Bhartiya Vidya Mandir Sen. Sec. School,Sector 39, Chandigarh Road, Ludhiana

CLASS - XI   Subject: Information Technology Session :2025-2026

Book:NCERT

Month	Unit/Chapter/Topic	Learning Objective	Resources/Art-Integrated Pedagogy Tools Used/E-Resources		Learning Outcomes and Skills Learnt by Students	
APRIL	UNIT-1 COMPUTER ORGANIZATION	Understand and appreciate fundamentals of Computer and itscharacteristics	Lecture Method	https://youtu.be/eEo_aacpwCw?si=Kj4J5fkcq84mZqNl	• Introduction to Fundamentals of Computer and its use • Characteristics of computer • Components of computer • Block diagram of computer • Processes of task execution • steps of process execution • function of various components of computer and CPU	•identify and enlist various applications of computer • illustrate various components of computer under different blocks • illustrate functions of various components of computer
	Components of computer	Understand the components of computer	Lecture Method	https://www.youtube.com/watch?v=t4nsaW-n1XE	• identify various components of computer • appreciate function and use of I/O devices • learn about various storage devices used in computer • various memory units of storage	• illustrate various types of I/O devices • identify and find out the application of each of the I/O Devices
	Operating System	Understanding the components of computer	Lecture Method	https://www.youtube.com/watch?v=ACsLvXuaKxw	• introduction to Operating System and its need • functions of operating system • types of operating system • difference between various operating systems	•identify different types of OS in computers/mobile phones • identify the different in features of various operating systems

APRIL	Troubleshooting in computer system	What is Troubleshooting?	Lecture Method	https://youtu.be/k8QIplKt2r8?si=J-POgyJdn7hyyFVu	• introduction to common troubleshooting/ problems • common troubleshooting steps • troubleshooting hardware problems like display, keyboard, mouse etc. • troubleshooting printer problems • understanding printer IP address • understanding various printer settings like fast/ slow printing • sound troubleshooting • understanding speaker settings like volume etc. • troubleshooting software problems • troubleshooting networking problems • learn about problems in network fly lead, network card	• identifying different kinds of problems in the system and its peripheral devices • setting up a printer • selecting a printer • setting default printer • changing printer settings • how to forcefully restart a computer or stop a task • demonstration of problems in fly lead, network card and possiblesolutions
	The importance of Utilities	Understand the importance of utilities	Lecture Method		• Disk Space management • Disk Cleanup • Managing Recycle Bin • learning about disk defragmentation • learn to remove unused programs • learn to disable unused program services • restart the system • learn to use command prompt to search for a file.	• illustration to view the disk storage • to apply Disk Cleanup utilities to enhance performance of the system • to identify, view and manage Recycle Bin • illustration and hands onto remove unused programs • illustration and hands on to disable/enable program services • restart the computer • to search different files using various options and wildcard characters

	UNIT 2: NETWORKING AND INTERNET	Understand Computer Networking	Lecture Method	https://youtu.be/YtxLexm-9pI?si=dtcF_a5tq9N0seQG	• Introduction • Need and benefits of networking • Components of a network: sender, receive, message, channel, • Transmission Medium (wired and wireless) • Telephone Network standard (technology used in each generation) • Working Devices (RJ45 connector, Modem, Repeater, Hub, Switch, Bridge, Gateway, Routers) • Network Topology (Bus, Star , Ring, Tree, Mesh) • Types of Networking (LAN, MAN, WAN, PAN, VAN)	• Illustrate various networks and its benefits • Identify the transmission medium,devices, network topology, type of networking in computer lab • Setting up hotspot
MAY	Internet and its terminolog	To understand Internet and its terminolog	Lecture Method	https://youtu.be/IPBJaL6OUCA?si=wWEMSSnqZRh9w1Y_	• Introduction and use of Internet • Digital Literacy • Terminology (Channels, Bandwidth (HERTZ, KHZ), ISP) • Internet Devices: Repeater, Hub, Switch, Gateway, Bridge, Router • Data Transfer Rate (bps, Kbps, KBps, Mbps, MBPS, Gbps, GBPS) • Protocols (TCP/IP, FTP, HTTP, SMTP, POP3, PPP, UDP)	• Analyze the Bandwidth, • identify Internet devices and their significance • to check/view Data transfer rate in computer lab/devices

