SANT NANDLAL SMRITI VIDYA MANDIR, GHATSILA

YEARLY SYLLABUS OF ARTIFICIAL INTELLIGENCE / COMPUTER

SESSION – 2025-26

STD – VII

Month	No. Of Working Days	Topic To Be Taught	Activities	Learning Outcomes	Values & Skills Imparted	Assessment
APRIL	**21**	**PROSPECTS OF AI** • **Introduction** • **History of AI** • **Categories of AI** • **Features of AI** • **Future of AI** • **Ethical Concerns**	• Think and express your views on the topic" Do AI gadgets improve our health or they deteriorate it". • Organize a discussion on the topic "If Super AI becomes a reality". Will it be good for human race or not? • Research about some milestones achieved in the field of AI other than discussed in the chapter. Make a chart and demonstrate in the class.	• Recognize examples of AI in everyday life, such as virtual assistants, recommendation systems, and autonomous vehicles. • Differentiate between different categories of AI, such as narrow AI (weak AI) and general AI (strong AI). • Identify examples of AI applications in each category, e.g., narrow AI includes voice assistants like Siri, while general AI represents the concept of AI with human-like intelligence.	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • Differentiate between. • Write short notes. • Answer the questions. • Situation based questions.
MAY	**9**	**AI & SYSTEM SOFTWARE** • **Introduction** • **Operating System** • **Features of Operating System**	• Research and write about some popular distributions of Linux and their primary area of usage. • Think of some areas where you would like to implement the concept of Backup in day to day life, including your certificates. Also imagine how backup may be taken in AI devices. Note the ways and discuss in the class.	• Discuss the primary features of an operating system, including: User interface: Graphical User Interface (GUI) vs. Command-Line Interface (CLI). • Multitasking: Ability to execute multiple tasks simultaneously. • Memory management:	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • State True or False. • Write short notes. • Answer the questions. • Situation based

		• **Utilities**		Allocation and utilization of computer memory. • File management: Organization, storage, and retrieval of data. • Security: Protection mechanisms to safeguard data and system resources. • Device management: Handling input/output devices and peripheral connectivity.		questions.
JUNE	**11**	**DATABASE** • **Introduction** • **DBMS** • **Features of DBMS** • **Data Types** • **Working in DBMS** • **Creating a Database in ACCESS**	• Divide the class into small groups and ask them to brainstorm different examples of databases they encounter in daily life (e.g., library catalog, online shopping website, school attendance records). Each group presents their findings to the class. • Provide a set of sample data (e.g., student names, ages, grades) and ask students to categorize them into different data types (e.g., text, number, date). Discuss their findings as a class.	• Students will understand the concept of databases and recognize various examples of databases in real-life situations. • Students will be able to explain the importance of databases in organizing and managing large sets of data efficiently. • Students will identify and describe key features of a DBMS, such as data storage,	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • Write short notes. • Answer the questions. • Situation based questions.

		• **Views of a Table** • **Creating a Table**		retrieval, security, and concurrency control.		
JULY	**26**	**DATABASE** • **Primary Key** • **Data in a Table** • **Editing Data of Table** • **Adding Field** • **Deleting Field** • **Modifying Field** • **Moving a Field** • **Closing Database File**	• Visit three shops in your neighborhood and research how they keep record of the data pertaining to their daily activities. Also, find how such data can be stored in a database and what will be the requisite fields. Design appropriate table structure for such activities of all the three shops in a chart paper and demonstrate in the class. • Projects n' Activity given in Page No 43.	• Learn how to designate a primary key in a table. • Understand how data is organized in tables. • Recognize common data types such as text, numbers, dates, etc. • Learn to update or modify records. • Learn to add new fields to a table. • Recognize the importance of maintaining consistency when adding fields. • Learn the steps to safely close a database file to prevent data loss or corruption.	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • Write short notes. • Answer the questions. • Situation based questions.

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AUGUST	**24**	**INTERPRETATION IN DATABASE** • **Introduction** • **Sorting** • **Relation between tables** • **Query** • **Filter** • **Reports** • **Preview Report**	• Explore about few latest databases packages and the developers of those packages. Prepare a well formatted document using features of word processing software to illustrate the findings and demonstrate to your teacher and classmates in the computer period. • Lab Assignment given in ▪ Page No 45 ▪ Page No 48 ▪ Page No 50 ▪ Page No 52 ▪ Page No 54 • Project n' Activity given in Page No 62	• Understanding what a database is and its purpose. • Basic terminology: tables, records, fields, etc. • Examples of everyday databases (e.g., address book, library catalog). • Understanding how tables relate to each other through keys (primary keys, foreign keys). • Basic understanding of one-to-one, one-to-many, and many-to-many relationships.	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • Differentiate between. • Answer the questions. • Situation based questions.
SEPTEMBER	**21**	**ETHICS & SAFETY MEASURES** • **Introduction** • **Right to Privacy** • **Intellectual Property Right** • **Plagiarism**	• Research and list five activities for which you generally use internet in your everyday schedule. Write the advantages you got on using internet for such tasks as well as note the unusual activities/pop-ups appearing in the browser window while working. Mention some preventive	• Understand the meaning of ethics and safety in the context of using technology. • Identify the importance of responsible behavior when using digital tools and platforms.	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • Differentiate between. • Answer the questions.

