

Govt. Shivalik College Naya Nangal

Teaching Plan(2021-22) Class: B.A & B.sc (Sem-I)

Subject: Computer Science

Paper: Fundamentals Of IT

Name :Pooja Sharma

Sr. No	Dates	Topics
1.	1-4 September	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.	6-11 September	Input Devices: Keyboard, Mouse, Joy tick, Track Ball, Touch Screen, Light Pen, Digitizer, Scanners, Speech Recognition Devices, Optical Recognition devices – OMR, OBR, OCR
3.	14-18 September	Output Devices: Monitors, Impact Printers - Dot matrix, Character and Line printer, Non Impact Printers – DeskJet and Laser printers, Plotter.
4	20-25 September	Memories: Memory Hierarchy, Primary Memory – RAM, ROM, Cache memory. Secondary Storage Devices - Hard Disk, Compact Disk, DVD, Flash memory.
5	27-01 October	Software: Types of Software- System Software, Application Software, Firmware. Type of System Software: Operating Systems, Language Translators, Utility Programs, Communications Software.
6	4-09 October	Commonly Used Application Software: Word Processor, Spreadsheet, Database, Education, Entertainment Software. Computer Languages: Machine language, assembly language, high level language, 4GL.
7	11-16 October	Commonly Used Application Software: Word Processor, Spreadsheet, Database, Education, Entertainment Software. Computer Languages: Machine language, assembly language, high level language, 4GL.
8	18-23 October	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	25-30 October	Computer Codes: weighted and non-weighted code, BCD, EBCDIC, ASCII, Unicode. Computer Network: Network types, network topologies.
10	01-06 November	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	08-13 November	Advanced Trends in IT : Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology, Virtual LAN Technology, Firewall, E-Commerce, M-Commerce, Nanotechnology,
12	15-20 November	Applications of IT: IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment.
13	22-27 November	Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.

14.	29-04 December	Virtual Reality, BPO and KPO, Online shopping, Social Media - YouTube, FaceBook, LinkedIn, Twitter, Google+.
15.	06-11 December	MST
16.	13-16 December	Revision

Govt. Shivalik College Naya Nangal

Teaching Plan(2021-22) Class: B.A & B.sc (Sem- III)

Subject: Computer Science

Paper: C PROGRAMMING AND DATASTRUCTURES

Name :Pooja Sharma

Sr. No	Dates	Topics
1.	1-4 September	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.	6-11 September	Basic structure of a C program. Data I/O statement : single character I/O, formatted I/O, string I/O functions.
3.	13-18 September	Control Structure: sequencing, alteration (if-else, switch, break, continue, go to, iteration while, do-while, for) and nested loops.
4	20-25 September	Functions: Defining and accessing a function, passing arguments to a function, specifying arguments data types, function prototypes, recursion .
5	27-01 October	Storage Classes- Automatic, External, Static, Register. Pointers and Structures: Character pointers, pointer to arrays, array of pointers.
6	4-09 October	Structure and Unions : Defining and processing structure, Unions
7	11-16 October	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	18-23 October	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	25-30 October	Stacks: Push and Pop in Stack. Representation of stack in memory (Using Arrays)
10	01-06 November	Queues: Insertion and deletion operations .
11.	08-13 November	Searching Techniques: Linear and binary search Sorting Techniques: Insertion sort.
12.	15-20 November	selection sort, bubble sort, merge sort, quick sort.
13.	22-27 November	Arrays: Multi- dimensional array: Row-Major, Column Major order, space array.
14	29-04 December	Preprocessor Directives.
15.	06-11 December	MST Exams..
16.	13- 16December	Revision

Teaching Plan(2021-22) Class: B.A & B.sc (Sem- V)

Subject: Computer Science

Paper: OBJECT ORIENTED PROGRAMMING USING C++

Name :Pooja Sharma

Sr. No	Dates	Topics
1.	1-4 September	Evolution of OOP : Procedure Oriented Programming, OOP Paradigm, Advantages and disadvantages of OOP over Functional Programming Approach.
2.	6-11 September	Characteristics of Object Oriented Language : Classes, Objects, Inheritance, Reusability, User defined Data Types, Polymorphism and Exception Handling.
3.	13-18 September	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	20-25 September	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	27-01 October	Software : Types of Software- System Software, Application Software, Firmware. Type of System Software: Operating Systems, Language Translators, Utility Programs, Communications Software.
6	4-09 October	Commonly Used Application Software : Word Processor, Spreadsheet, Database, Education, Entertainment Software. Computer Languages : Machine language, assembly language, high level language, 4GL.
7	11-16 October	Function in C++ : Function Prototyping, Defining a function, Types of functions. Methods of Parameter passing : by value, by address, by reference, Recursion.
8	18-23 October	Function Overloading : Virtual functions, pure virtual functions, operator overloading.
9	25-30 October	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	1-06 November	Constructors and Destructors : Default parameterized and copy constructors, multiple constructors in classes dynamic constructors. Rules for constructors and destructors, Const. objects.
11	08-13 November	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.
12	15-20 November	Polymorphism : Methods of achieving polymorphic behaviour.
13	22-27 December	Pointers : Pointers and classes, pointer to object, this pointer.
14	29 -04 December	Methods of Parameter passing : by value, by address, by reference, Recursion.
15	06-11 December	MST.
16	13-16 December	Revision.

