



केन्द्रीय विद्यालय संगठन, क्षेत्रीय कार्यालय, राँची  
शिक्षा मंत्रालय, भारत सरकार के अधीन स्वायत्त संस्थान  
KENDRIYA VIDYALAYA SANGATHAN, REGIONAL OFFICE, RANCHI  
(Under Ministry of Education, Govt. of India)  
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दिनांक : 27.06.2022

केवल ई-मेल द्वारा

प्राचार्य

समस्त केन्द्रीय विद्यालय

राँची संभाग के अंतर्गत

विषय: सत्र 2022-23 के लिए कक्षा VI से X का Computer एवं AI का split up syllabus के संबंध में।

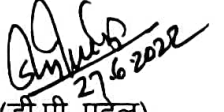
महोदया / महोदय,

उपरोक्त विषयक सत्र 2022-23 के लिए कक्षा VI से X तक के लिए Computer एवं AI का split up syllabus विषय संयोजकों द्वारा तैयार किया गया है, जो आपके आवश्यक कार्यवाही हेतु प्रेषित है।

कृपया सुनिश्चित करें कि उक्त विषयों की नियमित तौर पर सैद्धांतिक एवं प्रयोगिक कक्षाएं संचालित की जाएं।  
इन्हें विषयों की नोटबुक तैयार करायी जाए एवं प्रत्येक माह के पाठ्यक्रम पर माह के अंत में दक्षता परीक्षण/ टेस्ट आयोजित की जाए।

संलग्नक : उपरोक्तनुसार।

भवदीय,

  
27.6.2022  
(डी.पी. पटेल)

उपायुक्त

**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**

## Split Up Syllabus

## Class III

Sl No	Month	Unit	Content	No. of Period
01	April	Computer Basics	1.1 Introduction to computer 1.2 Starting and Shut Down the computer 1.3 Identify the parts of Computer and their functionality. 1.4 Identify the keys of keyboard (alphabet keys, numeric key, caps lock, space bar, backspace/ del, enter key, arrow movements) 1.5 Identify the buttons of Mouse (Left, Right, and Scroll). 1.6 Precautions to be taken while opening and closing computer. 1.7 Do's and Don'ts of Computer Labs 1.8 Features of the Computer 1.9 Strengths and Limitations of Computer	6
		Using Paint Brush	2.1 Introduction 2.2 How to start Paint brush	2
02	May	Using Paint Brush	2.3 Home Tab 2.4 Pencil, Eraser, Fill with color, pick color, brush, Air brush	2
03	June	Using Paint Brush	2.5 Text Tool, shapes 2.6 Magnifier	4
04	July	More in Paint	3.1 Selection-Rectangular Selection, Freeform Selection 3.2 View Menu 3.3 Zoom In 3.4 Zoom Out 3.5 Full Screen	8
05	August	About Desktop and computer Peripherals	4.1 Purpose of Desktop 4.2 Identify Icons on Desktop 4.3 Start Button and Taskbar 4.4 My Computer 4.5 Recycle bin 4.6 Input and Output Devices 4.7 Keyboard, mouse, monitor, printer, speaker 4.8 Memory Devices 4.9 Primary and Secondary Memory 4.10 CPU	4
		Word Processor	5.1 Introduction to Word a. What is Word Processor b. Features of Word Processor c. History of Word Processor d. Steps for Starting Word	4
07	September		5.2 Components of Word Screen 5.3 Creating a new Word Document	4

			5.4 Opening an existing Word Document	
<b>Mid Term Examination</b>				
08	October		5.5 Editing text in the Word Document a. Typing text b. Selecting the text c. Copy, Cut and Paste the text d. Deleting text  5.6. Saving the Document	4
09	November	Formatting Word Document	6.1 Formatting Text a. Font size, style. color, sub/super script. b. Bold, Italic, underline, background color c. Numbering and Bullets d. Alignment e. Change Case f. Inserting the special characters and symbols	8
10	December	Formatting Word Document	6.2 Insert Menu a. Word Art b. Page Break c. Images d. Clip Art e. Shapes f. Text Box g. Page Number h. Date and Time	6
11	January	Internet	7.1 Introduction 7.2 Need of Internet 7.3 Requirements for an Internet Connection.	4
12	February	Internet	7.4 Steps to open Web Browser 7.5 Search Engines 7.6 Finding, Downloading, Saving Images	8

## Minimum Level of Learning

### **Computer Basics**

1. Student should be able to identify basic components of computers.
2. Should know the rules of Computer Laboratory.

### **Paint Brush**

3. Should be able to identify tools of Paint Brush.
4. Should be able to draw basic figures.

### **About Desktop and computer Peripherals**

5. Student should be able to explore the windows.
6. Should be able recognize and work on basic computer parts

### **Word Processor**

7. Should be able to open, create and save word file.
8. Should be able to edit the contents in word file.
9. Student should be able to format the text.
10. Should be able to insert pictures from clip art and pictures stored in computer.
11. Should be able format heading using word art.
12. Should be able to insert page number, date and time.
13. Should be able to draw shapes

### **Internet**

14. Should be a b le to open the Google.
15. Should be able to search the images and text.
16. Should be able to download and save image.

