Govt. Shivalik College Naya Nangal

Teaching Plan(2022-23) Class: B.A & B.sc

(Sem-I) Subject: Computer Science Paper: Fundamentals Of IT

Name : Pooja Sharma

Sr. No	Dates	Topics
1	1-3 Sept.	**Computer Fundamentals:** Block diagram of a computer, characteristics of computers and generations of computers. Categories of Computers - Supercomputer, mainframe computer, network server, Workstation, Desktop computers, notebook computer, Tablet PC, handheld PC, smart phone.
2	5-10 Sept.	**Input Devices:** Keyboard, Mouse, Joy tick, Track Ball, Touch Screen, Light Pen, Digitizer, Scanners, Speech Recognition Devices, Optical Recognition devices – OMR, OBR, OCR
3	12-17 Sept.	**Output Devices:** Monitors, Impact Printers - Dot matrix, Character and Line printer, Non Impact Printers – DeskJet and Laser printers, Plotter.
4	19-24 Sept.	**Memories:** Memory Hierarchy, Primary Memory – RAM, ROM, Cache memory. Secondary Storage Devices - Hard Disk, Compact Disk, DVD, Flash memory.
5	26-01 Oct.	**Software:** Types of Software- System Software, Application Software, Firmware. Type of System Software: Operating Systems, Language Translators, Utility Programs, Communications Software.
6	03-08 Oct.	**Commonly Used Application Software**: Word Processor, Spreadsheet, Database, Education, Entertainment Software. **Computer Languages:** Machine language, assembly language, high level language, 4GL.
7	10-15 Oct.	**Commonly Used Application Software**: Word Processor, Spreadsheet, Database, Education, Entertainment Software. **Computer Languages:** Machine language, assembly language, high level language, 4GL.
8	17-22 Oct.	**Number System:** Non-positional and positional number systems, Base conversion, Concept of Bit and Byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other. Binary Arithmetic: Addition, subtraction and multiplication, 1's complement, 2's complement, subtraction using 1's complement and 2's complement.
9	24-29 Oct.	**Computer Codes:** weighted and non-weighted code, BCD, EBCDIC, ASCII, Unicode. **Computer Network:** Network types, network topologies.
10	31-05 Nov.	**Internet Related Concepts:** Internet, World Wide Web, Hypertext, Uniform Resource Locator, Web Browsers, IP Address, Domain Name, Internet Services Providers, Internet Security, Web Search Engine, Net Surfing, web portal, Wiki, Blog.
11	09-12 Nov.	**MST Exams..**
12	14-19 Nov.	**Applications of IT:** IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment.

13	21-26 Nov.	Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.
14	28-03 Dec	**Advanced Trends in IT :** Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology, Virtual LAN Technology, Firewall. E-Commerce, M-Commerce, Nanotechnology,
15	05-10 Dec.	E-Commerce, M-Commerce, Nanotechnology.
16	12-17 Dec.	**Revision**
17	19-23 Dec.	**Revision**

Govt. Shivalik College Naya Nangal

Teaching Plan(2022-23)

Class: B.A & B.sc (Sem- III)

