Govt. Shivalik College Naya Nangal

Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: BCA sem-1**

Paper : C language

Sr. no.	Dates	Topic
1	**05-12 October**	**Programming Process**: Problem definition, Algorithm development, Flowchart, Coding, Compilation and debugging.
2	**13-21 October**	**Basic structure of C program**: History of C, Structure of a C program, Character set, Identifiers and keywords, constants, variables, data types.
3	**22- 29 October**	**Operators and expressions**: Arithmetic, Unary, Logical, Relational operators, assignment operators, Conditional operators, Hierarchy of operations type conversion.
4	**07 November -14 November**	**Control statements**: branching statements (if, if else, switch), loop statements (for, while and do-while), jump statements (break, continue, goto), nested control structures.
5	**17 -21 November**	**MST Exams**
6	**22-29 November**	**Functions**: Library functions and user defined functions, prototype, definition and call formal and actual arguments, local and global variables, methods of parameter passing to functions, recursion
7	**30 November-7 December**	**I/O functions**: formatted & unformatted console I/O functions
8	**8-16 December**	**Storage Classes**: automatic, external, static and register variables.
9	**17-23 December**	**Arrays:** – One dimensional and two dimensional arraysDeclaration, initialization, reading values into an array, displaying array contents
10	**11-12 Jauuary**	**Strings**: input/output of strings, string handling functions (strlen, strcpy, strcmp, strcat & strrev), table of strings.
11	**05-12 October**	**Pointers**: pointer data type, pointer declaration, initialization, accessing values using pointers, pointers and arrays.
12	**13-21 October**	**Introduction to Files in C**: opening and closing files. Basic I/O operation on files.

13	22- 29 October	Rivision

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: PGDCA sem-1**

Paper : C language

Sr. no.	Dates	Topic
1	**29-06 October**	**Programming Process**: Problem definition, program design, coding, compilation and debugging; Program Development.
2	**07-14 October**	**Basic Constructs**: Identifiers, Keywords, Tokens, Data Types, Constants, Input and Output in C, Type Conversion, Operators and Expressions, Precedence Hierarchy of Operators, Associativity, Library functions.
3	**15- 21 October**	**Control Statements**: Branching, Looping
4	**22-27 October**	**Functions**: Definition, Prototype, Different types of functions based on arguments and return type, parameter passing mechanisms, concept of recursive function.
5	**28 October – 03 November**	**Storage Classes** Different Storage Classes (static, auto, extern, register), global and local variables
6	**03 -09 November**	**Arrays**: Definition, accessing elements, initialization, passing to functions, multi-dimensional arrays,
7	**10-16 November**	String handling, Applications of linear arrays: linear and binary search, Bubble Sort and selection Sort
8	**17-21 November**	**Pointers**:address and dereferencing operators, declaration, assignment, passing addresses to functions, using pointer arrays to sort n strings.
9	**01-07 December**	**Structure and Union**: Variables, Accessing members, Nested structures, pointer to structures, concept of self-referential structures, Difference between a union and structure.
10	**08-17 December**	**MST Exams**
11	**26-31 December**	**File Handling in C:** Processing a text file through C program**;** Concepts of Sequential File and Random File Text and Binary File, Formatted and Unformatted Files. (File Implementation is left out)