		• **Cyberbullying** • **Hacking**	measures to keep your system secured from such notification. Make a table mentioned: 1. Activities on Internet 2. Advantages 3. Unusual Activities 4. Preventive Measures	• Demonstrate an understanding of these concepts and apply them to their own digital behavior, promoting a safe and ethical online environment for themselves and others.		• Situation based questions.
OCTOBER	**18**	**ETHICS & SAFETY MEASURES** • **Phishing** • **Spamming** • **Software Piracy** • **Internet** • **Safety Measures** • **Digital Footprint**	• Research and list five activities for which you generally use internet in your everyday schedule. Write the advantages you got on using internet for such tasks as well as note the unusual activities/pop-ups appearing in the browser window while working. Mention some preventive measures to keep your system secured from such notification. Make a table mentioned: 1. Activities on Internet 2. Advantages 3. Unusual Activities 4. Preventive Measures	• Define phishing and identify common phishing tactics. • Recognize potential phishing attempts in emails, messages, and websites. • Define spamming and differentiate between spam and legitimate communications. • Identify common types of spam, including email spam, social media spam, and comment spam. • Understand the potential	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy	• Fill in the blanks • Select the most suitable alternative. • Differentiate between. • Answer the questions. • Situation based questions.

				consequences of engaging with spam, such as malware infection and privacy breaches. • By this students should be able to demonstrate an understanding of these concepts and apply safety measures to protect themselves and others online.		
NOVEMBER	**23**	**NETWORK** • **Introduction** • **Advantages of Network** • **Components of Network** • **Media of Communication** • **Types of Network** • **Network Topology**	• Observe the computer lab and other departments of your school and find whether the computers are in a network or not. If yes, find the components being used in the network and type of networking used and prepare a document on how it is helping in the work process. Demonstrate the findings to your classmates and teachers. • Conduct a discussion on the advantages of having a good network of friends and also suggest which type of skills are required to enhance networking	• Students should have a basic understanding of networking concepts, including how networks function, their benefits, the components involved, different types of networks, network topologies, and the role of intranets in organizations. They should also be able to apply this	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy. • Collaboration and Teamwork	• Fill in the blanks • State True/False • Write short notes. • Differentiate between. • Answer the questions. • Situation based questions.

		• **Intranet**	with people.	knowledge to practical scenarios and understand the importance of networking in modern society.		
DECEMBER	**19**	**INTRO TO SCRATCH** • **Introduction** • **Components of Scratch screen** • **Selecting a Sprite** • **Changing the Backdrop.** • **Drawing a Sprite** • **Blocks** • **Multiple Sprites**	• Create an animation in Scratch which displays moon revolving around the Earth. • Research about any three ways where animation can be used to explain concepts of different subject, say Science, Mathematics. Prepare any one such animation and demonstrate in your class. • Lab Assignment given in: ▪ Page No 79 ▪ Page No 82 ▪ Page No 84 ▪ Page No 89 ▪ Page No 91	• Understand the basic components of the Scratch interface. • Learn how to select and manipulate sprites. • Gain proficiency in changing backdrops and drawing custom sprites. • Understand the concept of blocks and how to use them to create scripts. • Learn how to work with multiple sprites and coordinate their actions within a project.	• Critical Thinking. • Problem-Solving skills. • Communication Skills. • Creativity. • Digital literacy. • Collaboration and Teamwork	• Fill in the blanks • State True/False • Write short notes. • Select the most suitable alternative. • Answer the questions. • Situation based questions.
JANUARY	**22**	**CODING IN SCRATCH** • **Introduction** • **Variables**	• Gather some information regarding types of triangles based on the length of sides. Create a project in Scratch that evaluates the sides of a triangle and display Equilateral,	• Students should be able to apply these concepts to create basic programs in Scratch, understand the flow of control in their programs, and	• Critical Thinking. • Problem-Solving skills. • Communication Skills.	• Fill in the blanks • State True/False • Write short notes. • Differentiate between.

		• **Operands** • **Operators** • **Coding in Scratch** • **Conditional Statements** • **Iterative Statements**	Isosceles or Scalene based on the comparison. • Lab Assignment given on: ▪ Page No 103 ▪ Page No 106 ▪ Page No 107	solve simple programming problems using variables, operators, conditional statements, and iterative statements. Additionally, they should develop problem-solving skills and logical thinking abilities through coding activities in Scratch.	• Creativity. • Digital literacy. • Collaboration and Teamwork	• Answer the questions. • Situation based questions.

Subject Teachers': **Principal**

1. **Arpa Bhattacharya**
2. **Bidyut Baran Chandra**