

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

CLASS - XI Subject: Information Technology Session :2024-2025

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 its characteristics	Lecture Method	https://youtu.be/eEo_aacpwCw?si=Kj4J5fkcq84mZqNI	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • identify and enlist various applications of computer <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • identify various components of computer • appreciate function and use of I/O devices <ul style="list-style-type: none"> • learn about various storage devices used in computer • various memory units of storage 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • introduction to Operating System and its need • functions of operating system <ul style="list-style-type: none"> • types of operating system • difference between various operating systems 	<ul style="list-style-type: none"> • 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/k8QlplKt2r8?si=J-POgyJdn7hyyFVu	<ul style="list-style-type: none">• 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<ul style="list-style-type: none">• sound troubleshooting• understanding speaker settings like volume etc.• troubleshooting software problems• troubleshooting networking problems<ul style="list-style-type: none">• learn about problems in network fly lead, network card	<ul style="list-style-type: none">• identifying different kinds of problems in the system and its peripheral devices<ul style="list-style-type: none">• 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 possible solutions
The importance of Utilities	Understand the importance of utilities	Lecture Method		<ul style="list-style-type: none">• Disk Space management<ul style="list-style-type: none">• Disk Cleanup• Managing Recycle Bin<ul style="list-style-type: none">• learning about disk defragmentation• learn to remove unused programs• learn to disable unused program services<ul style="list-style-type: none">• restart the system• learn to use command prompt to search for a file.	<ul style="list-style-type: none">• illustration to view the disk storage<ul style="list-style-type: none">• 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<ul style="list-style-type: none">• restart the computer• to search different files using various options and wildcard characters

MAY	UNIT 2: NETWORKING AND INTERNET	Understand Computer Networking	Lecture Method	https://youtu.be/YtxLexm-9pl?si=dtcF_a5tq9N0seQG	<ul style="list-style-type: none"> • Introduction • Need and benefits of networking <ul style="list-style-type: none"> • Components of a network: sender, receive, message, channel, • Transmission Medium (wired and wireless) • Telephone Network standard (technology used in each generation) <ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • Illustrate various networks and its benefits • Identify the transmission medium, devices, network topology, type of networking in computer lab • Setting up hotspot
	Internet and its terminolog	To understand Internet and its terminolog	Lecture Method	https://youtu.be/IPBJaL6OUCA?si=wWEMSSnqZRh9w1Y	<ul style="list-style-type: none"> • Introduction and use of Internet <ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • Analyze the Bandwidth, • identify Internet devices and their significance • to check/view Data transfer rate in computer lab/devices

