JAIN VIDYA MANDIR SR. SEC. SCHOOL, SONIPAT

ANNUAL SYLLABUS PLANNER

SESSION: 2025

12TH ENGLISH (301)

SR. No.	Month	Topic	Art Integrated Projects	Methodology	Teaching/ Instructional Aids
1	**April**	**Ch-1. The Last Lesson** **Ch-2. The Lost Spring**	1. Group Discussion on 'Political enslavement is a curse on any Nation as it deprives it of its identity'. 2. Find out about the following (You may go to the internet, interview people, consult reference books or visit a library.)(a) Linguistic human rights(b) Constitutional guarantees for linguistic minorities in India. 1. Being the head boy/girl of your school, write a notice informing students about the 'Anti-Child-Labour' day going to be observed in your school. 2. Prepare an appealing poster on 'Child Labour'. 3. Write an article on " Dreams of the poor and their reality. 1. Sing a song or recite a poem showing your love	Brainstorming Demonstration Reading Explanation	Flamingo Reader, Vistas, English practice, test materials, chalk-duster smart class, greenboard, mindmap (self made), over head Projector etc.

		Writing Skills- Short Composition (Notice Writing) **P-1 (My Mother at Sixty Six)** **P-2 (Keeping Quiet)** **Ch-3. Deep Water**	and gratitude towards your mother. 2. Draw a portrait of your mother. 1. Prepare a model of a clock representing different motivation words on each number. 2. Collect the details of cause of war. 1. Doing well in any involves a great deal of struggle. Most of us are very nervous to begin with until gradually we overcome our fears and perform well. Write an essay of about five paragraphs recounting such an experience. Try to recollect minute details of what caused the fear, your feelings, the encouragement you got from others or the criticism. 2. Are there any water sports in India? Find out about the areas or places which are known for water sports and prepare catchy handouts for them.		
2			1. Prepare Rattrap using waste material.	Enquiry based Lectures,	Flamingo Reader, Vistas, English practice, test materials,

	May	**L-4 The Rattrap** **Supplementary** **L-1: The Third Level** **L-3(Journey to The End of The Earth)** **Writing Skills-**	2. Prepare a comparative analysis on the behaviour of the three characters of the story who deal with the Rattrap seller. 1. Worksheets on Listening task, Crisis Management, Creative writing to unfold logical thinking skills. 2. Jot down your medium of escape from real world.(Your pastime) 3. Prepare a collage on postal stamps. 1. Prepare a globe using newspapers. 2. Speech: Humans are the cause of the destruction of the Earth. 3. Draw a scene of Antarctica Continent. 1. Framing and preparing invitation cards for different purposes: a) Annual Day Celebration invitation card. b) Prepare an information brochure highlighting the main programs of your function. Letters: 1. Public Issues	Classroom discussion, Demonstration, Explanation, Reading, Debate, Problem solving, Reading	chalk-duster smartclass, greenboard, mindmap (self made), over head Projector etc. Video on Save Tiger PPT

		Short Composition (Invitation & Reply) **Long Composition Letters**	2. Problem/ Inconvenience 3. Job application+ Resume.		
3	**June**	**Summer Break**			
4	**July**	**Ch-5. Indigo** **P-3 A Thing of Beauty** **Supplementary** **Ch-4 The Enemy** **Unit Test-I**	1. Prepare scrapbook on Gandhi's contribution in Indian Freedom Movement. 2. Flow chart of the characteristics of a team leader. 1. PowerPoint Presentation on the beauty of Nature. 2. Recite the poem and make a video. 1. Critically analyse the importance of war. 2. Group discussion on importance of our helpers.	Debreifing, Debate, Classroom discussion, enquiry based Lecture, Values Classification, Brainstorming, Demonstration, Problem solving, Reading	Flamingo Reader, Vistas, English practice, test materials, chalk-duster smartclass, greenboard, mindmap (self made), over head Projector etc.
5		**Ch-6. Poets and Pancakes**	1. Present Mono Acting related to the characters	Debreifing, Debate,	Flamingo Reader, Vistas, English practice, test materials,

	August	**Writing Skills-** **Article, Report,**	mentioned in the chapter. 2. Write an article on the role of Indian Cinema. 3. Present a review on any comedy film/book. 1. Article Writing deriving ideas from interviews.	Classroom discussion, enquiry based Lecture, Values Classification, Brainstorming, Demonstration, Problemsolving, Reading	chalk-duster smartclass, greenboard, mindmap (self made), over head Projector etc. Documentary on the services of Doctors and Nurses during War times.
6	**September**	**Revision + Half Yearly Examination**			
7	**October**	**Ch-7. The Interview**	1. Interview a person whom you admire either in school or your neighbourhood and record it in writing/video. 2. Deliver important information from literature, history, science, or maths in the form of a newscast. Newscast can be prerecorded or presented live.	Enquiry based Lectures, Classroom discussion, Demonstration,	Flamingo Reader, Vistas, English practice, test materials, chalk-duster smartclass, greenboard, mindmap (self made), over head Projector etc. PPT presenting the synopsis Documentary on the success

		P-4. A Roadside Stand **Supplementary** **Ch-6. On the Face of It** **Ch-8. Going Places** **P-6. Aunt Jennifer's Tigers**	1. Make a list of the items which are offered at the roadside stands. 2. Declamation on Current Topics 1. Make a collage of any powerful physically challenged person who created history. 1. Group Discussion on Hero-worship is the most favourite pastime of most Indians. 2. Draw a sketch of your role model. 3. Write diary entry about the experience and what a waste is day dreaming. Prepare a model of football ground. 1. Draw a beautiful sketch of tiger. 2. . Quiz on poetic devices. 3. Present a mime on the condition of women in society.	Explanation, Reading,Debate, Problem solving, Reading	stories of physically challenged people.
8	**November**			Enquiry based Lectures,	Flamingo Reader, Vistas, English practice, test materials, chalk-duster smartclass,

				Classroom discussion, Demonstration, Explanation, Reading, Debate, Problem solving, Reading	greenboard, mindmap (self made), over head Projector etc.
9	**December**	**Supplementary** **Ch-8. Memories of Childhood** **Writing Skills-** **Report**	1. Jot down any of your childhood experience in the form of diary entry. 2. Is 21st century still facing the stigma of untouchability? Prepare a symposium on the same. 3. Draw the scene when Zitkala-Sa was being dragged out. 4. Prepare a skit on the scene which made Bama cheerful first and disappointed later. 1. Write a Report on a recent disaster with complimentary newspaper clip. 2. Present a special report in the form of newscast.	Debreifing, Debate, Classroom discussion, enquiry based Lecture, Values Classification, Brainstorming, Demonstration, Problem solving, Reading	Documentary on the great personalities who fought against Social injustice
10	**January**	**Revision + Pre Board Examination** **Practice for ASL**			
11	**February**	**RECAPITULATION and PREPARATION FOR FINAL ASSESSMENT**			
12	**March**	**FINAL EXAMINATION**			