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: BCA sem-5**

Paper : C language

Sr. no.	Dates	Topic
1	**01-07 September**	**Introduction to HTML:** Basic HTML concepts, an overview of HTML markup. What is good Web design; the process of Web publishing; implementation;
2	**08-14 September**	the phases of Web site development; HTML's role in the Web; and issues facing HTML and the Web.
3	**15-21 September**	**HTML overview:** the structure of HTML documents; document types; the <HTML> element; the <HEAD> element; the <BODY> element;
4	**22-27 September**	**Links and Addressing:** Linking basics; what are URLs; linking in HTML; anchor attributes; images and anchors; image maps; semantic linking with the <LINK> element; meta-information;
5	**28-02 october**	**HTML and Images:** The role of images on the Web; image preliminaries
6	**03-09 october**	; image downloading issues; obtaining images; HTML image basics; images as buttons; and image maps.
7	**10-17 october**	**Introduction to Layout: Backgrounds, Colors, and Text;** design requirements; HTML approach to Web design; fonts; colors in HTML;
8	**18-25 october**	document-wide color attributes for <BODY>; and background images. Introduction to tables, LISTS; frames.
9	**25-01 November**	**Style Sheets:** style sheets basics; style sheet example; style sheet properties; positioning with style sheets;
10	**02-09 November**	**Basic Interactivity and HTML: Forms** form preliminaries; the <FORM> element; form controls;
11	**10-14 November**	**Introduction to Server-Side Programming:** This chapter covers: overview of client/server programming on the Web; server-side programming; common gateway interface (CGI);
12	**15-21 November**	**MST Exams**

13	22-30 November	**Dynamic HTML (DHTML):** dynamic HTML and document object model; HTML and scripting access; rollover buttons; moving objects with DHTML; and ramifications of DHTML.

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: BCA sem-5**

Paper : JAVA SEC-B

Sr. no.	Dates	Topic
1	**01-07 September**	**Inheritance:** types of inheritance, use of super
2	**08-14 September**	method overriding, final class, abstract class
3	**15-21 September**	wrapper classes.Arrays,
4	**22-27 September**	Strings and Vectors
5	**28-02 october**	Packages and Interfaces
6	**03-09 october**	visibility controls **Errors and Exceptions:** Types of errors,
7	**10-17 october**	Exception classes, Exception handling in java, use of try, catch, finally, throw and throws.
8	**18-25 october**	Taking user input, Command line arguments.
9	**25-01 November**	**Multithreaded Programming:** Creating Threads
10	**02-09 November**	Life cycle of thread, Thread priority
11	**10-14 November**	Thread synchronization
12	**15-21 November**	**MST Exams**
13	**22-30 November**	Inter-thread communication **MST Exams**

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: BCA sem-2**

Paper : DIGITAL ELECRONICS

Sr. no.	Dates	Topic
1	07-14 March	**Fundamental Concepts**: Introduction to Analog and Digital Systems, Digital Signals, Basic Digital Circuits: AND, OR, NOT, NAND, NOR, XOR and XNOR gates
2	15-22 March	Boolean algebra theorems, Characteristics of Digital IC.
3	24-31 March	**Number Systems:** Positional and Non-positional number systems, Binary, Decimal, Octal and Hexadecimal, Base conversions,
4	1-8 April	Binary arithmetic: Addition and Subtraction, 1's complement, 2's complement, subtraction using 1's complement and 2's complement.
5	09-17 April	**Combinational Logic Design:** SOP and POS Representation of Logic functions
6	18-24 April	K-Map representation and simplification up to 4 variable expressions, Don't care condition.
7	25-30 April	**Multiplexers:** 4X1, 8X1 and 16X1. De-multiplexers: 1 to 4, 1 to 8 and 1 to 16. BCD to Decimal decoder,
8	2-08 May	Decimal to BCD encoder. Parity generator and Parity checker. Design of Half adder and Full adder.
9	09-15 May	**Flip-Flops:** Introduction, Latch, Clocked S-R Flip Flop, Preset and Clear signals, D-Flip Flop, J-K Flip Flop, The race-around condition, Master Slave J-K Flip Flop. D-Flip-Flop, Excitation Tables of Flip Flops. Edge-Triggered Flip Flops
10	16-22 May	**A/D and D/A Converters:** Introduction, Digital to Analog Converters: Weighted-Register D/A converter, R-2R Ladder D/A converter. Analog to Digital Converters: Quantization and encoding, Parallel-comparator A/D converter, Counting A/D converter.
11	26-31 May	**MST Exams**

