-thread Communication.	DIWALI BREAK	Working with Files and Directories, I/O Basic, Byte and Character Structures, I/O Classes, Reading Console Input Writing Console Output, BufferedReader and BufferedWriter	Serialization and Deserialization, Random Access Files, Storing and Retrieving Objects from File, Stream Benefits.
MONTH-4	ArrayList, Vector, LinkedList, Stack. How Applets differs from Java Application, Applet Life Cycle, APPLET Tag Running an Applet, Passing Parameters to Applet.	Event Handling: Mechanism, The Delegation Event Model, Event Classes, Event Listener Interfaces, Adapter and inner classes.	Designing Graphical User Interfaces in Java, Components and Containers, Basics of Components, Using Containers, Layout Managers	AWT Components, adding a Menu to Window Working with Buttons, TextFields, and Labels	Doubts, Revision Test

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :-Dr. Ruchika Arora

Class:-M.Sc (Comp. Sc) 1st year

Sub:-Database Management System(24MSCCS201DS05)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
MONTH-1	Introduction: Characteristics of database approach, data models, DBMS architecture and data independence.	Database Languages, Classification of DBMS, Database Users and Administrator.	DBMS Environment: Database Access for applications Programs, Transaction Management, Database systemStructure, Storage Manager, Query Processor.	E-R Modeling: Entity types, Entity set, attribute and key, Relationships, Relation types, Roles and Structuralconstraints, Enhanced ER Model.	Relational Model: Introduction to the Relational Model, Integrity Constraint over Relations, EnforcingIntegrity constraints
MONTH-2	Querying relational data, Introduction to views	Destroying/altering Tables and Views. Relational Algebra and Calculus: Relational Algebra, Set operations	Selection and projection, renaming,Joins, Division, Examples of Algebra overviews,	Relational calculus: Tuple relational Calculus, Domainrelational calculus, Expressive Power of Algebra and Calculus.	Schema Refinement & Normalization: Problems Caused by redundancy, Schema refinement in DatabaseDesign
MONTH-3	Decompositions &its properties, Problem related to decomposition, Functional Dependency	Normalization: First, Second, Third Normal forms, BCNF, Lossless join Decomposition	DIWALI BREAK	Dependencypreserving Decomposition, Multi valued Dependencies, Fourth Normal Form.	Transaction Management: ACID Properties, Transactions and Schedules, Concurrent Execution oftransaction, Serializability and recoverability.
MONTH-4	Introduction to Lock Management, Lock Conversions, Dealing with Dead Locks,Concurrency without Locking, Recovery Techniques, Database Security.	Introduction to MySQL/Oracle:Working with MySQL/Oracle. Getting started, Modules of MySQL/Oracle, Invoking SQL*Plus/MySQL Command-line client ('mysql'), Data types, Data Constraints, Operators	Data manipulation - Create, Modify, Insert, Delete and Update;	Searching, Matching and Oracle Functions. REVISION	DOUBTS AND REVISION

Lesson Plan 25-26 (odd semester)

Name :- Seema Nandal

Department: Computer Science

Sub:- Discrete Mathematics (24CSC201DS01)

Class: MSC CS 1st Sem

Month	1st Week	2nd Week	3rd Week	4th Week
AUGUST		Sets: Sets, Subsets, Equal Sets Universal Sets, Finite and Infinite Sets, Operation on Sets.	Union, Intersection and Complements of Sets, Cartesian Product, Cardinality of Set, Simple Applications.	Relations and functions: Properties of Relations, Equivalence Relation, Partial Order Relation.
SEPTEMBER	Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions.	Propositional Logic: Proposition logic, basic logic, Logical Connectives,	truth tables, tautologies, contradiction, Logical implication, Logical equivalence	Normal forms, Theory of Inference and deduction.
OCTOBER	Predicate Calculus: Predicates and quantifiers. Mathematical Induction.	Matrices: Definition, Types of Matrices, Addition, Subtraction,	Scalar Multiplication and Multiplication of Matrices, Adjoint and Inverse of a matrix.	Determinants: Definition, Minors, Cofactors, Properties of Determinants,
NOVEMBER	Applications of determinants in finding area of triangle, Solving a system of linear equations.	Introduction to defining language, Kleene Closure, Arithmetic expressions,	Regular expressions. Conversion of regular expression to Finite Automata,	NFA, DFA, Conversion of NFA to DFA, FA with output: Moore machine, Mealy machine.