Annual Planner -24-25

Yoga

XII

Month	Week	Topic	Sub- topics	**Art-Integrated**	Methodology	Teaching - Aids
APRIL	**week-1,2** **week-3,4**	Unit-1 Unit-2	Communication Skills Self Management Skills	**Practice of Halasana, Pawanmuktasana**	Explanation	Chalk Board , duster and Smart - class
May	**Week-1,2** **Week-3,4**	Unit-3 Unit-4	ICT-Skills Entrepreneurial Skills	**Practice of Asanas**	Yoga Activities Explanation	Chalk Board , duster and Smart - class
June		**SUMMER BREAK**				
July	**Week-1,2** **Week-3,4**	Unit-5 Revision	Green Skills Green Skills	**Practice of Dhyana Mudra**	Revise and Explanation	Chalk board , duster and Smart - class
August	**Week-1** **Week-2** **Week-3** **Week-4**	(Part-B) Unit-1	Introduction to Yoga and Yogic Practices-II	**1) Yoga Etymology, definition, Aim, objective and misconception text.** **2)Yoga Origin, History and Development.** **3)Rules and Regulation to be followed by yoga practitioners.** **4)Introduction to major schools of yoga (Janan, Yoga Bhakti,Yoga Karma, Patanjali, Hatha.** **5)Introduction to yogic practices (SukshamaVyayama, Surya Namaskar and Asanas).**		Chalk board , duster and Smart - class
September		**REVISION**				
October	**Week-1** **Week-2**	Unit-2	Introduction to Yoga Texts-II	**1)Introduction and study of patanjali Yoga sutra including memorization of selected Sutra.** **2)Introduction and study of Gheranda**		Chalk board , duster and Smart – class

	Week-3			**Samhita. 3)Introduction of HataPradpika. 4) Introduction and study of Bhagavad Gita including memorization of selected Slokas.**		
	Week-4					
November	**Week-1**	Unit-3	Yoga for health Promotion-II	**1) Brief introduction to human Body. 2) Role of Yoga for health promotion. 3)Yogic attitudes and practices. 4) Holistic approach of Yoga towards the health and diseases. 5) Introduction Yoga diet and its relevance and importance in Yoga Sadhana. 6) Dincharya and Ritucharya with respect of Yogic lifestyle.**		Chalk board ,duster and Smart – class
	Week-2					
	Week-3					
	Week-4					
December						
January		Practicals and lab Activities	Demonstration of skill competency in lab activites and Surya Namaskar			
February		Revision	Revision			

SUBJECT - Economics

Month	Topic	Subtopics	Methodology	Students Activity	Instructional Aids

APRIL Week 1 Week 2 Week 3 Week 4	**Part A: Macro Economics** Ch.1--Introduction Ch.2 –Some Basic concepts of Macro Ch. 3—Money **Part B:Indian Economic Development** Ch.1- IndianEconomy on the Eve of Independence	*Meaning of macroeconomics*Significance of macroeconomics *Classification of goods *Concept and components of consumption expenditure *Concept of investment *Concept of depreciation, stock and flow *Sectors of the Economy and Intersectoralflows *C-C economy and its problem *Types of money *Money supply and its measures *Overall features of Indian economy on the eve of Independence *State of Agricultural sector,Industrialsector,Foreign trade *Demographic profile * Positive and negative impacts of Britishers on Indian economy	Problem solving discussion	*Draw a circular flow of income in 2 sector Economy on A4 size sheet *Make a list of some stock and flow variables *Make a Map and mention India's Domestic Territory *Draw a pie chart on Occupational Structure on the eve of Independence	Chalk Duster Green board Educomp NCERT Textbooks
MAY Week 1 Week 2	Ch. 2 Five Year Plans in India	* Five year plans in India *Goals of planning in India *Achievement of the goals	Interactive lecture method	*Make a chart on all the five year plans and	Chalk Duster Green board Educomp

Week 3 Week 4	Ch.3.Agriculture Industry and Trade Ch. 6 Banking Ch–3 National Income and Related Aggregates	*Agriculture land reforms *Gains of Green revolution *limitations of Green revolution *industry, small scale industries *Silent features of growth strategy *Central Bank and its functions *Monetary policy and its instruments *Credit creation process by commercial banks *Concept of national income domestic and national income *Gross and net domestic products *Aggregates related to national income *Nominal and real GDP *GDP and welfare	Problem Solving and Case Study Method	their principal objectives * debate on good and bad impact of the strategy of industrialisation *Collect some pictures of ancient and modern form of money and paste it on a chart	NCERT Textbook
JUNE JULY Week 1	SUMMER BREAK Ch-4Economic Reforms Since 1991	*Meaning of economic reforms *Privatisation *Globalisation*Liberalisation *Critical appraisal of NEP	Interactive Explanation Method	*Group discussion on advantages and disadvantages of Globalisation	

		*Concept of demonetisation and GST			
Week 2 Week 3 Week 4	Ch.7Aggregate Demand and Aggregate Supply and Related Concepts Ch. 8 Short Run Equilibrium Output UT 1	*Aggregate demand and its components *Consumption function ,Saving function *APC,MPC,APS ,MPS *AD -AS Approach *Saving-lnvestmentApproach *Derivation of saving curve and consumption curve *lnvestmentMultiplier	Problem Solvingand Discussion Method	Draw break even point on a A4 sheet *Draw the diagrams of under employment equilibrium and over full employment equilibrium on a chart * make a flowchart of instruments of monetary and fiscal policy	Chalk Duster Green board Educomp NCERT Textbook
AUG. Week 1 Week 2	Ch.6 Human capital Formation in India Ch.7 Rural Development	*Sources of human capital formation *Significance and problems of human capital formation *Rural credit and agricultural marketing *Role of cooperative agriculture diversification*Emerging challenges ,organic farming	Discussion Method Interactive lecture Method Problem Solving Method	*Collect some pictures of channels of alternative marketing and make a collage	Green board Educomp NCERT Textbook