Govt. Shivalik College Naya Nangal

Teaching Plan(2021-22)

Class: B.COM. PART-I (1st Semester)

Paper: COMPUTER APPLICATIONS IN BUSINESS

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	4-09 Oct.	Computer: Introduction, Functions and Classification of Computer, Overview of Software and Hardware, Input and Output devices, Computer Memory: RAM, ROM.
2.	11-16 Oct	Number System and its Inter Conversion Introduction to Operating System.
3.	18-23 Oct	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	25-30 Oct	Introduction to Word Processing, Word Processing concepts, Use of Templates, Working with word document: Editing text, Find the replace text, Formatting, spell check.
5	1-06 Nov	Auto correct, Auto text; Bullets and numbering, Tabs, Paragraph formatting, Indent, Page formatting, Header and footer.
6	8-13 Nov	Tables: Inserting, Filling and formatting a table; Inserting Pictures and Video; Mail Merge: Including linking with Database; Printing documents.
7	15-20 Nov	Preparing Presentations: Basics of presentations, Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols Media; Design; Transition; Animation; and Slide show.
8	22-27 Nov	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	29-04 Dec.	Generally used Spread sheet functions: Mathematical, Statistical, Financial, Logical, Date and Time Look up and reference, Database, and Text functions. Graphical representation of data: Frequency distribution and its statistical parameters; Mean, Median, Standard Deviation. Correlation and Regression.
10	6-11 Dec.	MST exams
11	13-16 Dec.	Database Designs for Accounting and Business Applications: Reality-Expressing the Application; Creating initial design in Entity Relationship Model
12	18-24 Dec	Transforming E.R. Model to Relational Data Model Concepts Applying DBMS in Areas of Accounting & Inventory.
13	10-15 Jan	Frequency distribution and its statistical parameters; Mean, Median, Standard Deviation. Correlation and Regression.
14.	17-22 Jan.	Revision..

Govt. Shivalik College Naya Nangal

Teaching Plan(2021-22)

Class: BCA

Subject: E-Commerce

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	7-12 March	Introduction to E-commerce: Definition of E-commerce, Advantages and disadvantages of E-commerce, E-commerce versus traditional commerce.
2.	14-19 March	Internet and WWW, Electronic commerce framework, Electronic commerce and media convergence, The anatomy of E-commerce applications
3.	21-26 March	Architectural framework for E-commerce, World Wide Web as the architecture, Web background: Hypertext publishing, Security and the Web.
4	28-02 April	Consumer-oriented E-commerce: Consumer-oriented applications, Mercantile Process Models – consumer's perspective, Merchant's perspective.
5	4-09 April	Advertising and Marketing on the Internet: The new age information based marketing.
6	11-16 April	Advertising on the Internet – Active or push-based advertising models, Passive or pull-based advertising models
7	18-23 April	Types of Electronic Payment Systems, Digital token-based electronic payment systems
8	25-30 April	Smart cards and electronic payment systems, Credit card-based electronic payment systems,
9	2-07 May	Risk and electronic payment systems.
10	9-14 May	Electronic Data Interchange and its applications in business.
11.	16-21 May	Legal, Ethical issues related to e-commerce.
12.	23-26 May	public policy issues related to e-commerce
13.	27-06 June	MST Exams...
14.	7-15 June.	Revision

**Govt. Shivalik College Naya
Nangal**

Teaching Plan(2021-22)

Class: B.A./B.Sc. Part-I (COMPUTER SCIENCE) (Semester II)

Paper: MS-OFFICE AUTOMATION TOOLS

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	7-12 March	MS-OFFICE: Basic layout, components, Office Characteristics, Common Office Controls and shortcuts for Home, Insert, Page Layout, Mailing, Review and View
2.	14-19 March	MS Word 2010: Introduction to Word Processing, Toolbars, Ruler, Menus, Keyboard Shortcut. Previewing documents, Printing documents, Formatting documents.
3.	21-26 March	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	28-02 April	Handling Graphics, tables as Converting a word document into various formats. MS PowerPoint 2010: Introduction, Elements of Power Point Package, Starting and exploring Power Point menus (Insert, Format, Tools, Slide Show, Window, Help options and all of their features, Options and sub options etc.)
5	4-09 April	Creating, inserting, deleting and formatting slides, Formatting and enhancing text, Slides with graphs, Giving Animation to slides, Transfer of files between Power Point and other word processors and software packages.
6	11-16 April	MS-EXCEL 2010: Creating worksheet, entering data into worksheet, Entering data into worksheet, Entering, data, dates, alphanumeric, values, saving & quitting worksheet .
7	18-23 April	Opening and moving and existing worksheet, Toolbars and Menus, keyboard shortcut.
8	25-30 April	Working with single and multiple workbooks, working with formulation & cell referencing, formatting of worksheet.
9	2-07 May	MS-ACCESS 2010: Introduction to MS-ACCESS-2010 working with databases and tables, queries in Access.
10	9-14 May	Introduction to forms
11.	16-21 May	sorting and filtering, controls
12.	23-26 May	Creating reports, Using Macro
13.	27-06 June	MST Exams...
15.	7-15 June.	Revision