**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**

Split Up Syllabus

Computer

Class IV

Sl No	Month	Unit	Content	No. of Period
01	April	Computer History	1.1 Understanding Generations 1.2 Classification of Computer	4
		Word Processor	2.1 File Menu a. Create a new file b. Open an existing file c. Save the current file d. Save As - saving the file with different name (Copy a file) e. Close the file	4
02	May	Word Processor	2.2 View Menu  a. View Menu b. Print layout c. Web layout d. Full Screen e. Zooming f. Ruler	2
03	June	Exploring Windows	3.1 Starting windows Explorer 3.2 Components of Explorer Window 3.3 Panes of the Explorer Window	4
			3.4 Working with folder in left pane 3.5 Managing files and folders in windows Explorer 3.6 Modes of View 3.7 File naming convention 3.8 Searching Files 3.9 Creating Shortcuts	4
05	July	PowerPoint Presentation	4.1 Starting Power Point a. Create a new file b. Open an existing file c. Save the current file d. Save As - saving the file with different name (Copy a file) e. Close the file 4.2 Formatting a Presentation a. Changing the Font b. Changing the Font Size, Style, Colour. c. Formatting Paragraphs d. Changing Text Alignment e. Modifying Line Spacing f. Creating Bulleted and Numbered Lists g. Copying Formatting	8

06	August		4.3 Insert Menu / Inserting a. Images b. Table c. Clip Art d. Screen Shot e. Shapes and SmartArt f. Chart g. Text Box, WordArt, Date & Time, Slide Number, Symbols, h. Moving&Resizing an Image	8
08	September		4.4 SLIDE SHOW MENU a. from Beginning b. from current slide c. Custom Slide shOw Setup slide show	4
<b>Term End Examination</b>				
09	October	Excel Spreadsheet	5.1 Working in Excel 5.2 Introduction - Workbook & Worksheet 5.3 Use in day to day life. 5.4 Steps to start Excel	4
10	November		5.5 Components of Excel Screen 5.6 Various data types 5.7 Entering Data in Spreadsheet	8
11	December		5.8 About the cell & cell address 5.9 Auto Sum 5.10 Formatting the Data in the Table	6
12	January	Window Explorer	6.1 Calculator 6.2 Onscreen Keyboard 6.3 Magnifier 6.4 Games 6.5 Virus &Anti-virus	4
13	February	Control Panel	7.1 Display Properties 7.2 Setting the Mouse 7.3 Task and Start Menu 7.4 Date and Time Settings	8
<b>Session Ending Examination (March)</b>				

## Minimum Level of Learning

### Computer History

1. Students should know the various inventions in computers.  
Should know the rules of Computer Laboratory.

### Word Processor

2. Student should know the difference between save and Save As option.
3. Student should be able to open the existing file.
4. Should be able to work on different views.

### Exploring Windows

5. Student should be able to create/rename/delete/move a folder and making its shortcut on Desktop.
6. Student should be able to search a particular file and folder in computer.

### PowerPoint Presentation

7. Student should be able to format the presentation.
8. Student should be able to insert various objects in the PowerPoint slide.
9. Student should be able to run the PowerPoint slides.

### Excel Spreadsheet

10. Student should be able to create a file in Excel.
11. Student should be able to identify components of Excel Screen.
12. Student should be able to make a mark sheet in spreadsheet.
13. Student can auto generate the series like Serial no., days, months etc.

### Window Accessory

14. Student should be able to use calculator, onscreen keyboard, and magnifier.

### Control Panel

15. Student should be able to change desktop background, time and date etc.
16. Student should be able to change the view of start menu and customize task bar.

**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**

Split Up Syllabus

Computer

Class V

SI No	Month	Unit	Content	No. of Period
01	April	Table creation in word	1.1 Inserting Tables 1.1.1 Selecting no. of rows and Columns 1.1.2 Inserting new row and column 1.1.3 Merging the cells 1.1.4 Filling the colour in cells 1.1.5 Alignment in the table (vertical and horizontal) 1.1.6 Table borders 1.2 Draw table	8
02	May	More in Words	2.1 Manipulating Paragraph 2.1.1 Selecting 2.1.2 Moving 2.1.3 Copying	2
03	June	More in Words	2.1.4 Page Layout Menu 2.1.5 Margins Setting 2.1.6 Orientation 2.1.7 Paper Size (Legal & A4) 2.1.8 Page Borders 2.2 Indentation 2.3 Wrap Text   Positioning Image	6
04	July	Working in Excel	3.1 Working with Sheets 3.2 Inserting New Row and Column 3.3 Deleting/Hiding the Rows and Columns 3.4 Changing the width and height of the column and row. 3.5 Find and Select the data in a given range	8
05	August	Working in Excel  Multimedia	3.6 VIEW MENU a. Gridlines b. Freeze Panes c. View side by side d. Synchronous Scrolling 4.1 Introduction to Multimedia 4.3.1 Definition 4.3.2 Uses of Multimedia 4.3.3 Hardware and Software required 4.2 Media Player: 4.3.1 How to open and use	6  2
06	September	Multimedia	4.3 Sound Recorder: 4.3.1 How to open and use 4.4 Movie Maker: 4.3.2 Inserting image 4.3.3 Setting timeline	6