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- Seema Nandal

Department: Computer Science

Sub:- Office Automation Tools (24CSC202SE01)

Class: MSC CS 1st Sem

Month	1st Week	2nd Week	3rd Week	4th Week
AUGUST		MS-Windows: Operating system-Definition & functions, basics of Windows. Basic components of windows, icons, types of icons, taskbar.	Activating windows, using desktop, title bar, running applications. exploring computer, managing files and folders, copying and moving files and folders.	Control panel – display properties, adding and removing software and hardware, setting date and time, screensaver and appearance. Using windows accessories.
SEPTEMBER	Using MS-Word: Introduction to word processing interface, Toolbars Creating & Editing Document, Formatting document.	Finding and replacing text, Format painter, Header and footer, Drop cap, Auto-text, Autocorrect, Spelling and Grammar Tool, Dictionary.	Page Formatting, Bookmark, Previewing and printing document, Insert Pictures, shapes, word Arts.	Advance Features of MS-Word-Mail Merge, Macros and Tables. Practice of Front Page of Practical File.
OCTOBER	Using MS-Excel: Introduction to MS-Excel, Cell, cell address, Creating & Editing Worksheet. Formatting and Essential Operations.	Moving and copying data in excel, Header and footer, Formulas and Functions, Charts, Cell referencing, Page setup, Macros, Advance features of MS-Excel-Pivot table & Pivot Chart. Assignment.	Diwali Break	Linking and Consolidation, Database Management using Excel-Sorting, Filtering, Validation, What if analysis with Goal Seek. Test 1. Seminars/Presentation

NOVEMBER	Using MS-PowerPoint: Presentations, Creating, Manipulating & Enhancing Slides. Seminars/Presentation	Organizational Charts, Excel Charts, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures Test 2. Seminars/Presentation	Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect. Seminars/Presentation	Revision and Practice Seminars/Presentation
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Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- Seema Nandal

Department: Computer Science

Sub:- Full Stack Development – I(25CSC203SE01)

Class: MSC CS 2nd Sem

Month	1st Week	2nd Week	3rd Week	4th Week
JULY				Frontend Development Fundamentals, Backend Development Basics.
AUGUST	Introduction to Web Development: Client-Server Architecture. HTML5: Elements, Forms, Semantic Tags.	CSS3: Selectors, Box Model, Grid, Flexbox	JavaScript Basics: DOM Manipulation, Events, ES6 Features, Tools: Browser Developer Tools.	Advanced Frontend Techniques: Responsive Design: Media Queries, Bootstrap, Tailwind CSS.
SEPTEMBER	JavaScript Libraries: jQuery, AJAX, Frontend Frameworks: Introduction to React.js/ Angular/Vue.js	Component-based Development and State Management, Case Study: Developing a Responsive Website.	Backend Development Basics: Introduction to Backend Development: Role and Concepts, Node.js: Setting up, Basic Syntax, File System, Modules. Seminars/Presentation	RESTful API Development with Express.js, Database Integration: MongoDB Basics and CRUD Operations, Authentication: JWT, OAuth Basics. Seminars/Presentation

OCTOBER	Deployment and Testing: Version Control: Git Basics and GitHub Revision	Deployment: Using Platforms like Heroku, Vercel, Debugging and Testing: Unit Testing, Mocha, and Chai Test 1.	Diwali Break	Continuous Integration/Continuous Deployment (CI/CD) Basics
NOVEMBER	Case Study: Developing and Deploying a Full Stack Application.	Test 2. Project Presentation	Project Presentation	Revision and Practice Project Presentation

Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :-SUMAN MALIK

Department:-Computer Department

Sub:- DATA BASE MANAGEMENT SYSTEM(BCA-2 YEAR)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Basic Concepts – Data, Information, Records and files.	Traditional file –based Systems-File Based Approach-	Limitations of File Based Approach REVISION
AUGUST	Database Approach- Characteristics of Database Approach,	advantages and disadvantages of database system, components of database system	Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components	DBMS users, Advantages and Disadvantages of DBMS, DBMS languages	Roles in the Database Environment - Data and Database Administrator Database Designers, Applications Developers and Users
SEPTEMBER	Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances	Logical and Physical Data Independence, Classification of Database Management System, Centralized and Client Server architecture to DBMS .	Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling. Entity Types, Entity Sets, Attributes Relationship Types	Relationship Instances and ER Diagrams, abstraction and integration ,Brief History,	Relational Model Terminology-Relational Data Structure, Database Relations, Properties of Relations, Keys,
OCTOBER	Domains and Integrity Constraints over Relations Relational algebra, Relational calculus	Functional dependencies Modification anomalies	1st to 3 rd NFs, BCNF	4 th and 5 th NFs , computing closures of set FDs	Data types, Basic Queries in SQL, Insert, Delete and Update Statements, Views
NOVEMBER	General strategies of query processing,	query optimization, query processor	concept of security, concurrency and recovery DOUBT SESSION	DOUBT SESSION , REVISION	Revision

Teacher Signature

TEACHING PLAN 2025-26

Name :-SUMAN MALIK Department:-Computer Department Class:-BCA 2 year Sub:-Java Programming

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			JAVA History, Java features, Java and Internet,Java and World wide Web,Java program structure, Java tokens	Java Virtual machine Data types Operators and expressions	Decision making and Branching Decision making and Branching
AUGUST	Looping classes and methods, Looping classes and methods	Inheritance: using existing class Class inheritance, Choosing Base class Access Attributes Types of Inheritance Types of Inheritance	Abstract class , Final modifier Doubts and discussion Test on topics covered Polymorphism Types of Polymorphism Types of polymorphism	Packages: understanding packages Defining a package Adding classes from a package to your program Understanding CLASSPATH Revision	Doubts and Discussion Access protection in packages Concept of interface Revision
SEPTEMBER	Exception Handling Types of exceptions Types of exceptions Dealing with exceptions	Dealing with exceptions Exception Objects Doubts and Discussion Test	Understanding Threads The Main thread Creating a thread Creating Multiple threads Revision	Thread Priorities Synchronization Deadlocks Inter-thread communication Revision Doubts and Discussion	I/O Basic, Byte and character structures I/O classes, Reading console
OCTOBER	Applet basics, Applet Architecture, Applet Life Cycle,Revision Simple Applet Display Methods	Request Repainting Using the status window	Working with AWT controls, AWT Classes Window fundamentals	Working with frames Creating a frame window in an Applet Revision	The HTML APPLET tag, Passing parameters to Applets Revision
NOVEMBER	Displaying information within a window Working with graphics	Working with color Setting the paint mode Test Working with fonts	Exploring with Text and Graphics Layout managers and Menus Revision	Graphics Layout managers and Menus	Doubts, Revision Test

TEACHING PLAN 2025-2026 (ODD SEMESTER)

Name :-SUMAN MALIK Computer Department

Sub:-BCA – MIS (BCA IIIrd Year)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Introduction to system and Basic System Concepts	Introduction to system and Basic System Concepts	Introduction to system and Basic System Concepts
AUGUST	Introduction to system and Basic System Concepts, Types of Systems	Introduction to system and Basic System Concepts, Types of Systems	The Systems Approach, Information System	Definition & Characteristics	Types of information, Role of Information in Decision-Making REVISION
SEPTEMBER	Sub-Systems of an Information system: EDP and MIS management levels,	Diffrence Between - EDP/MIS/DSS	An overview of Management Information System: Definition & Characteristics	Components of MIS, Frame Work for Understanding MIS	MIS : Information requirements & Levels of Management REVISION
OCTOBER	Simon's Model of decision-Making	Structured Vs Un-structured decisions	Formal vs. Informal systems.	Developing Information Systems: Analysis & Design of Information Systems	Analysis & Design of Information Systems: Implementation & Evaluation Revision
NOVEMBER	Pitfalls in MIS Development	Functional MIS: A Study of Personnel, Financial and production MIS	E-commerce – Technologies, Applications	Decision support systems: support systems for planning	REVISION

