TEACHING PLAN 2023-24 (ODD SEMESTER)

Name:- POONAM **Department :- Computer Science** **Sub :- COMPUTER FUNDAMENTALS AND PROGRAMMING IN C (MSC 1ST YEAR)**

Month	1st Week	2nd Week	3rd Week	4th Week	5th 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: Declaration 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

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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.

Teacher Signature

TEACHING PLAN 2023 -24 (ODD SEMESTER)

Name :- POONAM **Department :- Computer Science** **Sub :- OPERATING SYSTEM AND UNIX (MSC 2ND YEAR)**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
Month 1	Operating systems overview: Operating systems as an extended machine & resource manager	Operating systems classification; Operating systems and system calls;	Operating systems architecture, Process Management functions: Process model, hierarchies	Process implementation; process states and transit ions	multi-programming, multi-tasking, multi-threading
Month 2	level of schedulers and scheduling algorithms, Memory Management	Virtual Memory : Logical versus Physical Address Space, Swapping	Contiguous Allocation, Paging, Segmentation, Segmentation with Paging	Demand Paging, Performance of Demanding Paging, Page Replacement	Page Replacement Algorithm, Allocation of Frames
Month 3	Thrashing, Device Management functions: I/O devices and controllers	interrupt handlers, Types of I/O Software: Device independent I/O software	User-space I/O software, Terminal I/O software. Disk Scheduling	File management functions: file naming, structure	Types, access mechanisms, attributes and operations
Month 4	directory structures and directory operations	file space allocations; file sharing	File locking; symbolic links	file protection and security: distributed file systems	Concurrent programming: sequential and concurrent process
Month 5	precedence graph, Bernstein's condition; time dependency and critical code section	mutual exclusion problem; classical process coordination problems; deadlock handling	Inter-process communication, Unix Operating System, Overview of UNIX	OS in general and implementation of all above functions in Unix Operating System	REVISION AND TEST

Teacher Signature

TEACHING PLAN 2023-2024 (EVEN SEMESTER)

(JAN 2024 to APRIL 2024)

Name :-Mrs Poonam Department:-COMPUTER SCIENCE Class:- M.Sc(CS)-II Sub:- DATA STRUCTURES USING C

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	Programming fundamentals**:** Algorithm development, Techniques of problem solving,	Flow-chart, decision table, structured programming concepts;	Top-down design, development of efficient program;	Program correctness; debugging and testing of programs, algorithm for searching, sorting (exchange and insert ion)	Analysis of Algorithm: Frequency count, Time Space tradeoff. TEST ON TOPICS COVERED.
FEBRUARY	Introduction to C	Data type, constants and variable; Structure of a C program,	Operators and Expressions, Control statements: Sequencing, Alteration and Iteration;	Arrays: Representation of single and mult idimensional arrays; Sparse arrays - lower and upper triangular matrices and Tri-diagonal matrices	String and pointers, Funct ions, Recursion. ASSIGNMENT
MARCH	Stacks and Queues: Introduction and Primit ive operations on stack; Stack applicat ion: Infix, postfix, prefix expressions;	Evaluat ion of postfix expression; Conversion from infix to Postfix; Introduction and Primit ive Operation on queues.	D-queues and Priority queues, Circular queue, Linked Lists: Introduction to Linked lists;	Implementation of linked lists, operations such as traversal, Insert ion, delet ion, searching, Two way lists.	Holi break

Teacher Signature

APRIL	Trees: Introduction and Terminology; Traversal of binary trees; Recursive algorithms for tree operations such as traversal, insertion, delet ion; threaded Binary trees, binary search trees; AVL trees, B tress.	File structure**:** Physical Storage devices and their characterist ics, constituents of a file viz. fields, records, fixed and variable length records, primary and secondary keys;	File operations, basic file system operations, file organizat ions: serial sequential, index sequent ial, direct, inverted, mult ilist.	Sorting Techniques: Bubble Sort, Insertion sort, Select ion sort, merge sort, Heap sort, Quick sort.	Searching Techniques: Linear search, Binary search, Hashing funct ion and Collision Handling

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TEACHING PLAN 2023-24 (EVEN SEMESTER)

(JAN 2020 to APRIL 2020)

Name :-MS POONAM Department:-COMPUTER SCIENCE Class:- MA-I(ECO) Sub:- COMPUTER FUNDAMENTALS