Week 3 Week 4	Ch. 9 Problem of Excess and Deficient Demand Ch.4 Methods of Calculating National Income	*Causes and consequences of excess and deficient demand *Measures to correct excess and deficient demand- government spending taxes and money supply *Value added method *Problem of double counting*Classification of factor income *Precautions regarding income method expenditure method ,Concept of GNP,GDP,NDP at MP and FC GDP and welfare	Problem Solving Method		
SEPT.	REVISION AND	HALF YEARLY EXAMS	…….		
OCT. Week 1	CH – Employment	*labour supply labour force, work force *Rate of participation *Occupational structure *Casualisation and informalisation of workforce	Problem solving Discussion Interactive lecture Method		Chalk Duster Green board Educomp NCERT Textbook

Week 2	Ch.10 Government Budget	*Objectives of government budget *structure of budget *Budget deficit*Balanced and unbalanced budget		*QuizOn different types of taxes	
Week 3	Ch. 11 Foreign Exchange Rate	*Flexible and fixed exchange rate *Managed floating *Components of demand and supply for foreign exchange	Problem solving Discussion	Group discussion on Gold Standard and Bretton wood System of Exchang rate	
Week 4	Ch.10 Environment and Sustainable Development	*Environment and significance of environment*Sustainable development and strategies, global warming	Interactive Explanation Method		
NOV Unit test					
Week 2	Ch.12 Balance of Payment	*Components of BOP account *equilibrium and discipline *Balance and Imbalance in BOP*Significance of BOP	Interactive Explanation and Case Study Method		

Week 3 Week 4 DEC	Ch.11Comparative Development Experience of India and it's Neighbour Revision	*Path of development of India China and Pakistan *Experience and achievements of India, China and Pakistan*Development Strategies and appraisal and conclusion	Story Telling Methodand Interactive lecture Method	*Compare the growth strategies of India, China and Pakistan and make a chart of their strategie	Green board Educomp NCERT Textbook
JAN FEB	REVISION WINTER BREAK REVISION AND	FINAL EXAM			

SUBJECT - INFORMATICS PRACTICES

MONTH	WEEK	TOPIC	SUBTOPIC	ACTIVITIES	METHODOLOGIES	INSTRUCTIONAL/TEACHING AIDS
April	WEEK-I	Data Handling using PANDAS-I	Introduction to Python Libraries, Series Data structure (creating series , series object attributes, additional functionality ,series objects attributes, operations on series Object etc.	Students will practice in Lab, they will use different practical programs related to Series understand the concepts , Creating Series objectsand perform different operations on objects etc.	• Illustration Method • Discussion Method • Brain storming Method • Illustration Method	Black board , chalk , duster, pointer, computer system, Python software Course book

	WEEK –II WEEK-III WEEK-IV	Data Handling using PANDAS-I Data Handling using PANDAS-I Data Handling using PANDAS-I	DataFrame (creating , displaying ,attributes, accessing, modifying rows columns, renaming columns Pandas Series Vs Numpyndarray, Pandas Vs Series Object, Pandas Vs dictionary, arithmetic operations on Dataframe Importing and exporting data between CSV files and DataFrames	Students will practice in Lab, they will use different practical programs related to DataFrameattributes and different methods Accessing data from dataframes (including slicing) Modifying and deleting data in data frame etc. a. Team Based Time Bound Exercise using different topics. b. Using arithmetic operation on data frame Students will do practical to import and export data using CSV and DataFrame	• Demonstration Method • Brain storming Method • Brain Storming • Discussion Method • Illustration Method	

May	WEEK-I WEEK-II WEEK-III WEEK-IV	Data Handling using Pandas-II Plotting Data using MatplotlibPyplot	Sorting a dataframe, Altering index, other dataframe operations Line chart Different attributes Bar chart, Histogram Different attributes Customizing the plot with different attributes	Students will do practical related to different topics 1. Time Bound Team Based Exercise related to different topics and other practical 2. Plotting different plots using different plot methods	• Lecture cum Illustration Method • Demonstration Method	White board, marker,duster, pointer,computer system, Python software,course book
June		Summer Break				
July	WEEK-I	Querying and SQL functions	Database concepts(Database, Relational database, RDBMS, Benefits of RDBMS, Relation /Table, key, Primary key, Candidate key, Alternate Key),Classification of SQL	1. Students will practice in Lab they will use different commands in their queries with the help of practical like: 2. Creating database and tables.	• Lecture cum Illustration Method • Discussion Method	Black board , chalk , duster, pointer, computer system, database software, Course book

	WEEK-II WEEK-III WEEK-IV	Querying and SQL functions	statements, MYSQL Elements, Creating & Accessing database, creating tables, inserting data into tables, function in MYSQL (String Functions : (concat, length,substr, instr, trim, ltrim, rtrim, left ,right) Numeric Functions : (round,truncate,sqrt, mod, pow, sign) , Date & Time functions Making simple queries using Alter Table, Select, Describe, Where, Order By, Between, In, Like, Update, Delete etc.	3. Display those records from employee table whose name starts with 'A' alphabet. 4. Display Annual salary of employees who are in department 20. 5. Add one more column Address in employee table. 6. Arrange the information in table in descending order by their name. etc.		
August	WEEK-I	Querying using SQL (Group By) , and SET operations	Aggregate functions (Max, Min, Avg,Sum,Count) Aggregate		• Lecture cum Illustration Method • Demonstration method	White board, marker,duster, pointer,computer system, database software,course book

	WEEK-II WEEK-III WEEK-IV	Querying using SQL (Group By) , and SET operations	functions and null values Group by , Having, Displaying data from multiple tables, Cartesian product or cross join of tables, Equi join, set operations(Union , Intersection,Minus)	a. Team Based Time Bound Exercise using different topics. b. Using group functions c. Differentiate scalar and group functions d. Using set operations Team Based Time Bound Exercise using different topics using set operations		
Sept.		Revision & Half yearly Examination				
Oct.	WEEK-I WEEK-II WEEK-III	Internet and Web	Introduction, types of networks, network deives, Networking topologies,	1. Find the IP address of at least five computers in School. 2. Find the name of Internet Service Provider of your School. 1. Search on internet about the features of mySQL and Netbeans. 2. Know about your school website host server 3. Make list of 5 websites and 5 webportals	1. Interactive Lecture Method 2. Demonstration Method • Lecture cum Discussion Method • Illustration Method	White board, marker,duster, pointer,computer system , internet explore software, course book White board, marker,duster, pointer,computer system , internet explore software, course book