Teacher Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- Anu Khanna

Department:-Computer Science

Class: PGDCA 1st year

Sub:- COMPUTER NETWORKING & MULTIMEDIA

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Introduction to Computer Network, Why Computer Network ? Key Issues for Computer Network, Types of Network : LAN, WAN and MAN; Criteria for Classification of Computer Network, LANs	: Hardware requirements for LAN, Transmission Channel for LAN	Network Interface Unit, Servers & Workstations, LAN Software. Introduction to Ethernet, Token Ring : Basics and Working, Cables, ring speed. WAN : Transmission Channel for LAN, hardware requirements
AUGUST	Bridges, Routers, Gateways. Private Networks, Public Networks : ISDN, PSTN, PSDN, Value Added Networks.	Connecting PCs : Simple switches, Printer sharing buffers, Zero-slot LANs, Media sharing LANs, Printer Servers, Client and Servers, Interface Cards,	ers, Zero-slot LANs, Media sharing LANs, Printer Servers, Client and Servers, Interface Cards, Media Access Control, Operating System features, OSI Model, TCP/IP Model, Data encoding & Communication Techniques,	Multiplexing and Communication Hardware Network topology, Network Protocols,	Applications of Computer Network. Distributed data rocessing, Teletext and Videotext Networks
SEPTEMBER	Communication Channels : Wire cables (Telegraph, telephone, twisted-pair, co-axial), Microwave, Fibre-optics,	Communication satellites; Channel sharing, data-transmission	Introduction to multimedia technology - Computers, Communication and Entertainment; Framework for multimedia systems; M/M devices,	presentation devices and the user interface; M/M presentation and authoring; Digital representation of sound and transmission; brief survey of speech recognition and generation; digital video and image compression; JPEG image compression standards;	MPEG motion video compression; DVI technology; time-based media representation and delivery.

OCTOBER	Audio Compression and Decompression, Audio Synthesis, MIDI, Speech Recognition & Synthesis, Multimedia.	Video Capturing,	Applications of M/M; Intelligent M/M system, Desktop Virtual Reality (VR	; visually coupled system requirements; intelligent VR software systems.	Applications of environments in various fields viz. Entertainment, manufacturing, business, education, etc.
NOVEMBER	, Virtual environment displays and orientation tracking;	Compression & Decompression, Real-time 3D, LANs and.	VR operating System	input- output reference instructions and interrupts	Revision test

Teacher's Signature

TEACHING PLAN 2025-26 (ODD SEMESTER)

Name :- Anu Khanna

Department:-Computer Science

Class: BCA I Year

Sub:- Architecture

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JULY			Number Systems: Definition of Number system, necessity of binary number system, binary, decimal, octal and hexadecimal number system, interconversion of numbers	Representation of integers, fixed and floating points, BCD codes, Error detecting and correcting codes, character	Representation-ASCII, EBCDIC, Binary arithmetic
AUGUST	Input Devices, Historical evolution of computers, Classification of computers, Block Diagram along its components and characteristics,	Output Devices, Usefulness of Computers. Human being Vs computer, Computer as a tool, Applications of computers.	Memory & Mass Storage Devices	Optical disks - CD, CD-I, CD-ROM; Magnetic tapes	Concepts of Virtual and Cache memory
SEPTEMBER	Software Concepts	MS-OFFICE:MS-Word	Basic building blocks and Circuit Design: OR, AND , NOT, XOR Gates; De Morgan's theorem, laws and theorem of Boolean algebra	Simplifying logic circuits—sum of product and product of sum form, algebraic simplification, Karnaugh simplification	Adder, Subtractor, parallel Binary-adder/Subtractor, Binary Multiplier and Divider
OCTOBER	Decoders and Encoder, Multiplexer and De-multiplexer circuits, Design of code Converters.	Flip-flop-S-R, D, J-K, T, Clocked Flip-flop.	Flip-flop-S-R, D, J-K, T, Clocked Flip-flop.	Realization of One Flip-Flop using other Flip-Flop	Shift-Registers, Counters-Ripple, Modular Synchronous, Ring & Twisted-Ring Counter.
NOVEMBER	Register transfer and Micro-operations	Logic Micro-operations, Shift Micro-operations	Instruction and instructions codes, computer instructions, timing and control, instruction cycle, memory references instructions,	input- output reference instructions and interrupts	Revision test
Month	1st Week	2nd Week	3rd Week	4th Week	5th Week