			4.3.4 Publishing movie	
<b>Mid Term Exam (Third Week of September)</b>				
07	October	Making a powerful presentation	5.1 Design Menu 5.1.1 Slide Designs 5.2 Transition Menu 5.2.1 Different Effects on slides 5.3 Animation Menu 5.3.1 Different Effects on object	6
08	November	Making a powerful presentation	5.4 Viewing Presentation in Different Ways 5.4.1 Managing Slides in the Slide Sorter View 5.4.2 Running a Presentation in the Slide Show View 5.5 Previewing and Printing a Presentation 5.6.1 Selecting page setup option 5.6.2 Printing a Presentation 5.6.3 Showing presentation using projector	8
09	December	Creation Simple Project Using PowerPoint		6
10	January	Internet	6.1 Review of Internet 6.1.1 Introduction to Internet 6.1.2 Web Browsers 6.1.3 Websites 6.1.4 Search Engines	6
11	February		6.2 Exploring the different websites 6.2.1 KVS website 6.2.2 Vidyalaya's Website 6.2.3 Wikipedia 6.2.4 Edustrokes	6

## **Minimum Level of Learning**

### **Table creation in word and More in Words**

1. Student should be able to create a time table of their class in word.
2. Student should be able to create a greeting card using page borders and other options

### **Working in Excel and Multimedia**

3. Student should be able to create a sheet with his/ her own name.
4. Student should be able to create an album of CCA activity using movie maker.

### **Making a powerful presentation**

5. Student should be able to select a perfect design for his/her power point file based on project given by different subject teachers.
6. Student should be able to apply different animation effects on different objects used in slides.
7. Student should be able to give proper settings for printing the document in page setup

### **Internet**

8. Student should be able to open various educational websites and can copy a paragraph, in their PowerPoint presentation.

**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**

Split Up Syllabus

Computer

Class VI

<b>Sl No</b>	<b>Month</b>	<b>Unit</b>	<b>Content</b>	<b>No. of Period</b>
01	April	Fundamental of Computer	1.1 Review Brief historyof computer 1.2 Basic components of computer 1.3 Different I/O Devices 1.4 Computer Language 1.5 Software definition and its Types 1.6 Computer Memory 1.7 Different types Printers	5
		Word Processing (MS Word)	2.1 Header and footer 2.2 Formatting of Paragraph	3
02	May	Word Processing (MS Word)	2.3 Mail Merge	2
03	June	Word Processing (MS Word)	2.4 Envelope and labels 2.5 Page column 2.6 Hyperlink 2.7 Drop Cap	4
04	July	Spreadsheet (Excel)	3.1 Table creating in MS Excel and implementing Various Charts 3.2 Cell reference in MS Excel	8
05	August	Spreadsheet (Excel)	3.3 Functions in MS Excel 3.4 Sorting of data in MS Excel 3.5 Filtering data in MS Excel	8
06	September	Spreadsheet (Excel)	3.6 Conditional Formatting 3.7 Workbook and worksheet 3.8 Protection of Workbook and Worksheet	6
<b>Mid Term Examination</b>				
07	October	Advance feature MS PowerPoint	4.1 Insert differentobjects (i.e. images, Word artsAudio &Video etc.) 4.2 Transitions in slide	6
08	November	Advance feature MS PowerPoint	4.3 Custom Animation with text 4.4 Adobe Presenter	8
09	December	HTML	5.1 IntroductiontoHTML 5.2 Uses of HTML 5.3 HTML Tags 5.4 HEAD, TITLE, BODY, Empty and Container Tags	7

10	January	Use of internet	6.1 Overview of internet 6.2 Intranet 6.3 Different types of web sites 6.4 Web browsers 6.5 Opening of Web pages and Web Sites 6.6 Use of Search Engine	6
11	February	Use of internet	6.7 Creation of an E-mail and using it 6.8 Advantage and Disadvantage of Social Media/sites 6.9 Networking and Networks	8
<b>Session Ending Examination (March)</b>				

## **Minimum Level of Learning**

### **Fundamental of Computer**

1. Student should be able to identify basic components of computers and Input / Output devices.
2. Student should be able to turn on and off the computer.

### **Words Processing (MS Word)**

3. Should be able to open, create and format a word file.
4. Student should be able to understand the concept of mail merge.

### **Spreadsheet (MS Excel)**

5. Students should be able to understand the use of excel
6. Students should be able to open ,create an excel file and can do calculation using formulas
7. Students should be able to understand the concept of sorting, filtering, password.

