BHARTIYA VIDYA MANDIR SENIOR SECONDARY SCHOOL
SECTOR-39, CHANDIGARH ROAD, LUDHIANA
SYLLABUS OF CLASS VII

BOOK : Click Code Connect		SUBJECT : COMPUTER SCIENCE		SESSION : 2024-25
Month	**Unit/Chapter/Topic**	**Learning Objectives**	**Resources/Art-Integrated Pedagogy Tools Used/ E-Resources**	**Learning Outcomes/ Skills learnt by Students**
APRIL	**Interactive Session**	Students will be able to know about syllabus	Discussion method in classroom	Students will get syllabus awareness
	Chapter 1 **Number system and encoding schemes**	To stimulate learning among students	Storyboarding Method	Imaginative skill learnt by students.
	Topic Types of number systems - Binary, Decimal, Octal, Hexadecimal	Students will be able to identify different types of Number Systems like Binary, Decimal, Octal, Hexadecimal	Discussion method on 'Application Areas of different Number Systems'	Students will be able to identify different types of Number Systems
	Topic Conversion between number systems	To make students understand the conversion process of different Number Systems	Demonstration Method	Students will be able to do the conversion from one Number System to another
	Topic Encoding scheme	To make students understand some of well-known encoding schemes such as ASCII, Unicode	Lecture Method	Students will identify various standard encoding schemes
MAY	**Chapter 2 Chart in Excel 2016**	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic Elements of a chart	To make students learn about various elements of a chart	Practical in Lab	Students will able to list various elements of a chart
	Topic Types of charts - Column chart, Bar chart, Pie chart, Doughnut chart, Line chart	To make students able to use about various types of charts	Practical in Lab	Students will be able to categorize types of charts
MAY	**Topic** Creating a chart and placement of chart	To make students able to create a chart along with various chart elements	Practical in Lab	Students will able to create a chart along with various chart elements
	Topic Adding chart elements	To make students aware about how to add several elements in charts	Practical in Lab	Students will learn about adding Axis Titles, adding Chart Title, adding Data Labels, Adding Data Table, Adding Legend in a chart
	Topic Changing the chart style	To make students able to change chart styles	Practical in Lab	Students will able to create a change and use various styling features on charts
	Topic Adding sparklines	To make students learn about how to use Sparklines in Charts	Practical in Lab	Students will acquire skill of adding Sparkline feature of Excel
	Lab Activity	To encourage hand-on practise among students	Lab Activity 1 and 2 given on Page no. 31 of Textbook	Students will be able to use Charts in Excel 2016 by own
JUNE	**SUMMER VACATIONS**			

JULY	**Chapter 3**	**Useful Features of Excel 2016**	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic	Introduction of topic 'Sorting Data'	To encourage students to come up with different views about meaning of 'Sorting'	Brainstorming Techniques	Students will understand the fact 'Sorting' and its importance in MS-Excel
	Topic	Sorting on the Basis of One Column	To make students able to use of sorting features in Excel Sheet	Practical exercise 3.1 given in Textbook	Students will able to sort data on column basis
	Topic	Sorting on the Basis of Multiple Columns		Practical exercise 3.2 in Textbook	
	Topic	Filtering Data	To make students able to use of filtering feature in Excel Sheet	Practical exercise 3.7 given in Textbook	Students will learn filtering feature in Excel Sheet
	Topic	Custom Filtering	To make students aware about how to apply custom filter in sheet	Practical exercise 3.11 given in Textbook	Students will learn how to apply custom filter in sheet
	Topic	Conditional Formatting	To make students aware about how to apply conditional formatting in sheet	Practical exercise 3.14, 3.15, 3.16, 3.17 given in Textbook	Students will learn how to apply conditional formatting in sheet
		Lab Activity	To encourage hand-on practise among students	Lab Activity 1 and 2 given on Page no. 46 of Textbook	Students will be able to do work in Excel by own
AUGUST	**Chapter 4**	**Introduction to HTML5**	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic	Defining HTMl	To give basic information about 'HTML' and its purpose	Lecture Method	Students will understand the use of HTML to create web pages
	Topic	HTML Elements	To make students aware about how to add several elements of a HTML code	Lecture Method	Students will be able to understand the basic structure of an HTML document
	Topic	HTML attributes	To make students aware about using various attributes of tags in HTML code		
	Topic	Structure of an HTML Document	To make students able to comprehend how to structure content on a webpage	Demonstration Method - showing how to create a basic HTML structure with <html>, <head> and <body> tags	
	Topic	Creating and Saving HTML Documents	To make students learn how to create, save an HTML code in editor	Practical exercise 4.2 given in Textbook	Students will learn to create, save and view webpage on browser
	Topic	Viewing HTML Document	To make students able to view an HTMl page on browser	Practical exercise 4.4 given in Textbook	
	Topic	Line Break element	To make students able to insert line break using the element	Practical exercise 4.6 given in Textbook	Students will be able to identify and use various HTML elements to create a simple webpage.