Govt. Shivalik College Naya Nangal

Teaching Plan(2021-22)

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

Paper: DATABASE MANAGEMENT SYSTEM

Name : Pooja Sharma

Sr. No	Dates	Topics
1.	7-12 March	Traditional file procession system: Characteristics, limitation. Database: Definition, composition.
2.	14-19 March	Database Management System : Definition, Characteristic advantages over traditional file processing system, Implication Database approach, Uses of database.
3.	21-26 March	DBA and its responsibilities Database schema, instance.
4	28-02 April	DBMS architecture, data independence, mapping between different levels.
5	4-09 April	Database language : DDL, DML, DCL. Database utilities, Data Models, Keys : Super, candidate, primary, unique, foreign.
6	11-16 April	Entity relationship model : concepts, mapping cardinalities, entity relationship diagram, weak sets, strong entity sets, aggregation, generalization, converting ER diagram to tables.
7	18-23 April	Relational Algebra : Basic operations, additional operations.
8	25-30 April	Database design: Functional dependency, decomposition, problem arising out of bad database design, normalization, multi-valued dependency.
9	2-07 May	Database design process, database protection, database integrity, Database concurrency: Problems arising out of concurrency, methods of handling concurrency. Data recovery, database security: Authentication, authorization, methods of implementing security.
10	9-14 May	MS-Access: Introduction to MS-Access, working with database and tables, queries in Access.
11.	16-21 May	Applying integrity constraints, Introduction to forms, sorting and filtering controls.
12.	23-26 May	Macro: Creating reports using Macros.
13.	27-06 June	MST Exams...
14.	7-15 June.	Revision...

Govt. Shivalik College Naya Nangal

Teaching Plan(20201-22)

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.	7-12 March	Computer networks- Hardware, Software, users, goals and applications of computer networks.
2.	14-19 March	Types of Network: Local area networks, wide area networks, metropolitan area networks and value added networks - their features.
3.	21-26 March	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	28-02 April	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	4-09 April	WWW: the client side, the server side, web browsers, web pages, locating information on the web
6	11-16 April	E-Mail: architecture, various aspects, the user agent, message format, message transfer, email privacy.
7	18-23 April	Network Security: Various threats, prevention and solutions.
8	25-30 April	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	2-07 May	Organising Data with Table: Basic table Structures, individual cells and headings, vertical controls, database considerations, displaying real data with a table.
10	9-14 May	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.	16-21 May	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.	23-26 May	Images: Adding Images to web page, using images as links, creating menus with image maps, image formats-GIF, JPEG etc. HTML Forms: Understanding
13.	27-06 June	MST Exams
14.	7-15 June.	forms, creating simple GO button, fill-in-form page, form security, INPUT element, BUTTON element, SELECT element, TEXT AREA element, LABEL element, FIELDSET and LEGEND elements.

GOVERNMENT SHIVALIK COLLEGE, NAYA NANGAL

TIMETABLE

Session-2021-22

Department of Computer Science

Sr. No.	CLASS	PERIODNO.	TIME	PLACE	PRACTICAL (2:15-3:00PM)
1	B.A/B.Sc1	4 (1-6)	10:30-11:15AM	CR-15	(1-2) days RUSALAB
2	B.A/B.Sc2	2 (1-6)	12:45-1:30PM	CR-15	(3-4) days RUSALAB
3	B.A/B.Sc3	3 (1-6)	9:00-9:45AM	CR-1	(5-6) days RUSALAB
4	B.com (Sem-1)	6 (1-6)	1:30-2:15PM	LT-15	
5	BCA (sem-5)	4(1-4)	9:00-9:45 AM	LT-1	
6	BCA (sem-6)	7 (1-6)	1:30-2:15PM	LT-1	

Pooja Sharma



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GOVERNMENT SHIVALIK COLLEGE, NAYA NANGAL

WORK LOAD

Session-2021-22

Department of Computer Science

Sr. No.	CLASS	Uni. Norms Section	Strength	Theory Period	Practical Uni. Norms	Practical Period	Total Period
1	B.A / B.SC - 1	80	57	6	3 Group 3*2=6	6	12
2	B.A / B.SC - 1	80	34	6	2 Group 2*2=4	4	10
3	B.A / B.SC - 1	80	39	6	2 Group 2*2=4	4	10
4	B.COM Sem-1	80	69	6	3 Group 3*2=6	6	12
						G. Total =42	

Pooja Sharma