### **Advanced Feature of powerful presentation**

8. Students should be able to start PowerPoint presentation.
9. Students should be able to create an effective presentation (effective means using templates, transition, animation etc.)

### **Use of Internet**

10. Students should be able to access the web page.
11. Students can identify various browsers can effectively search a topic on the internet.
12. Students can ensure his/her security over the net can open an email account and operate it.

**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**

Split Up Syllabus

Computer

Class VII

Sl No	Month	Unit	Content	No. of Period
01	April	Computer Security	1.1 Threats to computer 1.2 Virus and its types 1.3 Anti-Virus software and examples 1.4 Firewall and its use 1.5 Cyber Crime and Computer Ethics 1.6 Hackers and crackers 1.7 Cyber law and importance 1.8 Backup and restore	5
		HTML	2.1 Heading (H1 to H6) 2.2  , <hr>, <comment>	3
02	May	HTML	2.3 Background Color 2.4 Text alignment (center, left, right)	2
03	June		2.5 font tag{size, face, color) 2.6 Text alignment (center, left, right) 2.7 Paragraph formatting Tags ListTags	6
04	July	HTML	3.1 Order (start and type attribute) and Un order List 3.2 Background Image and other 3.3 Image Insertion in Web Pagewith alignment 3.4 Creation of table 3.5 Anchor Tag 3.6 Hyper link	8
05	August	Photoshop Introduction	4.1 DTP and its software 4.2 Starting Photoshop 4.3 Tool Palette 4.4 How to create a new file 4.5 How to save a file 4.6 How to open an Existing file 4.7 How to use Photoshop tools	8
06	September	Using Layer	4.8 Using Layers 4.7.1 Learning Layer Basics 4.7.2 Using Layers palette 4.7.3 Rearranging Layers 4.7.4 Applying a Layer Style 4.7.5 Flattening and saving files	4
<b>Mid Term Examination (Third Week of September)</b>				
07	October	5.1 Rectangular Marquee	Rectangular Marquee 5.1.1 EllipticalMarquee 5.1.2 SinglecolumnMarquee 5.1.3 SingleRowMarquee	6

		5.2 Lasso	<p>Lasso</p> <p>5.2.1 Polygonal Lasso</p> <p>5.2.2 Magnetic Lasso</p> <p>5.2.3 Quick Selection</p> <p>5.2.4 Magic Wand</p>	
08	November	<p>5.3 Crop and Slice</p> <p>5.4 Measuring Tool</p>	<p>Crop and Slice tools</p> <p>5.3.1 Crop</p> <p>5.3.2 slice</p> <p>5.3.3 Slice Select</p> <p>Measuring Tool</p> <p>5.4.1 Eyedropper</p> <p>5.4.2 Colour Sampler</p> <p>5.4.3 Ruler</p> <p>5.4.4 Note</p> <p>5.4.5 Count</p>	8
09	December	5.5 Retouching tool	<p>Retouching tools</p> <p>5.5.1 Spot Healing Brush</p> <p>5.5.2 Healing Brush</p> <p>5.5.3 Patch</p> <p>5.5.4 Red Eye</p> <p>5.5.5 Magic Eraser</p> <p>5.5.6 Blur</p> <p>5.5.7 Sharpen</p> <p>5.5.8 Smudge</p> <p>5.5.9 Dodge</p> <p>5.5.10 Burn</p> <p>5.5.11 Sponge</p>	6
10	January	Painting tools in Photoshop	<p>6.1 Brush</p> <p>6.2 Pencil</p> <p>6.3 Colour Replacement</p> <p>6.4</p>	6
11	February	Painting tools in Photoshop	<p>6.5 Mixer Brush</p> <p>6.6 History Brush</p> <p>6.7 Art History Brush</p> <p>6.8 Gradient</p> <p>6.9 Paint Bucket</p>	8
<b>Session Ending Examination (March)</b>				

## Minimum Level of Learning

### **Computer Security**

1. Child should be able to secure his/her computer from various threats.
2. Child can tell what cybercrime is and understand the importance of cyber law.

### **HTML**

3. Child should be create a web page using tags taught in the class.

### **Photoshop**

Introduction of tool with its use to be demonstrated to students. Practical exercise to be given to students so that they can learn the specified tool. So that,

4. Child should be able to understand the use of Photoshop.
5. Child should be able to identify various tools and where to use the tool.
6. Child Should be able to make changes in the picture using tools taught in the class
7. Child should be able to identify various tools and where to use the tool
8. Child should be able to make changes in the picture using tools taught in the class