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	**Overview of Data Processing, History of Computing, Computer Generations**	**Characteristics of Computer, Anatomy of Computer Classification of Computers Number Systems and Codes**	**Introduction, Number Systems. Types of inter-conversion of Number Systems ASCII and EBCDIC codes.**	**Input and Output Devices: Concept of Input/output. Types of Input Devices, Test on Topics completed.**	**Output Devices – Printers, Plotters and Monitors. Assignment Topic: Classification of Computers and Input Output Devices**

Teacher Signature

FEBRUARY	**Memory and Storage Devices: Characteristics of memory systems**	**memory hierarchy, Types of Memory – RAM, ROM, etc Magnetic Disks, Magnetic Tapes, Optical Disks; Concept of Cache Memory and Virtual Memory , Software**	**Operating System Concepts: introduction. Software Types, Language translators, System Utility Software, Test on Topics Completed**	**Application Software,OS - Characteristics, functions, and its classification. Presentation on Topics covered.**	**User Interfaces – CUI and GUIs, DOS and Windows operating systems. Assignment Topic: Types of Memory and Operating System**
MARCH	**Using Word Processing: Opening and Closing of documents, Text creation and Manipulation, Test on Topics Completed**	**Moving Around in a Document, Formatting of text, Table handling, Spell check, language setting and thesaurus. Handling Multiple Documents, Printing of word document. Manipulation of cells, Formulas and Functions,. Test on Topics Completed**	**Using Spreadsheet tool: Basics of Spreadsheet; Editing of Spread Sheet, Page setups, header and footer, printing of Spreadsheet Basics of PowerPoint, Preparation and Presentation of Slides,**	**Slide Show, Formatting and Clip Arts, Taking printouts of presentation / handouts. Presentation on Topics covered. Assignment Topic: Basics of Spreadsheet; Formulas and Functions**	**Holi break**
APRIL	**Data Communication, Transmission Modes, Basics of Computer networks, Types of computer network, Network Topologies. Applications of Computer Networks.**	**Concept of Internet, Application of Internet, WWW, Web-sites and URLs, Search Engine, Using Electronic mails, Instant Messaging**	**Web Browsing software, Surfing the Internet, Social Concern: Positive and Negative. Impacts of Computer Technology, Computer Crimes,. Test on Topics Completed. Assignment Topic: Types of computer network**	**Computer Virus, Types of viruses, its Characteristics, antivirus software , Positive and Negative Impacts of Computer Technology, Computer Crimes,**	**Computer Applications. Revision, Doubt Session**

Teacher's Signature

Teacher Signature

TEACHING PLAN 2023-2024 (ODD SEMESTER)

NAME:- MRS RANJITA JOON **DEPARTMENT: COMPUTER SCIENCE**

SUB:- M.SC. CS (COMPUTER ORGANIZATION & ARCHITECTURE) PAPER CODE- 16MCS21C4

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
MONTH 1	Representation of Information: Number Systems: Binary, Octal and Hexadecimal	Integer and Floating-point representation, Character codes: ASCII and EBCDIC	Basic Building Blocks and Circuit Design: Boolean Algebra and Logic Gates: OR, AND, NOT, XOR Gates	De Morgan's theorem Universal building blocks; Simplifying logic circuits	sum of product and product of sum form; Karnaugh Map simplification;
MONTH 2	Revision, Combinational logic blocks (Adders, Multiplexers, Encoders, Decoder),	Sequential logic blocks (Latches, Flip-Flops, Registers, Counters), Register transfer and Micro-operations:	Register Transfer Language; Bus and memory Transfer; Micro operations: Arithmetic, Logic & Shift Micro operations.	Basic Computer Organization and Design: Instructions Codes, Register reference	Memory Reference & Input-output Instruction Cycle, Timing and Control, Interrupts; Design of Control unit: Hardwired control unit, Micro-programmed control unit.
MONTH 3	Memory Organization: Memory Hierarchy, Main Memory, Auxiliary Memory, Cache Memory, Virtual Memory	Register Organization and Parallel Processing: General Register Organization, Stack Organization, Instruction Formats, Addressing Modes	Data Transfer & Manipulation Instructions, CISC and RISC: Features and Comparison, Pipeline and Vector Processing:	Parallel processing, Pipelining, Arithmetic Pipeline, Instruction pipeline and Arrays Processors, Input-Output Organization:	Peripheral Devices, Input-Output interface, Asynchronous Data Transfer, Modes of transfer, Priority interrupt, Direct Memory Access (DMA)
MONTH 4	Input-output processors (IOP)	Serial communication Multi-processors,	characteristics of multi-processors, Interconnection structures	Inter-processor Arbitration, Inter-processor Communication	Synchronization, Cache Coherence, Revision