Subject: Computer Science

Paper: C PROGRAMMING AND DATASTRUCTURES

Name :Pooja Sharma

Sr. No	Dates	Topics
1.	1-3 Sept.	**Overview of C Language:** C Fundamental : Introduction to C, character set, identifiers, keywords, data types, constants, variable, user defined data types, arithmetic, unary, relational, logical, assignment and conditional operators & expression
2.	5-10 Sept.	Basic structure of a C program. Data I/O statement : single character I/O, formatted I/O, string I/O functions.
3.	12-17 Sept.	**Control Structure:** sequencing, alteration (if-else, switch, break, continue, go to, iteration while, do-while, for) and nested loops.
4	19-24 Sept.	**Functions:** Defining and accessing a function, passing arguments to a function, specifying arguments data types, function prototypes, recursion .
5	26-01 Oct.	Storage Classes- Automatic, External, Static, Register. **Pointers and Structures**: Character pointers, pointer to arrays, array of pointers.
6	03-08 Oct.	Structure and Unions : Defining and processing structure, Unions
7	10-15 Oct.	**Basic Notations and Array (Data Structure):** Basic concept and notations, data structures, Types of data structure and data structure operations, mathematical notation and functions, algorithmic complexity.
8	17-22 Oct.	Big 'O' notation and time space trade off. Arrays: Linear array, Representation of Linear array in memory, Traversing Linear array, Insertion and deletion in an array,
9	24-29 Oct.	**Stacks:** Push and Pop in Stack. Representation of stack in memory (Using Arrays)
10	31-05 Nov.	**Queues**: Insertion and deletion operations .
11.	09-12 Nov.	MST Exams..
12.	14-19 Nov.	selection sort, bubble sort, merge sort, quick sort.
13.	21-26 Nov.	Arrays: Multi- dimensional array: Row-Major, Column Major order, space array.
14	28-03 Dec	Preprocessor Directives.
15.	05-10 Dec.	**Searching Techniques:** Linear and binary search **Sorting Techniques:** Insertion sort. And Revision...

Teaching Plan(2022-23)

Class: B.A & B.sc (Sem- V)

Subject: Computer Science

Paper: OBJECT ORIENTED PROGRAMMING USING C++

Name :Pooja Sharma

Sr. No	Dates	Topics
1.	1-3 Sept.	**Evolution of OOP :** Procedure Oriented Programming, OOP Paradigm, Advantages and disadvantages of OOP over Functional Programming Approach.
2.	5-10 Sept.	**Characteristics of Object Oriented Language :** Classes, Objects, Inheritance, Reusability, User defined Data Types, Polymorphism and Exception Handling.
3.	12-17 Sept.	**Introduction to C++ :** Structure of C++ Program, Identifier and keywords, Constants, Data Types, C++ Operators, Type Compatibility, Variable Declaration, Reference Variable, Statements, Expressions, Manipulators. Input and Output Statements.
4	19-24 Sept.	**Control Statements:** Conditional Expression, Loop Statements, **Storage Class Specifiers :** Automatic, Static, Register, Extern. Array, Pointer Arithmetic, Structures, Pointers and Structures, Unions, Bit Field Typed Enumerations.
5	26-01 Oct.	**Software:** Types of Software- System Software, Application Software, Firmware. Type of System Software: Operating Systems, Language Translators, Utility Programs, Communications Software.
6	03-08 Oct.	**Commonly Used Application Software**: Word Processor, Spreadsheet, Database, Education, Entertainment Software. **Computer Languages:** Machine language, assembly language, high level language, 4GL.
7	10-15 Oct.	**Function in C++ :** Function Prototyping, Defining a function, Types of functions. **Methods of Parameter passing :** by value, by address, by reference, Recursion.
8	17-22 Oct.	**Function Overloading :** Virtual functions, pure virtual functions, operator overloading.
9	24-29 Oct.	**Classes :** Data members and member functions, objects, arrays of class objects, Objects as function arguments, nested classes, inline member functions, static data members and static member functions, friend functions, dynamic memory allocation.
10	31-05 Nov.	**Constructors and Destructors:** Default parameterized and copy constructors, multiple constructors in classes dynamic constructors. Rules for constructors and destructors, Const. objects.
11	09-12 Nov.	MST Exams….
12	14-19 Nov.	Polymorphism : Methods of achieving polymorphic behaviour.
13	21-26 Nov.	**Pointers:** Pointers and classes, pointer to object, this pointer.
14	28-03 Dec	**Methods of Parameter passing :** by value, by address, by reference, Recursion.
15	05-10 Dec.	**Inheritance:** single inheritance, inheriting private members, types of derivation, multiple inheritance, multi-level inheritance, hierarchical inheritance, hybrid inheritance, container classes and member access control. Abstract class.