**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**

Split Up Syllabus

Computer

Class VIII

Sl No	Month	Unit	Content	No. of Period
01	April	Algorithm	1.1 Use of algorithm in programming 1.2 Developing algorithm to solve a particular Problem	8
03	May	Flow Chart	2.1 Aboutflowchart	2
04	June		2.1 Various types of box used in flow chart and their use( terminal box, input/output box, processing box, decision box) 2.2 Questionbasedonsequence, Selection and iteration	6
05	July	Photoshop Review	3.1 Topics studied in class VII (Rectangular marquee Tool, Lasso, Quick Selection, Crop ,measuring, touching, painting)	5
		More on Photoshop	4.1 Drawingandtypetools Pen(P) FreeformPen AddAnchorpoint DeleteAnchorpoint ConvertPoint	3
06	August	More on Photoshop	4.2 Horizontal Type VerticalType 4.3 Rectangle  Rounded Rectangle Ellipse Polygon Line Custom Shape	4
		WorkingwithMasks	4.4 Working With Mask 4.4.1 Working with masks and channels 4.4.2 Creating a quick mask 4.4.3 Editing a quick mask 4.4.4 Saving a selection a s a mask	4
08	September	WorkingwithMasks	4.4.5 Viewing channels 4.4.6 Adjusting individual channels 4.4.7 Loading a mask as a selection 4.4.8 Applying effects using a gradient mask 4.4.9 Resizing the canvass 4.4.10 Moving layers between documents 4.4.11 Colorizing with an adjustment layers 4.4.12 Grouping and clipping layers 4.4.13 Applying a mask from a saved selection 4.4.14 Using Type as Mask	6

**Mid Term Examination (Third Week of September)**

09	October	5. Photoshop Continued 5.1 PhotoshopVectortools 5.2 Type in Photoshop	5.1 PhotoshopVectortools 5.1.1 Basic Vector paths 5.1.2 Drawing shapes 5.1.3 Combining vector paths 5.1.4 Converting shapes to selections 5.1.5 Manipulating vector paths  5.2 TypeinPhotoshop 5.2.1 Typographic design 5.2.2 Creating aclippingmaskfromtype 5.2.3 Creating a design elementfrom type 5.2.4 Using interactiveformatting controls 5.2.5 Wrapping font type 5.2.6 Designing a paragraph of type	6
	November	5.3 Output from Photoshop	5.2.7 Using interactive formatting controls 5.2.8 Wrapping font type 5.2.9 Designing a paragraph of type 5.3. Preparing file for print 5.3.1 Preparing file for web output File compression	4
10		Flash	6.1 What is flash and its uses 6.2 Creating animation 6.3 About symbols and instances 6.4 Types of symbols (graphic, button, movie clip etc.) 6.5 Converting an object to a symbol 6.6 Introducing time line and its use in animation 6.7 Frames and key frame	4
	December		6.8 About layers (inserting a new layer, renaming & deleting layer) 6.9 Types of animation (frame and tweened) 6.10 Introducing time line and its use in animation 6.11 Frames and key frame 6.12 About layers (inserting a new layer, renaming & deleting layer) 6.13 Types of animation (frame and tweened)	4
11	January	Flash Continued	7.1 Motion tweening (using and without using motion guide) 7.2 Shape Tweening (Simple Shape and using text string)	4
12	January	E-Commerce	8.1 EDI (Electronic data Interchange) 8.2 What is E-commerce and E-greetings 8.3 Influence on user 8.4 What factor one should keep in mind while using E-Commerce, website example	2

	January	Chatting	9.1 Definition 9.2 Example	2
	February	Downloading /Uploading	10.1 Downloading /Uploading Speed 10.2 Difference 10.3 Example Concept of bandwidth and principal	
		Audit and Video conference	11.1 What is it 11.2 Use of it 11.3 Factors affecting Video Quality 11.4 Usefulness of Video Conferencing	2
<b>Session Ending Examination (March)</b>				

## **Minimum level of Learning**

### **Algorithm and Flow Chart**

1. Child should be able to develop a solution of a problem and can create its algorithm and flow chart.

### **Photoshop**

Introduction of tool with its use to be demonstrated to students. Practical exercise to be given to students so that they can learn the specified tool.

2. Child should be able to identify various tools and where to use the tool.
3. Child should be able to make changes in the picture using tools taught in the class drawing and type tools.
4. Child should be able to identify various tools and where to use the tools.
5. Child should be able to make changes in the picture using tools taught in the class.

### **Flash**

6. Should be able to create a simple flash file using his/her own creativity.
7. Child should be able to create simple flash file having different types of motion.

### **E-Commerce and Other Internet Related Services**

8. Child should be able to create simple flash file having different types of motion.
9. Child should be able to understand the e-commerce and its various websites and what to keep in mind while doing online purchasing chatting, downloading and uploading.
10. Use of video conferring and its advantage

**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**  
**CLASS-IX : SPLIT-UP SYLLABUS : 2022-23**  
**SUB : ARTIFICIAL INTELLIGENCE (417)**  
**DISTRIBUTION OF MARKS AND PERIODS**  
**TOTAL MARKS: 100(THEORY-50+ PRACTICAL-50)**