Teacher Signature

Name :- SUMAN MALIKDepartment:-Computer Science **Subject:- BCA-101 Computer & Programming Fundamentals**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week

Month 1 (July)	Computer Fundamentals: Generations of Computers, Definition. Block Diagram along with its components.	characteristics & classification of computers, Limitations of Computers, Human-Being VS Computer, Applications of computers in various fields.	Memory: Concept of primary & secondary memory, RAM, ROM, types of ROM, Cache Memory, flash memory,	Secondary storage devices: Sequential & direct access devices viz. magnetic tape, magnetic disk, optical disks i.e. CD, DVD, virtual memory.	Human-Being VS Computer, Applications of computers in various fields.
Month 2 (August)	Computer hardware & software: I/O devices, definition of software, relationship between hardware and software, types of software.	Overview of operating system: Definition, functions of operating system.	Concept of multiprogramming, multitasking, multithreading, multiprocessing, time-sharing, real time, single-user & multi-user operating system.	Computer Virus: Definition, types of viruses, Characteristics of viruses, anti-virus software	Presentation on Operating System and Its types, Functions. Test of Topics Covered
Month 3 (September)	Computer Languages: Analogy with natural language, machine language, assembly language, high-level languages.	forth generation languages, compiler, interpreter, assembler, Linker, Loader.	characteristics of a good programming language, Planning the Computer Program: Concept of problem solving, Problem definition.	Program design, Debugging, Types of errors in programming, Documentation. Structured programming concepts.	Program: Concept of problem solving, Problem definition. Test of Topics Covered
Month 4 (October)	Structured programming concepts, Programming methodologies viz. top-down and bottomup programming,	Planning the Computer Program: Concept of problem solving, Problem definition, Program design, Debugging.	Programming methodologies viz. top-down and bottomup programming, Advantages and disadvantages of Structured programming.	Presentation on Computer Languages MLL, HLL ,LLL.	Network topologies, Modes of data transmission, Forms of data transmission, Transmission channels(media).
Month 5 (November)	Overview of Networking: An introduction to computer networking. Types of computer Networking .	Network types (LAN, WAN, MAN), Network topologies, Modes of data transmission, Forms of data transmission	Transmission channels(media), Introduction to internet and its uses.	Applications of internet, Hardware and Software requirements for internet, Intranet, Applications of intranet	Exams **Teacher Signature**

TEACHING PLAN 2023-24 (ODD SEMESTER)

Name :- SUMAN MALIKDepartment: Computer SC.

Sub:- PC SOFTWARE **Class: BCA 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	Documentation Using MS-Word - Introduction to word processing interface, Toolbars, Menus, footer,	Creating & Editing Document, Formatting Document, Finding and replacing text, Format painter, Header and footer	Drop cap, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark, Previewing and printing document	Features of MS-Word-Mail Merge, Macros, Tables, File Management, Printing, Styles, linking and embedding object, Template.
OCTOBER	Electronic Spread Sheet 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, Linking and Consolidation	Database Management using Excel-Sorting, Filtering, Validation, What if analysis with Goal Seek, Conditional formatting
NOVEMBER	Presentation using MS-PowerPoint: Presentations, Creating, Manipulating &	Enhancing Slides, Organizational Charts, Excel Charts, Word Art, Layering art Objects, Animations and Sounds,	Inserting Animated Pictures or Accessing through Object	Inserting Recorded Sound Effect or In-Built Sound Effect. **Teacher Signature**

TEACHING PLAN 2023 -24 (EVEN SEMESTER)

Name :-DR. SUMAN MALIK Department:-COMPUTER SCIENCE Class:- BCA I SEM Sub:- 'C' PROGRAMMING