		Understand what is cybercrime and the need of Cyber Security	Lecture Method		• Network safety concerns: (Digital Footprints, Threats, Virus, Worm, Trojan Horse, Spam, Malware, DoS Attacks, Eavesdropping, Adware, Spyware, Snooping) • Networking Security Measures (Antivirus, Firewall, Login ids and Password) • Cyber Crime (Phishing, Pharming, Spoofing, Cyber Bullying, Hacking, Cracking, Identity Theft, Cyber Stalking, Cyber Trolling, • Cyber Safety (Netiquettes, IT Act, Cyber Laws)	• Find out the threats encountered and the security measures used in computer lab and mobile phones • go through the link
	cybercrime and the need of Cyber Security			https://www.cyberlawsindia.net		
JUNE				**SUMMER VACATION**		
	UNIT 3: OFFICE AUTOMATION TOOLS	Word processoring software and its features	Lecture Method	https://youtu.be/E_GD3jlHHrk?si=oJs7d_yvFdd2iDRR	• Introduction work with Word processingapplications like OpenOffice, • Introduction to Word Processing windowcomponents like work area, ruler, tab etc.	• List the available wordprocessing applications. • Introduce the parts ofthe main window. • Change document views.
		Word processor window componenets	Lecture Method	https://youtu.be/fKZ_go3ScHU?si=wE8zKfilN7zUgsIm	• Understanding various tabs like File, Edit, Insert, View and their submenu options to format a document using OpenOffice Writer. • Learn to create tables in word processors	• Start a new document. • Open an existing document. • Save a document. • Close a document. • Use the Navigator

JULY		Features and components of Spreadsheets	Lecture Method	https://youtu.be/FG-2-ounHFw?si=1WdTAOTQ-90G_YSW	• appreciate need and use of spreadsheets • learn to install an open source spreadsheet software like Calc • learn components of the Spreadsheet title window. • appreciate different formatting features available in spreadsheets • learn to work, save and close spreadsheets • work with data, move data, use edit menu • Use AutoFill, formatting data, • alignment, changing cell color, gridlinesand borders, • flow of text, merging, splitting text, wraptext, shrink to fit • Numeric data formatting • Find and Replace Data • delete data and formatting • delete cells	• demonstration of components of the Spreadsheet window. •demonstration and hands on to insert formulae and use inbuilt functions efficiently • make charts using chart tools in spreadsheet • sort data according tovarious criteria • change colour, alignment, set borders
		insertion ,deletion of rows and columns, functions of spreadsheet	Lecture Method	https://youtu.be/tmDh0pnUUpo?si=CXC3Tsm3RRhRz6ZL	• insert delete rows and columns • using formula and functions • various type of operators • predefined functions in spreadsheets (sum(), sqrt(), product(), power(), log(), round(), abs(), average() etc. • addressing/ referencing: absolute, relative, mixed • sort and filter data • create chart and graph, setting legend, grids in charts, resizing and moving charts, modifying and deleting charts • create/record a macro, run/use macros • print spreadsheets	• insert, delete, hide, show rows and columns • creating macros and use them efficiently • merging two or more cells, splitting a cell • search data using Findoptions, search and replace a selected piece of text
		PowerPoint	Lecture Method	https://youtu.be/KqgyvGxISxk?si=ZdngPLRrIn80Y5nL	• introduction to presentation software • start OpenOffice Impress • overview of OpenOffice • study of various tabs of OpenOffice • understand various views of • presentation, animations, transitions, header, footer etc.	Students will be able to work with presentation software