	TERM	UNITS	NO. OF HOURS for Theory and Practical	MAX. MARKS for Theory and Practical
<b>PART A</b>	<b>Employability Skills</b>			
	<b>TERM I</b>	Unit 1: Communication Skills-I	10	5
		Unit 2: Self-Management Skills-I	10	
		Unit 3: ICT Skills-I	10	
	<b>TERM II</b>	Unit 4: Entrepreneurial Skills-I	15	5
		Unit 5: Green Skills-I	05	
		<b>Total</b>	<b>50</b>	<b>10</b>
<b>PART B</b>	<b>Subject Specific Skills</b>			
	<b>TERM I</b>	Unit 1: Introduction to Artificial Intelligence(AI)		10
		Unit 2: AI Project Cycle		10
	<b>TERM II</b>	Unit 3: Neural Network		5
		Unit 4: Introduction to Python		15
			<b>Total</b>	
<b>PART C</b>	<b>Practical Work</b>			20
		Unit 4: Introduction to Python		
		Practical Examination		10
		Viva Voce		5
		<b>Total</b>		<b>35</b>
<b>PART D</b>	<b>Project Work / Field Visit / Practical File/Student Portfolio</b>			10
		Viva Voce		5
		<b>Total</b>		<b>15</b>
		<b>GRAND TOTAL</b>	<b>200</b>	<b>100</b>

**TERM WISE MARKS DISTRIBUTION**

UNIT	UNIT NAME	Term 1	Term 2
1	Unit 1: Communication Skills-I	5	--
2	Unit 2: Self-Management Skills-I		
3	Unit 3: ICT Skills-I		
4	Unit 4: Entrepreneurial Skills-I	--	5
5	Unit 5: Green Skills-I		
6	Unit 1: Introduction to Artificial Intelligence(AI)	10	--
7	Unit 2: AI Project Cycle	10	--
8	Unit 3: Neural Network	--	5
9	Unit 4: Introduction to Python	--	15
	<b>TOTAL</b>	<b>25</b>	<b>25</b>

**PRACTICAL**

Sl	Unit Name	Marks
1	<b>Practical Work</b> Unit 4: Introduction to Python	20
2	Practical Examination	10
3	Viva Voce	5
4	Project Work / Field Visit / Practical File/Student Portfolio	10
5	Viva Voce	5

**MONTH-WISE DISTRIBUTION  
THEORY**

Sl	Month	Topic	Theory	Prac
1	April & May 2022	<p><b>Unit 1 Communication Skills:</b> Session 1 Methods of Communication, Session 2 Verbal Communication</p> <p><b>Unit 2 Self-management Skills</b> Session 1 Stress Management Session 2 Self-awareness — Strength and Weakness Analysis</p> <p><b>Unit 3 Information and Communication Technology Skills</b> Session 1 Basic Computer Operations</p>	08	--
2	June & July 2022	<p><b>Unit 1 Communication Skills:</b> Session 3 Non-verbal Communication Session 4 Communication Cycle and Importance of Feedback</p> <p><b>Unit 2 Self-management Skills</b> Session 3 Self-motivation</p> <p><b>Unit 3 Information and Communication Technology Skills</b> Session 2 Performing Basic File Operations</p> <p><b>Unit 1: Introduction to Artificial Intelligence(AI)</b> EXCITE Session: Introduction to AI and setting up the context of the curriculum</p> <p>RELATE Video Session: To watch a video • Introducing the concept of Smart Cities, Smart Schools and Smart Homes</p> <p>PURPOSE Session: • Introduction to UN Sustainable Development Goals</p>	06       04	       02
3	August 2022	<p><b>Unit 1: Introduction to Artificial Intelligence(AI) – contd...</b></p> <p>POSSIBILITIES Session: Theme-based research and Case Studies • Learners will listen to various case-studies of inspiring start-ups, companies or communities where AI has been involved in real-life. • Learners will be allotted a theme around which they need to search for present AI trends and have to visualise the future of AI in and around their respective theme.</p> <p>AI ETHICS Video Session: Discussing about AI Ethics Recommended Activity: Ethics Awareness • Students play the role of major stakeholders, and they have to decide what is ethical and what is not for a given scenario. Session: AI Bias and AI Access • Discussing about the possible bias in data collection • Discussing about the implications of AI technology</p>	04	01