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	**Overview of C: History of C, Importance of C**	**Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant**	**Program, printf(), scanf() Functions**	**Operators : Arithmetic, relational, logical, bitwise, unary, assignment, shorthand assignment operators, conditional operators and increment and decrement operators**	**Expression: Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy & associativity.**
FEBRUARY	**Decision making & branching: Decision making with IF statement(include examples)**	**IF-ELSE statement, Nested IF statement, ELSE-IF ladder(include examples)**	**switch statement, goto statement. For loops(include examples)**	**while, and do-while loop (include examples)**	**jumps in loops, break, continue statement, Nested loops.**
MARCH	**Functions: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C**	**Input functions viz. getch(), getche(), getchar(), gets(),**	**output functions viz., putch(), putchar(), puts()**	**string manipulation functions and its example. User defined functions: Introduction/Definition, prototype, Local and global variables, passing parameters, recursion.**	**HOLI BREAK**
APRIL	**Arrays: Definition, types, initialization, processing an array, passing arrays to functions**	**Array of Strings. String constant and variables, Declaration and initialization of string**	**Input/output of string data, Introduction to pointers. Algorithm development**	**Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime. ,**	**`Flowcharting and` Development of efficient program in C. Revision, Doubt Session** **Teacher Signature**

Name :-DR. RADHA Computer Department **Sub:-**BCA – 201 : Operating System (BCA IInd Year)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
AUGUST			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
SEPTEMBER	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
OCTOBER	CPU Scheduling: Scheduling algorithms : FCFS, SJF	CPU Scheduling: Round Robin & Queue Algorithms	Deadlocks: Deadlock characterization, Methods for handling deadlocks	Methods for handling deadlocks, Banker'sAlgorithm	Memory Management: Logical versus Physical address space
NOVEMBER	Memory Management: Contiguous allocation, Swapping	Memory Management: Paging, Segmentation.	Virtual Memory: Demand paging, Performance of demand paging	Page replacement, Page replacement algorithms	Revision
DECEMBER	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 **Teacher Signature**	Revision

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Lesson Plan 2023-2024 (odd semester)

Name :-RITU SHARMA Department: Computer SC.

Sub:-COMPUTER FUNDAMENTALS AND PROGRAMMING IN C**Class:MSc 1st Sem**

Month	1st Week	2nd Week	3rd Week	4th Week
AUGUST		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,	Advantages of Computer, Limitations of Computer, Range of Applications of ComputerSocial concerns of Computer Technology: Positive and Negative Impacts, Computer Crimes, Viruses and their remedial solutions..
SEPTEMBER	Problem Solving: Problem Identification, Analysis, Flowcharts, Decision Tables, Pseudo codes and	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; decision making using if…else, Else If Ladder; Switch, break,

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	algorithms, Program Coding, Program Testing and Execution			Continue and Goto statements.
OCTOBER	Arrays & Functions: Declaration 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 on Pointers,	, Passing to a function, Pointers & Arrays, Array of Pointers, Array accessing through pointers, Pointer to functions, Function returning pointers, Dynamic Memory Allocations.
NOVEMBER	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 Handing: 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.

TEACHING PLAN 2023-24 (ODD SEMESTER)

Name :-RITU SHARMA **Computer Department** **Sub:-**: Computer Fundamentals & MS-OfficeComputer Architecture **B Sc. Ist YEAR**

Month	1st Week	2nd Week	3rd Week	4th Week

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AUGUST	Historical evolution of computers, Classification of computers, Block Diagram along its components and characteristics, Usefulness of Computers. Human being Vs computer, Computer as a tool, Applications of computers.	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	Number Systems: Definition of Number system, necessity of binary number system, binary, decima l, 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	Arithmetic Circuits: Adder, Subtractor, parallel Binary-adder/Subtractor, Binary Multiplier and Divider. Combinational Circuits: Decoders and Encoder, Multiplexer and De-multiplexer circuits, Design of code Converters.
SEPTEMBER	Keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition, optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems. Hard-copy devices: Impact printers - DMPs, Daisy-wheel printers, Line-printers. Non-impact printers - Inkjet, Laser, Thermal, LED; Plotters. Soft-copy devices: Monitors, video-	: Flip-flop-S-R, D, J-K, T, Clocked Flip-flop, Race Around condition, Master-Slave Flip-Flop	Realization of One Flip-Flop using other Flip-Flop, Shift-Registers, Counters-Ripple, Modular Synchronous, Ring & Twisted-Ring Counter.	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