AUGUST	UNIT 4: RDBMS	Understand Relational Database Management System	Lecture Method	https://youtu.be/RkEVbs4-W_s?si=BIGOyrTVrqspPZnG	• Database and its purpose • Components of a table • Relational Database Model Terminology (Relation, Tuple, Attribute, Cardinality) • Keys (Primary, Candidate, Alternate, Foreign)	• Installation of MYSQL • Simple calculations in MYSQL
SEPTEMBER	**TERM EXAMINATION**					
OCTOBER	RDBMS	Introductionto MYSQL	Lecture Method	https://youtu.be/5L7TpWkHw-o?si=_YBglxZf8JIsTX_m	• Introduction To MYSQL • Classification of MYSQL commands (DDL, DML) • Data Types in MYSQL (char, varchar, decimal, int, date, time) • Create database • Create table • View structure of a table • Add constraints in table • Modify structure • Show all tables created in a database • Delete structure	• CREATE DATABASE • USE • CREATE TABLE • DESCRIBE • SHOW TABLES • ALTER TABLE • DROP TABLE
	RDBMS	DML Commands	Lecture Method	https://youtu.be/6CzfqZU2k0c?si=_kpov2SWd_UdbiXF	• Add rows to a table • Viewing content of a table • Display selected data depending on specific condition • Display data in a order • modify the data stored in a table • delete contents of a table	• INSERT INTO • UPDATE • DELETE • Using WHERE, ORDER BY, DISTINCT, LIKE, BETWEEN, IN
NOVEMBER	UNIT 5: FUNDAMENTALS TO JAVA PROGRAMMING	Understand Integrated Development Environment (NETBEANS)	Lecture Method	https://youtu.be/4k9DwvqCfKk?si=hrHBE7TtZ5O6S5X9	• Components of IDE • Understand and change Properties and methods ofComponents like jButton, jLabel, jTextField, jTextarea, jRadiobutton, jCheckbox, jPasswordField, jListBox, jComboBox	• Create a project • Create a JFrameForm container • Add a button component on JFrameForm and change properties like text, font, foreground etc using properties window • Add other container controls like jTextField , jTextarea, jRadiobutton, jCheckbox, jPasswordFieldjListBox, jComboBox and change their properties

				Lecture Method		• Introduction to Object Oriented Programming • To understand various data types (primitive) and purpose of each data type • To understand the need and usage of variables • To understand usage ofoperators (assignment, arithmetic, relational, logical, bitwise) • To understand how to attach a code with components like jButton,jLabel, jTextField and create a simple application on JFrame	• Display message Using jlabel and jtextField • Join two text entries and display them • Write code to close the application • Using Joption Pane display a message "welcome to INFORMATION TECHNOLOGY" • Perform simple arithmetic calculationusing operators and display the result • Write the code to find simple interest • Write code to perform an operation based on the criteria input by the user in a checkbox or radio button • change the background colour of jbutton based on the colour selected from the jListBox /jComboBox
DECEMBER	UNIT 5: FUNDAMENTALS TO JAVA PROGRAMMING	JAVA Programming			https://youtu. be/4k9DwvqCfKk? si=hrHBE7TtZ5O6S5X10		
JANUARY	UNIT 5: FUNDAMENTALS TO JAVA PROGRAMMING	JAVA Programming Continue		Lecture Method	https://youtu. be/4k9DwvqCfKk? si=hrHBE7TtZ5O6S5X11	• To understand the use ofvarious components like jTextarea, jRadiobutton, jCheckbox, jPasswordField, jListBox,jComboBox, JTable, JOptionPane, JPanel • To understand when to use selection statements (if, if else and switch case)	• accept marks in 5 subjects and find out the total, percentage. Also displaygrade depending on the total marks obtained. • Enter a character and find out it is vowel or consonant