		<b>Unit 2:AI ProjectCycle</b> Session: Introduction to AI Project Cycle <ul style="list-style-type: none"> <li>• Problem Scoping</li> <li>• Data Acquisition</li> <li>• Data Exploration</li> <li>• Modelling</li> <li>• Evaluation</li> </ul>	04	01
4	September 2022	<b>Unit 2:AI ProjectCycle– contd...</b>  <b>Data Acquisition</b> Activity: Introduction to data and its types.  <b>Data Exploration</b> Session: Data Visualisation <ul style="list-style-type: none"> <li>• Need of visualising data</li> <li>• Ways to visualise data using various types of graphical tools.</li> </ul> <b>Modelling</b> Session: Decision Tree, <ul style="list-style-type: none"> <li>• To introduce basic structure of Decision Trees to students.</li> </ul> <b>HALF YEARLY EXAMINATION</b>	04	--
5	October 2022	<b>Unit 4 Entrepreneurial Skills</b> Session 1 Entrepreneurship and Society Session 2 Qualities and Functions of an Entrepreneur Session 3 Myths about Entrepreneurship Session 4 Entrepreneurship as a Career Option  <b>Unit 5 Green Skills</b> Session 1 Sustainable Development Session 2 Our Role in Sustainable Development	06	--
6	November 2022	<b>Unit 3: Neural Network</b> Session: Introduction to neural network <ul style="list-style-type: none"> <li>• Relation between the neural network and nervous system in human body</li> <li>• Describing the function of neural network.</li> </ul> <b>Unit 4: Introduction to Python</b> Recommended Activity: <ul style="list-style-type: none"> <li>• Introduction to programming using Online Gaming portals like Code Combat.</li> </ul> Session: <ul style="list-style-type: none"> <li>• Introduction to Python language</li> <li>• Introducing python programming and its applications</li> </ul>	04	04
7	December 2022	<b>Practical: Python Basics</b> <ul style="list-style-type: none"> <li>• Students go through lessons on Python Basics (Variables, Arithmetic Operators, Expressions, Data Types - integer, float, strings, using print() and input() functions)</li> <li>• Students will try some simple problem-solving exercises on Python Compiler.</li> </ul>	04	04
8	January 2023	Practical: Python Lists <ul style="list-style-type: none"> <li>• Students go through lessons on Python Lists (Simple operations using list)</li> <li>• Students will try some basic problem-solving exercises using lists</li> </ul>	04	04
9	February	<b>Revision and Project</b>		

	2023		
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**KENDRIYA VIDYALAYA SANGATHAN, RANCHI REGION**  
**CLASS-X : SPLIT-UP SYLLABUS : 2022-23**  
**SUB : ARTIFICIAL INTELLIGENCE (417)**  
**DISTRIBUTION OF MARKS AND PERIODS**  
**TOTAL MARKS: 100(THEORY-50+ PRACTICAL-50)**

	TERM	UNITS	NO. OF HOURS for Theory and Practical	MAX. MARKS for Theory and Practical
<b>PART A</b>		<b>Employability Skills</b>		
	<b>TERMI</b>	Unit 1: Communication Skills-II	10	5
		Unit 2: Self-Management Skills-II	10	
		Unit 3: ICT Skills-II	10	
	<b>TERM II</b>	Unit 4: Entrepreneurial Skills-II	15	5
Unit 5: Green Skills-II		05		
		<b>Total</b>	<b>50</b>	<b>10</b>
<b>PART B</b>		<b>Subject Specific Skills</b>		<b>Marks</b>
	<b>TERMI</b>	Unit 1: Introduction to Artificial Intelligence		10
		Unit 2: AI Project Cycle		10
		Unit 3: Advance Python*(*To be assessed in Practicals only)		
	<b>TERM II</b>	Unit 4: Data Science*(*To be assessed in Practicals only)		
		Unit 5: Computer Vision*(*To be assessed in Practicals only)		
		Unit 6: Natural Language Processing		10
Unit 7: Evaluation			10	
		<b>Total</b>		<b>40</b>
<b>PART C</b>		<b>Practical Work:</b>		20
		<ul style="list-style-type: none"> <li>• Unit 3: Advance Python</li> <li>• Unit 4: Data Science</li> <li>• Unit 5: Computer Vision</li> </ul>		
		Practical Examination		10
		Viva Voce		5
		<b>Total</b>		<b>35</b>
<b>PART D</b>		<b>Project Work/Field Visit/Practical File/Student Portfolio</b>		10
		Viva Voce		5
		<b>Total</b>		<b>15</b>
		<b>GRAND TOTAL</b>	<b>200</b>	<b>100</b>

**TERM WISE MARKS DISTRIBUTION**

UNIT	UNIT NAME	Term 1	Term 2
1	Unit 1: Communication Skills-II	5	--
2	Unit 2: Self-Management Skills-II		
3	Unit 3: ICT Skills-II		
4	Unit 4: Entrepreneurial Skills-II	--	5
5	Unit 5: Green Skills-II		
6	Unit 1: Introduction to Artificial Intelligence	10	--
7	Unit 2: AI Project Cycle	10	--
8	Unit 3: Advance Python*(*To be assessed in Practicals only)	--	--
9	Unit 4: Data Science*(*To be assessed in Practicals only)	--	--
	Unit 5: Computer Vision*(*To be assessed in Practicals only)	--	--
	Unit 6: Natural Language Processing	--	10
	Unit 7: Evaluation	--	10
	<b>TOTAL</b>	<b>25</b>	<b>25</b>

**PRACTICAL**

Sl	Unit Name	Marks
1	<b>Practical Work</b> <ul style="list-style-type: none"> <li>• Unit 3: Advance Python</li> <li>• Unit 4: Data Science</li> <li>Unit 5: Computer Vision</li> </ul>	20
2	Practical Examination	10
3	Viva Voce	5
4	Project Work / Field Visit / Practical File/Student Portfolio	10
5	Viva Voce	5