TEACHING PLAN 2025-26 (ODD SEMESTER)**(AUG 2025 to DEC 2025)****Name :-Kalpana Gupta****Department:- Computer Science****Class:- PGDCA****Subject: Programming in C and Data Structure**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
August			Introduction to Problem Solving : Top Down Design, Algorithm, Characteristics of Algorithm, Implementation of Algorithms	Efficiency of Algorithms, Analysis of Algorithm.. Fundamental algorithms, Array Techniques, Merging,	Sorting & Searching Techniques, Text Processing and Pattern Search, Dynamic Data Structure Algorithms, Recursive Algorithms
September	Elements of Program Style, Flowcharts : Flowchart Symbols, Its Types, Benefits and Limitations; Decision Tables, Pseudocodes : Using User Input, Files, Reports and Output on Paper/Console;	Practice of Algorithm Development and Flowcharting, C Programming: Basic concepts of programming, problem solving	Algorithm designing and flowcharting, concept of structured programming, Functions, structures, pointers, file-handling.	C Programming: Basic concepts of programming, problem solving, algorithm designing and flowcharting,	Concept of structured programming, Evolution of C language, advantages of C, variables and constants,
October	Operators, expressions, loops,	functions, structures, pointers, file-handling.	DIWALI BREAK	Fundamental Notations: Primitive and Composite data types. Time and Space complexity of algorithms.	Data structures: Arrays, Stacks
November	Queues, Linked Lists	Trees and Graphs	File Structures: Concepts of fields, records and files. Sequential file organisation, ISAM, Hashing techniques, Inverted Lists and Multilists.	Sorting: Internal and External sorting. Searching techniques and Merging algorithms	REVISION

TEACHING PLAN 2025-26 (ODD SEMESTER)

(AUG 2025 to DEC 2025)

Name :-Kalpana Gupta

Department:- Computer Science

Class:- PGDCA

Subject:- Foundation Course in IT And MS-Office -2000

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
August			Introduction: Historical evolution of computers, Classification of computers	Model of a digital computer, functioning of a digital computer, why computers are useful?	Human being Vs computer, Computer as a tool,
September	Binary arithmetic. Input/Output Devices: Punched cards, card-readers, key-punching machines, keyboards,	mouse, joysticks, trackballs, digitizer, voice-recognition, optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems.	Hard- copy devices: Print quality, Impact printers - DMPs, Daisy-wheel printers, Line-printers, Drum printers, Chain printers; non-impact printers - Inkjet, Laser, Thermal, LED; Plotters.	Soft-copy devices: monitors, video-standards (VGA and SVGA). Memory & Mass Storage Devices: Characteristics of memory systems,	Types of memory, RAM, ROM, magnetic disks - floppy disk, hard-disk; optical disks - CD, CD-I, CD-ROM; Magnetic tapes; Concepts of Virtual and Cache memory
October	Software Concepts: Introduction, types of software - System & Application software; Language translators - Compiler, Interpreter, Assembler	Operating system - Characteristics, bootstrapping, types of operating, operating system as a resource manager;	DIWALI BREAK	BIOS; System utilities - Editor, Loader, Linker, File Manager. Concept of GUI, GUI standards.	Social Concerns: Positive and Negative Impacts of Computer Technology, Viruses and their types, Computer Crimes.
November	MS-Word: Introduction to MS-Word, Standard Toolbar, Word Wrap, Text formatting, Formatting Paragraphs	Applying Effects to Text, Applying Animation to Text. MS-Excel: Introduction to MS-Excel, Working with Toolbars	Formatting, Formulas, Data Management, Graphs & Chart, Macros, and other additional Functions. MS-Power Point: Introduction	PowerPoint Slide Creation, Slide-show, Adding Graphics, Formatting, Customizing and Printing	REVISION