	WEEK-IV		The internet, applications of internet, website, web page, web server, hosting of a website, browser,chat ,VOIP	4. Perform browser settings		
Nov.	WEEK-I WEEK-II WEEK-III WEEK-IV	Societal impacts	Introduction, digital footprints, digital society and netizen Creative commons, cyber crime Indian information technology Act E-waste : Hazards and management, Impact on health	1. Search online pictures 2. Create a power point presentation using some pics, and videos in it and give reference of used contents in it (i.e. search from internet) 3. Create a chart or power point presentation on CC commons	• Lecture cum Illustration Method • Brain Storming	White board, marker, duster, Computer system, internet, flash cards ,pointer, course book
Dec.	WEEK-I WEEK-II	Data Protection (Syllabus completion)	Threats to data Data protection solutions	Time Bound Team Based activity related to different topics	• Lecture Illustration Method • Brain Storming	White board, marker, duster, pointer, Internet , course book
Jan.		Revision & Pre-boardxams.				
Feb.		Practicals				

SUBJECT - TYPOGRAPHY AND COMPUTER APPLICATION

MONTH	WEEK	TOPIC	SUB TOPICS	ACTIVITIES	METHODOLOGIES	INSTRUCTIONAL/ TEACHING AIDS
April	Week –I	Correspondence	Introduction, Business Correspondence, Styles of Typewriting letters(Indented style, Block style /fully blocked style, Semi- Block style, Modified Block style, Hanging style ,Official Correspondence, Office Memorandum, Office Order, Demi- Official letter(DO) , Office Note.	Write business letters using Different styles of typewriting Letters.	• Lecture cum Illustration Method • Discussion Method • Brain Storming	Computer system with MS-Word, White board , marker, pointer, duster, course book
	Week -II	Manuscripts	Introduction, Meaning, Proof correction symbols, procedure of preparing a fair copy of the manuscript	Typewrite a fair copy of the Manuscript on computer by incorporating the correction.	• Lecture cum Discussion Method • Demonstration Method	
	Week -III	Excel	Introduction, Starting Excel, Components of Excel window, workbook and worksheet, (Opening, saving and	Prepare salary sheet by using Sum, min and max functions. Save and print the same sheet	• Lecture cum Discussion Method • Illustration Method • Brain Storming	Computer system with MS word, White board , marker, pointer, duster, flash cards course book Computer system , MS-Excel. White board , marker, pointer, duster

May	Week -IV Week -I	Excel Internet Search	printing a workbook), navigating the worksheet. Editing excel : Selecting cells and ranges, editing data, modifying a worksheet , Adding worksheets, rows and columns, Resizing rows and columns, moving and copying cells, freeze pane, Find and Replace data, Auto fill. Formatting Worksheets: Formatting cells, Formatting rows and columns, Formatting text, Formatting worksheets using Styles Toolbar, Auto formatting, AutoCorrect, Format painter. Formulas and Functions: Formulas, Operators, Creating a formula, AutoSum, Relative, Absolute and Mixed Referencing,	Prepare a report related to Sales of salesman using different functions and display pictorial representation of same. Search different topics on internet	• Lecture Method • Discussion Method • Demonstration Method	

	Week -II		Functions, Spell Checking. Using Charts: Components of a Chart, Chart types, creating a Chart. Search Engine, Types of Search Engine, Finding information through search engine, Different Search Engines, E-Commerce, Types of E-Commerce, E-Business			Computer ,intern et, White board , marker, pointer, duster
May	Week -III Week -IV	Email	E-mail Management: Importance of E-mail, E-mail Services, Opening an email account using Gmail. Composing an email, Sending an email with attachment, Formatting text. E-mail actions- Reading an email, replying an email, forwarding an email, printing an email and deleting an	Create your E-mail account On Gmail . Send an e-mail to your friend with at least two attachments. Download attachment from your inbox. etc	• Lecture cum Discussion Method • Demonstration Method	Computer ,intern et, White board , marker, pointer, duster

			email. Adding a signature. Creating folders/ labels for archiving emails.			
June		Summer Break				
July	Week -I Week -II	Power Point	Power Point Presentation: Starting PowerPoint, Creating a presentation, Opening an existing presentation. Viewing slides- NormalView, Slide Sorter View, Notes Page, Slide Show. Working with slides- Adding a slide, deleting a slide, Adding text, moving a text box, format text. Adding WordArt, Format WordArt. Adding shapes, image and clipart. Adding theme to slide, changing the background. Formatting presentation using slide master.	Prepare a PPT's on different topics (Digital India, Demonetization, Save Earth, Mahatma Gandhi, Missile Man Dr. APJ Abdul Kalam , Smart city etc.)	• Demonstration Method • Lecture cum Discussion Method • Lecture cum Illustration Method • Discussion Method	Computer system , MS-Power Point. White board , marker, pointer, duster

	Week -III Week -IV	Computer Virus	Objects and Animation: Creating Custom Animation Effects for objects, Modify Animation effects, Create a Slide Transition, Change the order of the slide, Slide Show Options, Rehearse Timing Computer Virus, Computer virus versus Biological virus, Computer virus classification– Boot sector virus, Companion virus, E-mail virus, Logic Bomb, Macro virus, Cross-site scripting virus, Worm, Trojan Horse. Effects of computer virus, the vulnerability of operating		• Lecture cum Illustration Method • Discussion Method	

			systems to virus, protection from virus and use of popular antivirus software.			
Aug.	Week -I Week -II Week -III Week -IV	Communication Skills-IV Green Skills-IV	Session 1- Active Listening Session 2 -Parts of Speech Session 3 - Writing Sentences Session 1 - Green Jobs Session 2 - Importance of Green Jobs	1. Demonstration of the key aspects of becoming active listener Telephone Game 2. Preparing posters of steps for active listening 1. Listing of green jobs and preparation of posters on green job profiles 2. Prepare posters on green jobs 3. Motivate students to plant a tree. 4. Motivate students to buy energy efficient products etc.	• Lecture cum Illustration Method • Discussion Method • Role Play Method • Lecture cum Illustration Method • Discussion Method	White board , marker, pointer, duster , facial expression chart White board , marker, pointer, duster, flash cards

Sep.		Half Yearly Exams.				
Oct.	Week -I Week -II Week -III Week -IV	ICT skills -IV	Session 1 - Getting Started with Spreadsheet Session 2 - Performing Basic Operations in a Spreadsheet Session 3 - Working with Data and Formatting Text Session 4 - Advanced Features in Spreadsheet Session 5 - Presentation Software Session 6 - Opening, Closing, Saving and Printing a Presentation 7. Session 7 - Working with Slides and Text in a Presentation Session 8 Advanced Features used in Presentation	1. Demonstration and practice on the following: ➢ Introduction to the spreadsheet application ➢ Listing the spreadsheet applications ➢ Creating a new ➢ worksheet Opening the workbook and enter text ➢ Resizing fonts and styles ➢ Copying and move the cell data ➢ Sorting and Filter the data ➢ Applying elementary formulas and functions ➢ Saving the spreadsheet in various formats	• Lecture cum Discussion Method • Demonstration Method	White board , marker, pointer, duster, computer system , open office