**MONTH-WISE DISTRIBUTION  
THEORY**

Sl	Month	Topic	Theory	Prac
1	April & May 2022	<b>Unit 1 Communication Skills:</b> Session 5 Barriers to Effective Communication Session 6 Writing Skills — Parts of Speech  <b>Unit 2 Self-management Skills</b> Session 4 Self-regulation — Goal Setting  <b>Unit 3 Information and Communication Technology Skills</b> Session 3 Computer Care and Maintenance	10	--
2	June & July 2022	<b>Unit 1 Communication Skills:</b> Session 7 Writing Skills — Sentences  <b>Unit 2 Self-management Skills</b> Session 5 Self-regulation — Time Management  <b>Unit 3 Information and Communication Technology Skills</b> Session 4 Computer Security and Privacy  <b>Unit 1: Introduction to Artificial Intelligence(AI)</b>  <b>Foundational concepts of AI</b> Session: What is Intelligence? Session: Decision Making. <ul style="list-style-type: none"> <li>● How do you make decisions?</li> <li>● Make your choices!</li> </ul> Session: what is Artificial Intelligence and what is not?	08	02
3	August 2022	<b>Unit 1: Introduction to Artificial Intelligence(AI) – contd...</b>  <b>Basics of AI: Let's Get Started</b> Session: Introduction to AI and related terminologies. <ul style="list-style-type: none"> <li>● Introducing AI, ML &amp; DL.</li> <li>● Introduction to AI Domains (Data, CV &amp; NLP)</li> </ul> Session: Applications of AI – A look at Real-life AI implementations Session: AI Ethics	05	01

		<p><b>Unit 2: AI Project Cycle</b>  Introduction  Session: Introduction to AI Project Cycle  Problem Scoping  Session: Understanding Problem Scoping &amp; Sustainable Development Goals  Data Acquisition  Session: Simplifying Data Acquisition</p>		
4	September 2022	<p><b>Unit 2: AI Project Cycle – contd...</b></p> <p>Data Exploration  Session: Visualising Data</p> <p>Modelling  Session: Introduction to modelling</p> <ul style="list-style-type: none"> <li>● Introduction to Rule Based &amp; Learning Based AI Approaches</li> <li>● Introduction to Supervised Unsupervised &amp; Reinforcement Learning Models</li> <li>● Neural Networks</li> </ul> <p>Evaluation  Session: Evaluating the idea!</p> <p><b>HALF YEARLY EXAMINATION</b></p>	02	06
5	October 2022	<p><b>Unit 3: Advance Python* (*To be assessed in Practicals only)</b>  Session: Jupyter Notebook  Session: Introduction to Python  Session: Python Basics</p> <p><b>Unit 4: Data Science* (*To be assessed in Practicals only)</b>  Introduction  Session: Introduction to Data Science  Session: Applications of Data Science  Session: Revisiting AI Project Cycle</p> <p>Concepts of Data Sciences  Session: Python for Data Sciences  Session: Statistical Learning &amp; Data Visualisation</p> <p>K-nearest neighbour model  Activity: Personality Prediction  Session: Understanding K-nearest neighbour model</p>	02	04
6	November 2022	<p><b>Unit 5: Computer Vision* (*To be assessed in Practicals only)</b>  Introduction  Session: Introduction to Computer Vision  Session: Applications of CV</p> <p>Concepts of Computer Vision  Session &amp; Activity: Understanding CV Concepts</p> <ul style="list-style-type: none"> <li>● Pixels</li> <li>● How do computers see images?</li> <li>● Image Features</li> </ul>	02	06

		<p>OpenCV Session: Introduction to OpenCV Hands-on: Image Processing</p> <p>Convolution Operator Session: Understanding Convolution operator Activity: Convolution Operator</p> <p>Convolution Neural Network Session: Introduction to CNN Session: Understanding CNN  <ul style="list-style-type: none"> <li>● Kernel</li> <li>● Layers of CNN</li> </ul> Activity: Testing CNN</p>		
7	December 2022	<p><b>Unit 6: Natural Language Processing</b> Introduction Session: Introduction to Natural Language Processing Session: NLP Applications Session: Revisiting AI Project Cycle</p> <p>Chatbots Activity: Introduction to Chatbots</p> <p>Language Differences Session: Human Language VS Computer Language</p> <p>Concepts of Natural Language Processing Hands-on: Text processing  <ul style="list-style-type: none"> <li>● Data Processing</li> <li>● Bag of Words</li> <li>● TFIDF</li> <li>● NLTK</li> </ul> </p>	06	02
8	January 2023	<p><b>Unit 7: Evaluation</b> Introduction Session: Introduction to Model Evaluation</p> <p>Confusion Matrix Session &amp; Activity: Confusion Matrix</p> <p>Evaluation Score Calculation Session: Understanding Accuracy, Precision, Recall &amp; F1 Score Activity: Practice Evaluation</p>	06	02
9	February 2023	<b>Revision and Project</b>		