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	standards (VGA and SVGA).			
OCTOBER	Register transfer and Micro-operations: Register transfer Language, Bus and Memory Transfer, Arithmetic, Logic Micro-operations, Shift Micro-operations	: Introduction, types of software - System & Application software; Language translators - Compiler, Interpreter, Assembler; Operating system - Characteristics, bootstrapping, types of operating	Basic computer organization and Design: Instruction and instructions codes, computer instructions, timing and control,	Operating system as a resource manager; BIOS; System utilities - Editor, Loader, Linker, File Manager. Concept of GUI, GUI standards. Introduction to Algorithm & Flowcharts, Advantages & Disadvantages.
NOVEMBER	Creating a document, font operation, bullet and numbering, find & replace, hyper linking, mathematical operation, Create table and flow chart, Macro, Mail merge, Correcting grammar, protect files, difference between doc and docx	instruction cycle, memory references instructions, input-output reference instructions and interrupts;	Creating single and multiple slide, Animation, manual and automatic slide show, hyper linking, DFD, shape and style	Create sheet and rename sheet, table and operation, cells operation, hyper linking, Function (mathematic, logical), sort and data tools, protection (sheet, workbook).

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Lesson Plan 2023-2024 (odd semester)

Name :- SURENDER

Sub:- INTRODUCTION TO INTERNETWEB TECHNOLOGY(B.SC CS 3RD Year)

Month	1st Week	2nd Week	3rd Week	4th Week
AUGUST	Introduction to Internet, Benefits of Internet, WWW, Hardware and software requirement for internet,	internet protocols, applications of internet, Internet Tools- Telnet	FTP,Gopher, Archie, Veronica, Mosaic, WAIS, IRC,	Online Chatting, Messaging, and Conferencing Concepts, resources of internet.
SEPTEMBER	E-Mail mailing lists, Internet addressing, internet service provider (ISP), internet in India-Shell account, TCP/IP account	Home page and Web Site, internet accessing, internet terminology, internet security problems and solutions.	Overview of Intranet and its applications, Web Browsers, Search Engines, Categories of Search Engines,	Searching Criterion, Surfing the Net, Hypertext Transfer Protocol (HTTP), URL
OCTOBER	HTML: Internet Language, Understanding HTML, Create a Web Page,	Linking to other Web Pages, Publishing HTML Pages,	Text Alignment and Lists, Text Formatting Fonts Control	E-mail Links and link within a Page, Creating HTML Forms.
NOVEMBER	Creating Web Page Graphics, Putting Graphics on a Web Page,	Custom Backgrounds and Colors, Creating Animated Graphics,	Web Page Design and layout	Advanced Layout with Tables, Using Style Sheets.

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TEACHING PLAN 2023-24 (ODD SEMESTER)

Name : SURENDER Sub:-DBMS – B.SC CS3ND YEAR

Month	1st Week	2nd Week	3rd Week	4th Week
AUGUST	Basic Concepts – Data, Information, Records and files. Traditional file – based Systems-File Based Approach-Limitations of File Based Approach,	Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment	DBMS Functions, Advantages and Disadvantages of DBMS.	Classification of Database Management System. Roles in the Database Environment - Data and Database Administrator.
SEPTEMBER	Centralized and Client Server architecture to DBMS. Database System Architecture – Three Levels of Architecture,	External, Conceptual and Internal Levels, Schemas, Mappings and Instances. Data Independence – Logical and Physical Data Independence	Data Models: Records- based Data Models, Object-based Data Models,	Physical Data Models and Conceptual Modeling. Hierarchical, network and relational model
OCTOBER	Entity-Relationship Model – Entity Types, Entity Sets, Attributes and keys, Relationship, relationship sets, Role name & recursive relationship and structural constraints	Conceptual design using E-R Diagrams. Relational Data Model:-Introduction, Properties of Relations, Keys, Integrity Constraints over Relations	Views. Relational Database Design: Functional Dependencies,	Normalizaton.1 st to 3rd Normal Form, BCNF, Lossless Join and Dependency preserving decomposition.