				2. Demonstration and practice on the following: Listing the Software, packages for presentation, Explaining the features of presentation, Creating a new Presentation, Adding a slide to Presentation., Deleting a slide, Entering and edit text, Formatting text, Inserting clipart and images, Sliding layout,		
Nov.	Week -I Week -II	Self Management Skills –IV	Session 1 - Motivation and Positive Attitude Session 2 - Result Orientation	1. Group discussion on identifying needs and desire 2. Discussion on sources of motivation and	• Lecture cum Illustration Method • Discussion Method	White board , marker, pointer, duster

	Week -III Week -IV		Session 3- Self-awareness Session 4	inspiration 3. Demonstrate the knowledge of different personality types		
Dec.	Week -I Week -II	Entrepreneurial Skills-IV (Syllabus completion)	Session 1- Entrepreneurship and Entrepreneur Session 2 Barriers to Entrepreneurship Session 3 Entrepreneurial Attitudes Session 4 Entrepreneurial Competencies	1. Administering self rating questionnaire and score responses on each of the competencies 2. Collect small story/ anecdote of prominent successful entrepreneurs 3. Identify entrepreneurial competencies reflected in each story and connect it to the definition of behaviorual competencies 4. Preparation of competencies profile of students 5. Games and	• Lecture cum IllustrationMethod • Discussion Method • Brain Storming	White board , marker, pointer, duster,flash cards

				exercises on changing entrepreneurial behavior and development of competencies for enhancing self-confidence, problem solving, goal setting, information seeking, team building and creativity		
Jan.		Revisions + Pre-Board Exams.				
Feb.		CBSE Practical + CBSE BOARD Exams				

SUBJECT - Economics

Month	Topic	Subtopics	Methodology	Students Activity	Instructional Aids
APRIL Week 1 Week 2	**Part A: Macro Economics** Ch.1--Introduction Ch.2 –Some Basic concepts of Macro	*Meaning of macroeconomics*Significance of macroeconomics *Classification of goods *Concept and components of consumption expenditure *Concept of investment *Concept of depreciation, stock and flow	Problem solving discussion	*Draw a circular flow of income in 2 sector Economy on A4 size sheet *Make a list of some stock and flow variables *Make a Map and mention	Chalk Duster Green board Educomp NCERT Textbooks

Week 3 Week 4	Ch. 3—Money **Part B:Indian Economic Development** Ch.1-IndianEconomy on the Eve of Independence	*Sectors of the Economy and Intersectoralflows *C-C economy and its problem *Types of money *Money supply and its measures *Overall features of Indian economy on the eve of Independence *State of Agricultural sector,Industrialsector,Foreign trade *Demographic profile * Positive and negative impacts of Britishers on Indian economy		India's Domestic Territory *Draw a pie chart on Occupational Structure on the eve of Independence	
MAY Week 1 Week 2 Week 3 Week 4	Ch. 2 Five Year Plans in India Ch.3.Agriculture Industry and Trade Ch. 6 Banking	* Five year plans in India *Goals of planning in India *Achievement of the goals *Agriculture land reforms *Gains of Green revolution *limitations of Green revolution *industry, small scale industries *Silent features of growth strategy *Central Bank and its functions *Monetary policy and its instruments *Credit creation process by commercial banks *Concept of national income	Interactive lecture method Problem Solving and Case Study Method	*Make a chart on all the five year plans and their principal objectives * debate on good and bad impact of the strategy of industrialisation *Collect some pictures of ancient	Chalk Duster Green board Educomp NCERT Textbook

	Ch–3 National Income and Related Aggregates	domestic and national income *Gross and net domestic products *Aggregates related to national income *Nominal and real GDP *GDP and welfare		and modern form of money and paste it on a chart	
JUNE JULY Week 1	SUMMER BREAK Ch-4Economic Reforms Since 1991	*Meaning of economic reforms *Privatisation *Globalisation* Liberalisation *Critical appraisal of NEP *Concept of demonetisation and GST	Interactive Explanation Method	*Group discussion on advantages and disadvantages of Globalisation	
Week 2 Week 3	Ch.7Aggregate Demand and Aggregate Supply and Related Concepts Ch. 8 Short Run Equilibrium Output	*Aggregate demand and its components *Consumption function ,Saving function *APC,MPC,APS ,MPS *AD -AS Approach *Saving-lnvestmentApproach *Derivation of saving curve	Problem Solvingand Discussion Method	Draw break even point on a A4 sheet *Draw the diagrams of under employment equilibrium and over full employm	Chalk Duster Green board Educomp NCERT Textbook

Week 4	UT 1	and consumption curve *lnvestmentMultiplier		ent equilibrium on a chart * make a flowchart of instruments of monetary and fiscal policy	
AUG. Week 1 Week 2 Week 3 Week 4	Ch.6 Human capital Formation in India Ch.7 Rural Development Ch. 9 Problem of Excess and Deficient Demand Ch.4 Methods of Calculating National Income	*Sources of human capital formation *Significance and problems of human capital formation *Rural credit and agricultural marketing *Role of cooperative agriculture diversification*Emerging challenges ,organic farming *Causes and consequences of excess and deficient demand *Measures to correct excess and deficient demand-government spending taxes and money supply *Value added method *Problem of double counting*Classification of factor income	Discussion Method Interactive lecture Method Problem Solving Method Problem Solving Method	*Collect some pictures of channels of alternative marketing and make a collage	Green board Educomp NCERT Textbook

		*Precautions regarding income method expenditure method ,Concept of GNP,GDP,NDP at MP and FC GDP and welfare			
SEPT.	REVISION AND	HALF YEARLY EXAMS	………….		
OCT. Week 1	CH – Employment	*labour supply labour force, work force *Rate of participation *Occupational structure *Casualisation and informalisation of workforce	Problem solving Discussion	*QuizOn different types of taxes	Chalk Duster Green board Educomp NCERT Textbook
Week 2	Ch.10 Government Budget	*Objectives of government budget *structure of budget *Budget deficit*Balanced and unbalanced budget	Interactive lecture Method	Group discussion on Gold Standard and Bretton wood System of Exchang rate	
Week 3	Ch. 11 Foreign Exchange Rate	*Flexible and fixed exchange rate *Managed floating *Components of demand and supply for foreign exchange	Problem solving Discussion		
Week 4	Ch.10 Environment and Sustainable Development	*Environment and significance of			