	Topic	Paragraph <P> element	To make students able to create simple paragraphs using the <p> element	Practical exercise 4.8 given in Textbook	
	Topic	Heading elements	To make students understand usage of <h1>,<h2>,<h3>,<h4>,<h5> heading elements	Practical exercise 4.10 given in Textbook	
	Topic	Horizontal Rule<hr> element	To make students able to create horizontal line in web content using the <hr> element	Practical exercise 4.12 given in Textbook	
	Topic	HTML Formatting elements	To make students able to format elements in HTML code	Practical exercise 4.14 given in Textbook	

AUGUST	**Topic** HTML Comments	To make students able to write 'comments' in HTML code	Practical exercise 4.16 given in Textbook	Students will learn to include comments in their HTML code
	Topic Nesting of elements	To make students know how to do Nesting of elements in HTML code		Students will learn 'Nesting of elements' in their HTML code
	Lab Activity	To encourage hand-on practise among students	Lab Activity 1 and 2 given on Page no. 64 of Textbook	Students will be able to create HTML webpage by own
SEPTEMBER	**TERM I EXAMINATIONS**			
OCTOBER	**Chapter 5 Introduction to CSS**	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic CSS and its Syntax	To students aware about importance of CSS and its syntax	Lecture Method	Students will acquire skills to apply 'Style rules - Selector, Property, Value' to HTML elements.
	Topic Three ways to include CSS in an HTML document - Inline CSS, Embedded/Internal CSS	To discuss the various ways to include CSS in HTML document	Practical exercise given on Page no. 70 of textbook	Students will gain a comprehensive understanding of how to effectively include CSS in HTML documents and apply styling to create visually appealing and accessible web pages.
	Topic CSS Properties	To make students understand the importance of color, font, text, image properties in web design	Practical exercise given on Page no. 72, 73, 75, 77, 78, 80 of textbook	Students will gain proficiency in styling text, backgrounds and borders of HTML elements using properties
	Lab Activity	To encourage hand-on practise among students	Lab Activity given on Page no. 85 of Textbook	Students will learn how to set up your CSS file structure
	Chapter 6 Loops in Python	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic Sequence Type	To emphasize the importance of understanding sequence types for Python programming.	Lecture Method	Students will know able to create lists, tuples in Python
	Topic range( ) function	To make students understand the range( ) function in Python, including its syntax, purpose	Demonstration Method	Students will develop a comprehensive understanding of the range( ) to use it effectively in their coding
	Topic for Loop, while Loop	To make students understand and apply the concepts of "for" and "while" loops in Python, including their syntax, purpose	Kinesthetic Learning Activities	Students will develop a solid understanding of "for" and "while" loops and gain the skills necessary to use them effectively in Python programming
	Lab Activity	To encourage hand-on practise and experimentation	Lab Activity no. 1,2,3,4,5 given on Page no. 103 of Textbook	Students evaluate their ability to correctly apply loop syntax for deepen understanding and proficiency
NOVEMBER	**Chapter 7 Strings in Python**	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic Accessing Characters in a String	To provide information on the concept of indexing in Python	Structural approach SnapCheck given on Page no. 107	Student will learn how to access characters in a string using Python
	Topic String Operations - Concatenation, Repetition, Membership, Slicing	To make students learn about various String Operations, Built-in functions available in Python	Practical exercise 7.1, 7.2 given in Textbook	Students will learn string operations to be performed on strings
	Topic Built-in functions and String methods			Students will learn skill of using built-in functions, string methods in Python

NOVEMBER	**Topic** Traversing a String	To make students learn how to traverse a string	Programs 1, 2, 3, 4, 5 given on Page no. 113, 114, 115	Students will learn about traversing a string using 'for loop' in Python