	cybercrime and the need of Cyber Security	Understand what is cybercrime and the need of Cyber Security	Lecture Method	https://www.cyberlawsindia.net	<ul style="list-style-type: none"> • 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) <ul style="list-style-type: none"> • Cyber Crime (Phishing, Pharming, Spoofing, Cyber Bullying, Hacking, Cracking, Identity Theft, Cyber Stalking, Cyber Trolling, • Cyber Safety (Netiquettes, IT Act, Cyber Laws) 	<ul style="list-style-type: none"> • Find out the threats encountered and the security measures used in computer lab and mobile phones • go through the link
JUNE	SUMMER VACATION					
	UNIT 3: OFFICE AUTOMATION TOOLS	Word processing software and its features	Lecture Method	https://youtu.be/E_GD3jIHHrk?si=oJs7d_yvFdd2iDRR	<ul style="list-style-type: none"> • Introduction work with Word processing applications like OpenOffice, • Introduction to Word Processing window components like work area, ruler, tab etc. 	<ul style="list-style-type: none"> • List the available word processing applications. • Introduce the parts of the main window. • Change document views.
		Word processor window components	Lecture Method	https://youtu.be/fkZ_go3SchU?si=wE8zKfilN7zUgslm	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • learn to work, save and close spreadsheets • work with data, move data, use edit menu <ul style="list-style-type: none"> • Use AutoFill, formatting data, • alignment, changing cell color, gridlines and borders, • flow of text, merging, splitting text, wrap text, shrink to fit <ul style="list-style-type: none"> • Numeric data formatting • Find and Replace Data • delete data and formatting <ul style="list-style-type: none"> • delete cells 	<ul style="list-style-type: none"> • 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 to various criteria <ul style="list-style-type: none"> • change colour, alignment, set borders
	insertion ,deletion of rows and columns, functions of spreadsheet	Lecture Method	https://youtu.be/tmDh0pnUUpo?si=CXC3Tsm3RRhRz6ZL	<ul style="list-style-type: none"> • insert delete rows and columns • using formula and functions <ul style="list-style-type: none"> • various type of operators • predefined functions in spreadsheets (sum(), sqrt(), product(), power(), log(), round(), abs(), average() etc. • addressing/ referencing: absolute, relative, mixed <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • print spreadsheets 	<ul style="list-style-type: none"> • insert, delete, hide, show rows and columns • creating macros and use them efficiently • merging two or more cells, splitting a cell <ul style="list-style-type: none"> • search data using Find options, search and replace a selected piece of text
	PowerPoint	Lecture Method	https://youtu.be/KqgyvGxISxk?si=ZdngPLRrin80Y5nL	<ul style="list-style-type: none"> • introduction to presentation software <ul style="list-style-type: none"> • start OpenOffice Impress • overview of OpenOffice • study of various tabs of OpenOffice <ul style="list-style-type: none"> • 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=BIGOyrTVrqsPZnG	<ul style="list-style-type: none"> • Database and its purpose • Components of a table • Relational Database Model Terminology (Relation, Tuple, Attribute, Cardinality) • Keys (Primary, Candidate, Alternate, Foreign) 	<ul style="list-style-type: none"> • Installation of MYSQL • Simple calculations in MYSQL
SEPTEMBER	TERM EXAMINATION					
OCTOBER	RDBMS	Introduction to MYSQL	Lecture Method	https://youtu.be/5L7TpWkHw-o?si=_YBglxZf8JIsTX_m	<ul style="list-style-type: none"> • Introduction To MYSQL • Classification of MYSQL commands (DDL, DML) • Data Types in MYSQL (char, varchar, decimal, int, date, time) <ul style="list-style-type: none"> • Create database • Create table • View structure of a table • Add constraints in table <ul style="list-style-type: none"> • Modify structure • Show all tables created in a database <ul style="list-style-type: none"> • Delete structure 	<ul style="list-style-type: none"> • CREATE DATABASE <ul style="list-style-type: none"> • USE • CREATE TABLE <ul style="list-style-type: none"> • DESCRIBE • SHOW TABLES • ALTER TABLE • DROP TABLE
	RDBMS	DML Commands	Lecture Method	https://youtu.be/6CzfqZU2k0c?si=_kpov2SWd_UdbiXF	<ul style="list-style-type: none"> • Add rows to a table • Viewing content of a table • Display selected data depending on specific condition <ul style="list-style-type: none"> • Display data in a order • modify the data stored in a table <ul style="list-style-type: none"> • delete contents of a table 	<ul style="list-style-type: none"> • INSERT INTO <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Components of IDE • Understand and change Properties and methods of Components like JButton, JLabel, JTextField, JTextarea, JRadioButton, JCheckBox, JPasswordField, JList, JComboBox 	<ul style="list-style-type: none"> • 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, JPasswordField, JList, JComboBox and change their properties

<p>DECEMBER</p>	<p>UNIT 5: FUNDAMENTALS TO JAVA PROGRAMMING</p>	<p>JAVA Programming</p>	<p>Lecture Method</p>	<p>https://youtu.be/4k9DwvqCfKk?si=hrHBE7TtZ5O6S5X10</p>	<ul style="list-style-type: none"> • 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 of operators (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 	<ul style="list-style-type: none"> • Display message Using JLabel and JTextField • Join two text entries and display them <ul style="list-style-type: none"> • Write code to close the application • Using JOptionPane display a message “welcome to INFORMATION TECHNOLOGY” <ul style="list-style-type: none"> • Perform simple arithmetic calculation using operators and display the result • Write the code to find simple interest <ul style="list-style-type: none"> • 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 JComboBox /JComboBox
<p>JANUARY</p>	<p>UNIT 5: FUNDAMENTALS TO JAVA PROGRAMMING</p>	<p>JAVA Programming Continue</p>	<p>Lecture Method</p>	<p>https://youtu.be/4k9DwvqCfKk?si=hrHBE7TtZ5O6S5X11</p>	<ul style="list-style-type: none"> • To understand the use of various components like JTextarea, JButton, JCheckBox, JPasswordField, JComboBox, JTable, JOptionPane, JPanel • To understand when to use selection statements (if, if else and switch case) 	<ul style="list-style-type: none"> • accept marks in 5 subjects and find out the total, percentage. Also display grade depending on the total marks obtained. • Enter a character and find out it is vowel or consonant