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NOVEMBER	SQL: Types & components of SQL, Data Definition and data types, Data definition commands, Data manipulation commands	Data Control Commands Specifying Constraints(Primary Constraint,. Foreign key, Unique, Not Null) in SQL, Schema, Basic Queries in SQL,	Insert, Delete and Update operations. Inbuilt Date, String functions	Commit, Rollback, Save points. Views: Introduction, Advantages of creating views, Features, Destroying/ Altering table & Views. REVISION.

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TEACHING PLAN 2023-2024 (ODD SEMESTER)

Name :-SURENDERComputer Department **Sub:-**BCA – 301 : MIS (BCA IIIrd Year)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
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

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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	Decision support systems: control and decision-making

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Lesson Plan 23-24 (odd semester)

Name :- Richa Bansal **Department: Computer Science**

Sub:- Discrete Mathematics **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. **Teacher Signature**

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 2023-24 (ODD SEMESTER)

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Name :-RICHA BANSAL Computer Department Sub:-BCA – 201 : Operating System (BCA IInd Year)

Month	1st Week	2nd Week	3rd Week	4th Week

AUGUST		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
SEPTEMBER	Types of Operating System : Parallel, Distributed Systems, Real-Time Systems	Process Management: Process Concept	Process Management: Operation on processes, Cooperating Processes, Threads, and Inter-process Communication	CPU Scheduling: Basic concepts, Scheduling criteria REVISION
OCTOBER	CPU Scheduling: Scheduling algorithms : FCFS, SJF	CPU Scheduling: Round Robin & Queue Algorithms	Deadlocks: Deadlock characterization, Methods for handling deadlocks	Methods for handling deadlocks, Banker'sAlgorithm Memory Management: Contiguous allocation, Swapping
NOVEMBER	Memory Management: Paging, Segmentation. Virtual Memory: Demand paging, Performance of demand paging	Page replacement, Page replacement algorithms 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

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TEACHING PLAN 2023-2024 (EVEN SEMESTER)

Name:- Mrs. Ranjita Joon **Department: Computer Science** **Class:- M.Sc (CS)-2nd sem Subject:- Computer Networks(16MCS22C4)**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
April	Introduction to Computer Network: Types of Networks, Network Topologies,	OSI and TCP/IP Reference Models; Comparison of Models.	Digital Vs. Analog communicat ion; Parallel and Serial Communicat ion; Synchronous, Asynchronous and Isochronous Communicat ion;	Data Communications Concepts: Communication modes: simplex, half duplex, full duplex; Mult iplexing	; Transmission media: Wired- Twisted pair, Coaxial cable, Optical Fiber, Wireless transmission: Terrestrial, Microwave, Satellite, Infra red. UNIT TEST
May	Communication Switching Techniques: Circuit Switching, Message Switching, Packet Switching.	Data Link Layer Fundamentals: Framing, Basics of Error Detection, Forward Error Correction, Cyclic Redundancy	Check codes for Error Detection, Flow Control, Media Access Protocols**:** ALOHA,	Carrier Sense Mult iple Access (CSMA), CSMA with Collision Detection (CSMA/CD), Token Ring, Token Bus. ASSIGNMENT	High-Speed LAN: Standard Ethernet, Fast Ethernet, Gigabit Ethernet,
June	10G; Wireless LANs: IEEE 802.11, Bluetooth. Network Layer: IP Addressing and Routing, IPv4 (Header Format and Services), ARP	ICMP (Error Reporting and Query message); IPv6 (Header Format and Addressing). Transport Layer: Process-to-Process Delivery: UDP,	TCP; Connect ion Management by TCP; Basics of Congestion Control.	Application Layer: Domain Name System (DNS); SMTP; HTTP; WWW.	Network Security**:** Security Requirements and attacks; Cryptography: Symmetric Key (DES, AES),
July	Public Key Cryptography (RSA); Firewall.				

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TEACHING PLAN 2023-24 (EVEN SEMESTER)

Name :- Ms Ranjita Joon Department:-Computer Science Class:- M.Sc(CS) 2nd sem Subject:- Object Oriented Programming using C++ (16MCS22C2)