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: BCA sem-5**

Paper : web desigining using ASP.NET

Sr. no.	Dates	Topic
1	**01-07 September**	**Introduction to .net framework: -** Genesis of.NET, Features, Advantages and disadvantages of .net framework. Common Language Runtime:-Common Type System, Common Language Specification, .Net binaries, Microsoft Intermediate Language, Meta Data, .Net types and .net namespaces.
2	**08-14 September**	**Basics of ASP. NET: -** Introducing ASP .NET– Creating ASP .NET applications using command line compiler and visual studio .net IDE.
3	**15-21 September**	**Introduction to c#:-** variables, Constants, Data Types, Operators, Control Structures and loops, Arrays, events.
4	**22-27 September**	**Introduction to Classes and objects Web forms, Standard Controls: -** Display information, Accepting user input, Submitting form data,
5	**28-02 october**	displaying images, using the panel control, using the hyperlink control.
6	**03-09 october**	**Validation Controls:** required field validation control, range validator Control, compare validator control, regular expression validator control, custom validator control, validation summary controls.
7	**10-17 october**	**Rich Web Controls: -**Accepting file uploads, displaying a calendar, Displaying advertisement, displaying different page views, displaying a wizard. List Controls: Dropdown list control, Radio button, list controls.
8	**18-25 october**	Grid View Controls: Grid view control fundamentals, using field with the grid view control, working with grid view control events extending the grid view control. Debugging, caching and deploying ASP .NET pages.
9	**25-01 November**	**Master pages: -** Designing Website with Master Pages: Creating master pages, Modifying master page content
10	**02-09 November**	**ADO.NET:-** Changes from ADO to ADO.NET, ADO .NET Managed Providers – OleDb and SQL Managed Providers – OleDb Data Adapter Type.
11	**10-14 November**	SQL Data Source Control: Creating database connections, executing database commands, Using ASP.NET parameters with the SQL data source controls,
12	**15-21 November**	MST EXAMS
13	**22-30 November**	programmatically executing SQL data source commands, Caching database data with the SQL data Source controls

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class: BCA sem-5**

Paper : OPERATING SYSTEM SEC-B

Sr. no.	Dates	Topic

1	01-07 September	**Deadlocks** – Characteristics of deadlocks, methods for handling deadlocks
2	08-14 September	deadlock prevention, deadlock avoidance
3	15-21 September	**Memory Management** – Logical versus Physical address space, swapping
4	22-27 September	contiguous allocation, Paging,
5	28-02 october	Concept of Virtual memory, Implementation by Demand Paging
6	03-09 october	Page replacement algorithms – FIFO, Optimal, LRU,.
7	10-17 october	Concept of thrashing
8	18-25 october	**File Management** – Allocation methods: contiguous allocation,
9	25-01 November	linked allocation and indexed allocation;
10	02-09 November	**Device Management** – Disk Scheduling: FCFS,
11	10-14 November	SSTF, SCAN,
12	15-21 November	M MST EXAMS
13	22-30 November	C-SCAN, LOOK.

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Teaching plan (2021-22)

Teacher Name:Rohit Kumar   **Class:PGDCA sem-2**

Paper : Database Management of System

Sr. no.	Dates	Topic

1	**22-29 March**	**Database Management System**: Characteristics, Database: Definition, components, definition, characteristics, advantages over traditional file processing system,
2	**30 -6 April**	User of database, DBA and its responsibilities, Database schema, instance
3	**7-14 April**	DBMS architecture, data independence.
4	**15-22 April**	**Database languages**: DDL, DML, DCL. Database utilities, Data Models, Keys: Super, candidate, primary, unique, foreign
5	**23-30 April**	**Entity relationship model**: Concepts, mapping cardinalities, entity relationship diagram, weak entity sets, strong entity set,
6	**01-07 May**	aggregation, generalization, converting ER diagrams to tables
7	**08-16 May**	**Database Design**: Functional dependency, normalization (upto 3NF), data base recovery, database integrity, Definition and problems arising out of concurrency
8	**17-23 May**	Authentication, authorization, methods of implementing security. **SQL: Basic SQL Query, Creating Table and Views**
9	**26-31 May**	**MST EXAM**