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Teaching Plan(2022-23)

Class: B.COM. PART-I (Ist Semester)

Paper: COMPUTER APPLICATIONS IN BUSINESS

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	1-3 Sept.	Computer: Introduction, Functions and Classification of Computer, Overview of Software and Hardware, Input and Output devices, Computer Memory: RAM, ROM.
2.	5-10 Sept.	Number System and its Inter Conversion Introduction to Operating System.
3.	12-17 Sept.	DOS and WINDOWS, working with files and folder, Understanding the control panel, Opening and exiting Windows applications, Copying and moving information between windows and learning other basic functions of window (latest version).
4	19-24 Sept.	Introduction to Word Processing, Word Processing concepts, Use of Templates, Working with word document: Editing text, Find the replace text, Formatting, spell check.
5	26-01 Oct.	Auto correct, Auto text; Bullets and numbering, Tabs, Paragraph formatting, Indent, Page formatting, Header and footer.
6	03-08 Oct.	Tables: Inserting, Filling and formatting a table; Inserting Pictures and Video; Mail Merge: Including linking with Database; Printing documents.
7	10-15 Oct.	Preparing Presentations: Basics of presentations, Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols Media; Design; Transition; Animation; and Slide show.
8	17-22 Oct.	Creating Business Presentations using above facilities. Spread sheet and its Business Applications: Spread sheet concepts, Managing worksheets; Formatting, Entering data, Editing, and Printing a worksheet; Handling operations in Formula, Project involving multiple spread sheets, Organizing Charts and Graphs.
9	24-29 Oct.	Generally used Spread sheet functions: Mathematical, Statistical, Financial, Logical, Date and Time Look up and reference, Database, and Text functions.
10	31-05 Nov.	Graphical representation of data: Frequency distribution and its statistical parameters; Mean, Median, Standard Deviation. Correlation and Regression.
11	09-12 Nov.	MST exams
12	14-19 Nov.	Transforming E.R. Model to Relational Data Model Concepts Applying DBMS in Areas of Accounting & Inventory.
13	21-26 Nov.	Frequency distribution and its statistical parameters; Mean, Median, Standard Deviation. Correlation and Regression.
14.	28-03 Dec	
15	05-10 Dec.	Database Designs for Accounting and Business Applications: Reality-Expressing the Application.
16	12-17 Dec.	Creating initial design in Entity Relationship Model.
17	19-23 Dec.	Revision..

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Teaching Plan(2022-23)
Class: B.A./B.Sc. Part-I (COMPUTER SCIENCE) (Semester II)
Paper: MS-OFFICE AUTOMATION TOOLS

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	1-4 Feb	**MS-OFFICE:** Basic layout, components, Office Characteristics, Common Office Controls and shortcuts for Home, Insert, Page Layout, Mailing, Review and View
2.	6-11 Feb	**MS Word 2010:** Introduction to Word Processing, Toolbars, Ruler, Menus, Keyboard Shortcut. Previewing documents, Printing documents, Formatting documents.
3.	13-18 Feb	Checking the grammar and spelling, Formatting via find and replace, Using the Thesaurus, using Auto Correct, word count, Hyphenating, Mail merge, mailing Labels Wizards and Templates .
4	20-25 Feb	Handling Graphics, tables as Converting a word document into various formats.
5	27-4 March	Creating, inserting, deleting and formatting slides, Formatting and enhancing text, Slides with graphs.
6	6-11 March	**MS-EXCEL 2010:** Creating worksheet, entering data into worksheet, Entering data into worksheet, Entering, data, dates, alphanumeric, values, saving & quitting worksheet .
7	13-18 March	Opening and moving and existing worksheet, Toolbars and Menus, keyboard shortcut.
8	20-25 March	Working with single and multiple workbooks, working with formulation & cell referencing, formatting of worksheet.
9	27-1 April	**MS-ACCESS 2010:** Introduction to MS-ACCESS-2010 working with databases and tables, queries in Access.
10	3-8 April	Introduction to forms
11.	10-15 April	sorting and filtering, controls.
12.	17-22 April	Creating reports.
13	24-29 April	Giving Animation to slides, Transfer of files between Power Point and other word processors and software packages.
14	1-6 May	**MS PowerPoint 2010:** Introduction, Elements of Power Point Package.
15	8-13 May	**Revision…**
16	15-20 May	Using Macro.
17	22-27 May	**Test**
18	29-3 June	Starting and exploring Power Point menus (Insert, Format, Tools, Slide Show, Window, Help options and all of their features, Options and sub options etc.)