NOV Unit test Week 2	Ch.12 Balance of Payment	environment*Sustainable development and strategies, global warming *Components of BOP account *equilibrium and discipline *Balance and Imbalance in BOP*Significance of BOP	Interactive Explanation Method Interactive Explanation and Case Study Method		
Week 3 Week 4	Ch.11Comparative Development Experience of India and it's Neighbour Revision	*Path of development of India China and Pakistan *Experience and achievements of India, China and Pakistan*Development Strategies and appraisal and conclusion	Story Telling Methodand Interactive lecture Method	*Compare the growth strategies of India, China and Pakistan and make a chart of their strategie	Green board Educomp NCERT Textbook
DEC JAN FEB	REVISION WINTER BREAK REVISION AND	FINAL EXAM			

SUBJECT- Mathematics

MONTH	TOPIC	SUB-TOPICS	ACTIVITY	METHODOLOGY	TEACHING ID/ INSTRUCTIONAL AID

APRIL WEEK 1 AND 2	RELATION AND FUNCTION INVERSE TRIGONOMETRIC FUNCTION	Types of relation: reflexive, symmetric ,transitive and equivalence relations. one to one and onto function , Definition, range ,domain ,principal value branch .graph of trigonometric function	Using thread /wool 1.To demonstrate a function which is not one-one but is onto 2. show equivalence relations 3.one-one 4 .onto Use sketch/thread/graph 1.To draw the graph of sin inverse x using graph of sin x 2. $\cos^{-1}$. show unit circle graphically	explanation by diagram, learning by doing, problem solving	Chalk board,duster,smart class
APRIL WEEK 3 AND 4	MATRICES **DETERMINANT**	Concept, notation, order, equality, types of matrices. transpose, symmetric, skew symmetric matrices operation on matrices: addition, multiplication concept of row and column invertible matrices Determinant of a square matrix, properties, minors, cofactors and application of determinants in finding area of a triangle, adjoint and inverse, consistency, inconsistency, no. of solutions of linear equation on in two variable using inverse Continuity and differentiability chain rule, derivatives of inverse	1.To relate the matrices with real life. 2. design with the help of row /column 3.diagram to show different type of matrix Make a ppt/ diagram to show determinant and its properties	problem solving ,Explanation.	Chalk board, duster, smart class.

MAY WEEK 1 WEEK 2	**CONTINUIT-Y AND DIFFERENTIA BILITY**	trigonometric, implicit functions ,concept of exponential and logarithmic function ,second order derivative,	. To verify rolle's theorem . 1. show what is continuity through representation of any curve		
MAY *JULY* *WEEK 1* *WEEK 2*	**APPLICATION S OF DERIVATIVES** **Integrals**	Rate of change of bodies, increasing/decreasing functions, maxima and minima, simple problems basic principles and understanding of the subject as well as real life situation Integration as inverse process of differentiation. integration by substitution, different forms of integration, definite, basic properties of definite integrals and evaluation of definite integrals, fundamental theorem of calculus (without proof).	1. To show the concept of decreasing and increasing function through data analysis /CURVE 2 . To show the concept of absolute max. and minimum through graphics 3. To construct an open box of max. volume from a given rectangular sheet by cutting equal square from each corner Make a beautiful chart of all the formulas of integrations	Inductive approach, Discovery Method	Chalk board, Duster, Smart Class
UNIT TEST					
JULY *WEEK 3* *WEEK 4* *AUGUST* *WEEK 1* *WEEK 2*	**APPLICATION S OF THE INTEGRALS** **DIFFERENTIA L EQUATIONS**	Application in finding the area under simple curves, especially lines, circles/parabola /ellipse (in standard form only), definition, order definition ,order and degree, general and particular solutions of a differential equation formation of differential	1.Draw beautiful diagram of parabola and line 2.Ellipse and line to show area under curve 3.2 circle and shaded region that contain	Explanatio n, Brain storming Explanatio n, Brain storming	Chalk board, Duster, Smart Class

		equation by method of sepration ,solution of homogenious differential equation ,solution of linear differential equation dy/dx+py=q and dx/dy+px=q	common area through equation of circle		
SEPTEM-BER	Revision and Half Yearly Exams				
OCTOBE R *WEEK 1* *WEEK 2* *WEEK 3* *WEEK 4*	**VECTORS** **Three-dimensional Geometry**	Vectors and scalers, magnitude ,directrion of vector,direction ratio and cosines ,types of vectors,component ,addition and subtraction of vectors,properties of dot product and cross profduct,application of scalar product , vector product, geometetrical interpretation Direction cosines and direction ratio of a line joining two points, Cartesian equation and vector equation of line ,shortest distance,angle between two lines,skew lines.	1. To verify geometric ally that vector c×(a+b)=c× a+c×b 1. Find the shortest distance between two skew lines	Discovery Method, Problem Solving, Explanatio n, Problem Solving	Chalk board, Duster, Smart Class, Models
NOVEM-BER *WEEK 1* *WEEK 2* *WEEK 3* *WEEK 4*	**Linear programming** **PROBALITY**	Introduction, related terminology such as constraints,objective function, optimization, different types of L.P ,mathematical formulations of l.p, graphical method of solution for problem in two variable ,feasible and in feasible solutions, optimal feasible solutions Conditional probability, multiplication theorem, indepent event, total probability, bayes theorem	Project : To minimize the cost of food ,meeting the dietary requirements of staple food of the adolescent student of your school	Project, Discussion , Problem Solving,	Chalk board, Duster, Smart Class

DECEM-BER	**PROBABILITY**	Random variable and its probability distribution, mean of random variable.	1.To explain the computation of conditional 2. probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice. 3.Show outcomes of coin ,dice, cards through diagram or real objects	Problem Solving, Explanation	Chalk board, Duster, Smart Class
JANUARY	Pre-board 1				
FEBRU-ARY	REVISION AND ANNUAL EXAMS				
MARCH	ANNUAL EXAMS				

Subject: -Psychology

Month	Week	Topic	Sub -Topic	Teaching Aids
April	Week -1	**Variations in Psychological Attributes The topics in this unit are: 1 Psychology?**	**1. Introduction 2. Individual Differences in Human Functioning 3. Assessment of Psychological Attributes.**	Blackboard, Chalk , Duster, Course Book
	Week - 2		**4. Intelligence 5. Psychometric Theories of Intelligence, Information** • **Processing Theory: Planning, Attention-arousal and** • **Simultaneous successive Model of Intelligence,**	