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
April	Procedural Language Object Oriented Approach Objects & Classes Encapsulation Data Abstraction Revision	Doubts and Discussion Inheritance Polymorphism Dynamic Binding, Message Passing Revision Test	Structure of C++ Program , Data types Variables Static Variables Operators in C++ Revision	Arrays Strings, Structure Revision	Functions, Recursion Control Statements Test of topics covered
May	Classes and Objects Memory Allocation for objects, memory layout of objects	Private, Public member functions Protected member functions Static members Explain with examples Doubts and Discussion	Constructor, Features Types of constructor Dynamic constructor Parameterized constructor Destructor	Doubts and Discussion Dynamic memory allocation New, delete Object creation at run time. This pointer Doubts and discussion	Derived class and Base class, Different types of Inheritance Overriding member function Public and private inheritance Ambiguity in multiple inheritance Doubts and Discussion
June	Virtual Inheritance Abstract class Introduction to Polymorphism Revision Test	Operator overloading Overloading Unary operator Overloading Binary Operators Function overloading Revision	Virtual function Friend function Static function Doubts and Discussion Test on topics covered	Throwing Catching Re-throwing an exception Specifying exceptions Exceptions when handling exceptions Exceptions when handling exceptions Resource capture and release	Introduction to Templates Class Templates Function Templates Overloading of template function, namespaces Introduction to STL, Benefits of STL: Containers, adapters

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				Revision	

TEACHING PLAN 2023-24 (EVEN SEMESTER)

(JAN 2024 to APRIL 2024)

Name :-SUMAN MALIK Department:- Computer Science Class:- B.COM (HONS) 1st Sub:- Introduction to computer **Teacher Signature**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week

JANUARY	Computer basic concepts: Definition and characteristics of a computer, Advantages of computer, Components of computer.	Human-being Vs computer, Difference between Computer and Calculator, Applications of computer, Generations of computer.Application Software, Introduction to Programming Language: Types of Programming Language, Language Translators.	Types of computer: Analog, Digital and Hybrid computers, Micro, Mini, Mainframe and Super Computers,	Introduction to Software: Software Types, Systems Software, Types of Operating System, , Introduction to Computer memories: Primary storage, Secondary storage.	TEST AND REVISION
FEBRUARY	Computer Network: Introduction, Network Elements, Advantages of Networking, Network Topologies, Communication Channels, Types of Computer Networks- LAN.	Public and Private Network., Communication devices, Introduction to MS Word: Features of MS Word, Components of Word document window, Menu Bars.	Creating own document-, Formatting text and document, Mail Merge, Creating a Macro, Working with auto shapes, Export and Import File, Finding and replacing text.	Spell Check and Grammar Check, Working within tables- Adding, deleting, modifying rows and columns, Printing documents.	TEST AND PRESENTATION.
MARCH	Internet: Introduction, History of Internet, Benefits of the Internet, Hardware and Software requirement for Internet, Internet Applications or services of Internet.	Internet Connection, Internet Addressing, Extranet and E-Mail, Mobile Computing.MS Excel: Features of MS Excel, Components of Worksheet.	Inserting and deleting of cells, rows and columns, Formatting a worksheet, Formatting textual data.	Excel Functions, Goal Seek, validation, Pivot Table and Pivot Chart, Sort, Filter, Print the worksheet.	HOLI BREAK

TEACHING PLAN 2023-24 (EVEN SEMESTER)

Teacher Signature

(JAN 2024 to APRIL 2024)

Name :-Shallu Hassija Department:-Computer Science Class: BCA 1st year Sub:-107: Logical Organization of Computer-II

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	**Sequential Logic: Characteristics, Flip-Flops, Types of flip flop**	**Clock RS, D Type ,JK**	**Master-Slave flip-flops, State table**	**T Type, state diagram and state equations.**	**Flip-flop excitation tables Assignment,UT1**
FEBRUARY	**Introduction Counters,Types of Counters**	**Asynchronous and Synchronous, Mod -10 Counters**	**Binary Counters, Modulo-N Counters, Revision & test**	**Asynchronous/ Synchronous Up-Down Counters**	**Sequential Circuits: Designing registers – Serial Input Serial Output (SISO), Serial Input Parallel Output (SIPO)**
MARCH	**Parallel Input Serial Output (PISO), Parallel Input Parallel Output (PIPO) and shift registers**	**Memory & I/O Devices: Memory Parameters, Semiconductor RAM,**	**ROM, Magnetic andOptical Storage devices**	**Flash memory, I/O Devices and their controllers**	**HOLI VACATIONS**
APRIL	**Instruction Design & I/O Organization: Machine instruction, Instruction set selection,Instruction cycle**	**Instruction Format and Addressing Modes,I/O Interface**	**Interrupt structure, Program-controlled, Interrupt-controlled**	**DMA transfer, I/O Channels, IOP**	**Revision &doubt session &test** **Teacher Signature**