	Topic Programs using Strings	To make students efficient in creating small programs in python		Students will learn how to write small programs using strings in Python
	Lab Activity	To encourage hand-on practise among students	Lab Activity no. 1,2,3,4 given on Page no. 120 of Textbook	Students evaluate their ability to create programs using strings
DECEMBER	**Chapter 9 Emerging Trends**	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic Artificial Intelligence	To make students understand the concept of Artificial Intelligence (AI) and its various domains	Discussion Method	Students will explore examples of AI applications in different domains such as Machine Learning, Natural Learning Processing, Computer Vision, Robotics
	Topic Domains of Artificial Intelligence			
	Topic Internet of Things	To make students understand IT	Discussion Method	Students will understand the concept of the Internet of Things (IoT) and its significance in everyday life
	Topic Big Data	To give students an introduction to big data, and why it matters in today's digital world	Open Discussion Method	Students will explore examples of big data applications and discuss their impact on society
	Topic Virtual Reality	To encourage students think about the potential uses and implications of virtual reality and augmented reality	Whiteboard, Marker	Students will know about the existence of virtual reality and augmented reality across different domains such as entertainment, gaming, education, healthcare, architecture, and training
	Topic Augmented Reality		PPT on Smartboard	
	Topic Cloud Computing	To ensure students are aware about Cloud Computing concept and its usefulness	Brainstorming with Group Discussion or Debate	Students will know about various Cloud-Storage providers in market; hence, able to use Cloud Storage as well in their real-life
	Lab Activity	To encourage hand-on practise among students	Lab Activity 1 and 2 given on Page no. 46 of Textbook	
JANUARY	**Skill Module - Information Technology**			
	Unit 1 : Cyber Security	To check the knowledge level of students	Previous Knowledge Testing Method	Students will desire to learn new things
	Topic Computer Network	To ensure students are aware about Cloud Computing concept and its usefulness	Brainstorming with Group Discussion or Debate	Students will know about various Cloud-Storage providers in market; hence, able to use Cloud Storage as well in their real-life
	Topic Types of Computer Network	To give students knowledge about the various types of network	Visual-aids methods like Diagrams, Hangouts	Students will able to decide which type of network should be implemented as per need of user
	Topic Internet	To give students knowledge about the Internet	Discussion in classroom	Student will learn new concepts related to Internet
	Topic Threats in the Cyber World - Malware	To ensure students are aware about different types of Malware such as Virus, Worms, Trojan Horse, Spyware	Visual Presentation on Smartboard	Students will know how to keep themselves safe from cyber threats
	Topic Other threats in the Cyber World - Cyberstalking, Cyberbullying, Cyber Trolling, Phishing and Email Frauds	To ensure students are other important threats		
	Topic Cyber Security and its significance	To ensue students know what is Cyber Security and its significance	Lecture Method	Students will know how to prevent cyber exploitation
	Topic Safely Browsing the Web	To create awareness among students about different precaution measures such as Antivirus Software, Firewall, Strong Passwords, Avoid Questionable Websites	Open discussion Method	To ensure students are aware about different precautions and measures to stay safe online
	Topic Reporting Cyber Crimes	To ensure awareness among students about how to facilitate Cyber Safety	Real life examples, Survey on Cybercrime in local area or neighbourhood	Students will know how to handle cybercrime. They can guide and help cyber crimes victims as well in real-life
	Topic Netiquette	To alert students about set of rules to be followed while communicating over the Internet	Lecture Method	Students will learn etiquette of Internet
FEBRUARY	**REVISION + TERM II EXAMINATIONS**			