			• **Triarchic Theory of Intelligence; Theory of Multiple** • **Intelligences.**	
	Week -3		**6. Individual Differences in Intelligence** **7. Culture and Intelligence** **8. Emotional Intelligence**	
	Week -4		**9. Special Abilities: Aptitude: Nature and Measurement** **10.Creativity**	
May	Week - 1	**Self and Personality**	**1. Introduction** **2. Self and Personality**	Blackboard, Chalk , Duster, Course Book
	Week -2		**3. Concept of Self** **4. Cognitive and Behavioural aspects of Self Psychology.**	
	Week -3		**5. Culture and Self** **6. Concept of Personality**	
	Week -4		**7. Major Approaches to the Study of Personality** • **・Type Approaches** • **・Trait Approaches** • **・Psychodynamic Approach and Post Freudian** • **Approaches** • **・Behavioural Approach** • **・Cultural Approach** • **・Humanistic Approach** **8. Assessment of Personality** • **・Self-report Measures** • **・Projective Techniques** • **・Behavioural Analysis**	
June			**Summer Break**	
July	Week-1	**Meeting Life Challenges**	**1. Introduction** **2. Nature, Types and Sources of Stress**.	Blackboard, Chalk , Duster, Course Book

	Week-2		**3. Effects of Stress on Psychological Functioning and** • **Health** • **Stress and Health** • **General Adaptation Syndrome** • **Stress and Immune System** • **Lifestyle**	
	Week -3		**4. Coping with Stress** • **Stress Management Techniques**	
	Week -4		• **5. Promoting Positive Health and Well-being** **・Life Skills** **・Positive Health**	
August	Week-1	**Psychological Disorders**	**1. Introduction** **2. Concepts of Abnormality and Psychological Disorders** **・Historical Background**	Blackboard, Chalk , Duster, Course Book
	Week-2		**3. Classification of Psychological Disorders** **4. Factors Underlying Abnormal Behaviour**	
	Week-3		**5. Major Psychological Disorders** **・Anxiety Disorders** **・Obsessive-Compulsive and Related Disorders** **・Trauma-and Stressor-Related Disorders** **・Somatic Symptom and Related Disorders** **・Dissociative disorders** **・Depressive Disorder** **・Bipolar and Related Disorders**	
	Week-4		**・Schizophrenia Spectrum and Other Psychotic Disorders**	

			· Neurodevelopmental Disorders **· Disruptive, Impulse-Control and Conduct Disorders** **· Feeding and Eating Disorders** **· Substance Related and Addictive Disorders.**	
September	Revision		Half Yearly	
October	Week- 1	**Therapeutic Approaches**	**1. Nature and Process of psychotherapy** **· Therapeutic relationship** **2. Types of Therapies** **· Behaviour Therapy** **· Cognitive Therapy** **· Humanistic-Existential Therapy** **· Alternative Therapies**	Blackboard, Chalk , Duster, Course Book
	Week-2		**Factors contributing to healing in Psychotherapy** **· Ethics in Psychotherapy** **3. Rehabilitation of the Mentally Ill**	
	Week -3	**Attitude and Social Cognition**	**1. Introduction** **2. Explaining Social Behaviour** **3. Nature and Components of Attitudes**	
	Week-4		**4. Attitude Formation and Change** **· Attitude Formation** **· Attitude Change**	

			· Attitude-Behaviour Relationship **5. Prejudice and Discrimination** **6. Strategies for Handling Prejudice.**	
November	Week -1	**Social Influence and Group Processes**	**1 Social Influence and Group Processes** **The topics in this unit are:** **1. Introduction** **2. Nature and Formation of Groups**	Blackboard, Chalk , Duster, Course Book
	Week-2		**3. Type of Groups** **4. Influence of Group on Individual Behaviour** **· Social Loafing** **· Group Polarisation.**	
	Week-3	Practical	**5.Practical 30 Marks** **A. Development of case profile:** **Using appropriate methods like interview, observation & psychological tests.**	
	Week-4		**B. Test administration:** **Students are required to administer and interpret five psychological tests related to various psychological attributes like intelligence, aptitude, attitude, personality, etc..**	
DECEMBER to MARCH	Revision	**Preboard**	Annual examination	

Biology (044)

Months	Working Days	Lesson No & Name	Activity
April	**Week-1 To Week-4**	Introduction of the syllabus and practicals Sexual reproduction in flowering plant	Study pollen germination by temporary slide
			Flowers adapted to pollination by different agencies
May	**Week-1,2**	3.Human Reproduction	Identification of stages of gamete development. and Meiosis in onion bud cell through permanent slide
	Week-3,4	4.Reproductive health	Identification of stages of gamete development. and T.S. blastula
June	**Break**		
July	**Week- 1,2**	5. Principles of Inheritance and Variation	Mendelian inheritance using seeds of different colour/size of pea plant
	Week-3	6.Molecular Basis of inheritance	To study pedigree charts of genetic traits
	Week-4	7.Evolution	
August	**Week-1,2**	8. Human Health and disease	Identification of common disease

			causing organisms.
			Exercise on controlled pollination
	Week-2,3	10.Microbes in human welfare	Pollen germination on stigma through permanent slide
September	**Half yearly**		
October	**Week1,2**	11.Principles and process of biotechnology	To study homologous and analogous organs
	Weel-2,3	12.Application of biotechnology in health and agriculture	Isolation of DNA
November	**Week-1,2**	13.Organisms and environment	Study of mitosis in onion root tip
	Week-3,4	14.Ecosystems	Model specimen to show symbolic association
November	**Week-1,2**	14.Ecosystems (contd)	Study of different plant populations density by quadrat method

	Week-3,4	15.Biodiversity and its conservation	Study of different plant populations frequency by quadrat method
December		Revision	Investigatory Project
January		Pre-boards	
February		Practicals	
March		Final practicals	

SUBJECT – CHEMISTRY

MONTH	**Week**	**TOPIC**	SUBTOPIC	ACTIVITIES	METHODOLOGIES	TEACHING AIDS
April	1st week 2nd week	SOLUTIONS	Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor.	Make a poster showing importance of osmosis Make an assignment on functioning of RO Make an assignment on functioning of RO Draw a table depicting different types of solution	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board
April	3rd week 4th week	ELECTROCHEMISTRY	Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration, Kohlrausch's Law,	Draw a diagram of an electrochemical cell on chart paper Draw a diagram of wheatstone bridge principle on A4 size sheet Make an assignment on lead storage batteries	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board

			electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion..	Draw different types of of cells used by us also classify them as electrochemical or electrolytic cell.		
May	1st week 2nd week 3rd week 4th week	CHEMICAL KINETICS	Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; molecularity of a reaction, rate law and specific rate constant, integrated rate equations half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation	Make a report on the role of catalyst in industries. Diagrammatically show the factors affecting rate of reaction Graphically show the role of activation energy in a reaction on a chart. List out the formulas used in this chapter on an A4 size sheet.	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board
July	1st week	d and f BLOCK ELEMENT	General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals – metallic character, ionization enthalpy,	Make a report on why transition elements act as good catalysts. Make a figure showing chemical reactions of	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board