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Teaching Plan(2022-23)

Class: B.A./B.Sc. (Computer Science) Part II (Semester IV)

Paper: DATABASE MANAGEMENT SYSTEM

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	1-4 Feb	**Traditional file procession system:** Characteristics, limitation. Database: Definition, composition.
2.	6-11 Feb	**Database Management System :** Definition, Characteristic advantages over traditional file processing system, Implication Database approach, Uses of database.
3.	13-18 Feb	DBA and its responsibilities Database schema, instance.
4	20-25 Feb	DBMS architecture, data independence, mapping between different levels.
5	27-4 March	**Database language :** DDL, DML, DCL. Database utilities, Data Models, Keys : Super, candidate, primary, unique, foreign.
6	6-11 March	**Entity relationship model :** concepts, mapping cardinalities, entity relationship diagram, weak sets, strong entity sets, aggregation, generalization, converting ER diagram to tables.
7	13-18 March	**Relational Algebra :** Basic operations, additional operations.
8	20-25 March	**Database design:** Functional dependency, decomposition, problem arising out of bad database design, normalization, multi-valued dependency.
9	27-1 April	Database design process, database protection, database integrity.
10	3-8 April	**MS-Access:** Introduction to MS-Access, working with database and tables, queries in Access.
11.	10-15 April	Applying integrity constraints, Introduction to forms, sorting and filtering controls.
12.	17-22 April	Macro: Creating reports using Macros.
13.	24-29 April	Database concurrency: Problems arising out of concurrency, methods of handling concurrency.
14.	1-6 May	Data recovery,
15	8-13 May	database security: Authentication, authorization, methods of implementing security.
16	15-20 May	**Revision...**
17	22-27 May	**Test**
18	29-3 June	**Revision..**

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Teaching Plan(20202-23)

Class: B.A/B.Sc. (COMPUTER SCIENCE) Part III Semester VI

Paper: Introduction to Computer Network and Internet Programming

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	1-4 Feb	Computer networks- Hardware, Software, users, goals and applications of computer networks.
2.	6-11 Feb	Types of Network: Local area networks, wide area networks, metropolitan area networks and value added networks - their features.
3.	13-18 Feb	Transmission media: Magnetic media, twisted pair, coaxial cables, fibre optics, radio transmission, microwave transmission, infrared waves and Line of sight transmission, Cellular radio and communication Satellites.
4	20-25 Feb	Internet: What is Internet, its advantages, disadvantages, internet facilities through WWW and HTML, Internet Protocols, TCP/IP, FTP, newsgroups, remote logins, chat groups etc.
5	27-4 March	WWW: the client side, the server side, web browsers, web pages, locating information on the web
6	6-11 March	E-Mail: architecture, various aspects, the user agent, message format, message transfer, email privacy.
7	13-18 March	Network Security: Various threats, prevention and solutions.
8	20-25 March	HTML: Introduction to HTML, SGML, Internet and Web structure of HTML document. Starting an HTML document: Head element, body element, style element, Script element, Text formatting, using lists to organise information.
9	27-1 April	Organising Data with Table: Basic table Structures, individual cells and headings, vertical controls, database considerations, displaying real data with a table.
10	3-8 April	Table Layout and Presentation: Table Syntax, two column layout, staggered body with an index, traditional newspaper layout. Uniform Resource Locators (URLs): Absolute URLs, Relative URLs, fragment URLs,
11.	10-15 April	Types of URL Schemes- HTTP, mailto, news, FTP, Telnet, File etc. Using Hyper Links and Anchors: Uses to Hyper Links, Structure of Hyper Links, Links to specialised contents.
12.	17-22 April	Images: Adding Images to web page, using images as links.
13.	24-29 April	creating menus with image maps, image formats-GIF, JPEG etc. HTML Forms: Understanding
14.	1-6 May	forms, creating simple GO button, fill-in-form page, form security, INPUT element.

15	8-13 May	BUTTON element, SELECT element, TEXT AREA element, LABEL element, FIELDSET and LEGEND elements.
16	15-20 May	Revision
17	22-27 May	Test
18	29-3 June	Revision..


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