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TEACHING PLAN 2023-24 (EVEN SEMESTER)

(JAN 2024 to APRIL 2024)

Name :-Shallu Hassija **Department:-COMPUTER SCIENCE** **Class:- BCA I SEM** **Sub:- 'C' PROGRAMMING**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	Overview of C: History of C, Importance of C	Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables,	Structure of a C Program, printf(), scanf() Functions	Operators : Arithmetic, relational, logical, bitwise, unary, assignment, shorthand assignment operators, conditional operators	Expression: Arithmetic expressions, evaluation of arithmetic expression, type

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		Assignment statement, Symbolic constant		and increment and decrement operators	casting and conversion, operator hierarchy & associativity.
FEBRUARY	Decision making & branching: Decision making with IF statement(include examples)	IF-ELSE statement, Nested IF statement, ELSE-IF ladder(include examples)	switch statement, goto statement. For loops(include examples)	while, and do-while loop (include examples)	jumps in loops, break, continue statement, Nested loops.
MARCH	Arrays: Definition, types, initialization, processing an array, passing arrays to functions	Array of Strings. String constant and variables, Declaration and initialization of string	Input/output of string data, Introduction to pointers. Algorithm development `Flowcharting and` Development of efficient program in C	Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime. ,	**Holi Vacations**
APRIL	Functions: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C	Input functions viz. getch(), getche(), getchar(), gets(), output functions viz., putch(), putchar(), puts()	string manipulation functions and its example.	User defined functions: Introduction/Definition, prototype, Local and global variables, passing parameters, recursion.	**Revision, Doubt Session**

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TEACHING PLAN 2023-24 (EVEN SEMESTER)

(JAN 2024 to APRIL 2024)

Name :-DR. RADHA Department:-Computer Science Class: BCA 3rd year Sub:- 309: Introduction to .NET

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	The Framework of .Net: Building blocks of .Net Platform (the CLR, CTS and CLS)	Features of .Net, Deploying the .Net Runtime, Architecture of .Net platform	Introduction to namespaces & type distinction	.Types & Object in .Net, the evolution of Web development .	Assignment,UT1
FEBRUARY	Class Libraries in .Net, Introduction to Assemblies & Manifest in .Net	Metadata & attributes . Introduction to C#: Characteristics of C#,	Characteristics of C#, Data types: Value types, reference types, default value	Constants, variables, scope of variables, boxing and unboxing.	Assignnment,UT2
MARCH	Operators and expressions: Arithmetic, relational, logical, bitwise, special operators,	evolution of expressions, operator precedence & associativity, Control	Constructs in C#: Decision making, loops, Classes & methods: Class, methods, constructors, destructors,	Overloading of operators & functions. Revision & test	. HOLI BREAK
APRIL	Inheritance & polymorphism: visibility control, overriding,	Abstract class & methods, sealed classes & methods, interfaces.	Advanced features of C#: Exception handling & error handling,	Automatic memory management, Input and output (Directories, Files, and streams).	Revision & test

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TEACHING PLAN 2023-24 (EVEN SEMESTER)

(JAN 2024 to APRIL 2024)

Name :-DR. RADHA **Department:- Computer Science** **Class:- bsc cs 1st Sub:- Programming in C**

Month	1st Week	2nd Week	3rd Week	4th Week	5th Week
JANUARY	Basic concepts of programming	techniques of problem solving, algorithm designing and flowcharting	concept of structured programming-Top-Down design, Development of efficient program	Program correctness; Debugging and testing of programs	Algorithm for searching, sorting(Insertion, Exchange)
FEBRUARY	Overview of C.	Data types: declaration and definition	Operators: Arithmetic, relational, logical, bitwise, unary, assignment and conditional operators and their hierarchy & associativity	input/output statements	Arithmetic Expression, Evaluation of Arithmetic Expression, Type-casting and Conversion.
MARCH	Decision making & branching	Decision making & looping	Jumps in loop, break, continue.	Functions: Definition, prototype, passing parameters, Recursion.	HOLI BREAK

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APRIL	Pointers	Arrays	Strings	Structures and unions	File handling

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