	2nd week 3rd week 4th week		oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of K2Cr2O7 and KMnO4. Lanthanoids - Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences. Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids	the lanthanoids. Write applications of d and f block elements on A4 sheet. Make a graph on A4 sheet showing trends in m.pt. of transition elements		
August	1st week 2nd week	COORDINATION COMPOUNDS	Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).	Draw the shapes of different coordination polyhedron A4 size sheet. List out the definition of all the terms pertaining to coordination compounds on a chart. Show geometrical isomerism on a piece of chart taking any example. one piece of chart show d orbital splitting in an	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board

				octahedral crystal field and a tetrahedral crystal field.		
August	3rd week 4th week	HALOALKANES AND HALOARENES	Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.	Write all the name reactions in this chapter on a chart paper. On a chart paper show nucleophilic substitution reactions in halo alkane and haloarene. make an assignment on stereochemical aspects of nucleophilic substitution reactions. Make a report on polyhalogen compounds and their significance.	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board
October	1st week	ALCOHOLS, PHENOLS AND ETHERS	Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference	Write all the name reactions in the chapter on a chart paper. Show the mechanism of acid catalysed hydration of alkenes for the	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board

	2nd week		to methanol and ethanol. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophillic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses	preparation of alcohols on an A4 size sheet. Draw the structures of methanol phenol and methoxymethane on an A4 size sheet Show dehydration of alcohols on an A4 size sheet		
October	3rd week 4th week	ALDEHYDES, KETONES AND CARBOXYLIC ACIDS	Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses. Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses	Write the IUPAC names of at least 10 aldehydes ketones and carboxylic acids on a chart paper. Write all the name reactions involved in this chapter on a piece of chart. Draw orbital diagram for the formation of carbonyl on an A4 size sheet write various methods involved for the preparation of aldehydes	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board

				and ketones on a chart paper.		
November	1st week 2nd week 3rd week 4th week	AMINES	Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines. Diazonium salts: Preparation, chemical reactions importance in synthetic organic chemistry	Write various methods involved for the preparation of amines on a piece of chart Make a report on the structure basicity relationship of amines Assignment on electrophilic substitution of amines. Make a report on importance of diazonium salts in synthesis of aromatic compounds	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board
December	1st week 2nd week	BIOMOLECULES	Carbohydrates - Classification (aldoses and ketoses), monosaccahrides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins -Elementary idea of - amino acids,	Make a assignment on structure of glucose Draw the structure of starch cellulose on a chart Make a report on globular proteins	• Discussion • Explanation • observation	Chalk, duster, green board, model, smart board

	3rd week 4th week		peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins enzymes. Hormones - Elementary idea excluding structure. Vitamins - Classification and functions. Nucleic Acids: DNA and RNA.	on a chart write some important vitamins their sources and their deficiency diseases.		

SUBJECT - PHYSICS

MONTH	TOPIC	SUB-TOPIC	ACTIVITY	METHODOLOGY	TEACHING-AIDS
MONTH	TOPIC	SUB-TOPIC	ACTIVITY	METHODOLOGY	TEACHING-AIDS
APRIL MAY	ELECTRIC CHARGES AND FIELDS ELECTROSTATIC POTENTIAL AND CAPACITANCES ELECTROSTATIC POTENTIAL AND CAPACITANCES	Electric charges, Conservation of charge, Coulomb's law-force between two- point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside). Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor (no derivation, formulae only).	To find the value of *v* for different values of *u* in case of a concave mirror and to find the focal length.	EXPLANATION DISCUSSION OBSERVATION	CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD

MONTH	TOPIC	SUB-TOPIC	ACTIVITY	METHODOLOGY	TEACHING-AIDS
MAY JUNE JULY	CURRENT ELECTRICITY CURRENT ELECTRICITY MOVING CHARGES AND MAGNETISM	Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; SUMMER VACATIONS Ohm's law, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge. Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight solenoid (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.	To determine resistivity of two / three wires by plotting a graph for potential difference versus current. To find resistance of a given wire / standard resistor using metre bridge. To verify the laws of combination (series) of resistances using a metre bridge. **OR** To verify the laws of combination (parallel) of resistances using a metre bridge.	EXPLANATION DISCUSSION OBSERVATION EXPERIMENTATION	CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD

AUGUST	MAGNETISM AND MATTER	Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.		EXPLANATION DISCUSSION OBSERVATION EXPERIMENTATION	CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD
	ELECTROMAGNETIC INDUCTION	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction. Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.		EXPLANATION DISCUSSION OBSERVATION	CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD
SEPTEMBER	ELECTROMAGNETIC WAVES	Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.			
SEPTEMBER	HALF YEARLY EXAMINATIONS				

MONTH	TOPIC	SUB-TOPIC	ACTIVITY	METHODOLOGY	TEACHING-AIDS
OCTOBER	RAY OPTICS AND OPTICAL INSTRUMENTS	Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.	To find the focal length of a convex lens by plotting graphs between *u* and *v* or between *1/u* and *1/v*.	EXPLANATION DISCUSSION OBSERVATION EXPERIMENTATION	CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD
	WAVE OPTICS	Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width (No derivation final expression only), coherent sources and sustained interference of light, diffraction due to a single slit, width of central maxima (qualitative treatment only).	To determine angle of minimum deviation for a given prism by plotting a graph		
NOVEMBER	DUAL NATURE OF RADIATIONS AND MATTER	Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.	To find the refractive index of a liquid using convex lens and plane mirror.	EXPLANATION DISCUSSION OBSERVATION	CHALK,DUSTER, GREEN BOARD,MODEL, SMART BOARD

MONTH	TOPIC	SUB-TOPIC	ACTIVITY	METHODOLOGY	TEACHING-AIDS
DECEMBER	ATOMS AND NUCLEI	Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model of hydrogen atom, Expression for radius of nth possible orbit, velocity and energy of electron in his orbit, of hydrogen line spectra (qualitative treatment only). Composition and size of nucleus, nuclear force Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion.		EXPLANATION DISCUSSION OBSERVATION	
	ELECTRONIC DEVICES	Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier.	To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias.	EXPLANATION DISCUSSION OBSERVATION EXPERIMENTATION	
JANUARY	PRE- BOARD EXAM				