

MONTH	NAME OF THE UNIT / CHAPTER/TOPIC	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	SUGGESTED ACTIVITIES	ART INTEGRATED ACTIVITY/ART INTEGRATED PROJECT	P R A C T I C A L S	ASSESSMENT (INCLUDE 50% COMPETENCY BASED ASSESSMENT)	TIME SPENT FOR PROJECT AND HOME WORK
APRIL	THE LAST LESSON	4.5 hrs.	Students will understand the theme and central idea of the story Students will be able to analyze the characters and their role in the story	Group Discussion on the characters and their roles in the story.	Art Integrated Learning - Project Make a COLLAGE /PPT/ VIDEO on any one of.	C u r r e n t T o p i c s	Compare and contrast the last lesson with another literary work you've studied. What similarities and differences do you notice in terms of themes & character	9hrs
	MY MOTHER AT SIXTY-SIX	2.25 hrs	Students will be able to identify and explain the major themes and symbols in the poem.	Discuss the emotions of the old people at home- their loneliness and expectations	the following, supporting it with pictures and sketches		Rewrite a stanza of the poem from the perspective of the mother, expressing her thoughts and feelings about the journey and her daughter's presence.	
	NOTICE WRITING	2.25 hrs	Students will be able to identify the key components of a notice. Students will be able to write a notice effectively.	Group activity: Students will work in groups to create a notice for a particular event or announcement.	Take ideas from 'Lost Spring 'OR ' On the Face of It' .		Write a notice for a real-life situation.	
	THE THIRD LEVEL	4.5hrs	Understanding the theme and setting of the story.	Writing alternate endings to the story. Imagining what it would be like to go back in time to a different era.	1.Child labour – condition in my city and ways of combating it 2)Differently-Abled People who emerged as achievers defying all the		Put yourself in the shoes of the protagonist, Charley, as he grapples with the idea of the third level. How does his desire to escape to a different time and place reflect universal human desires for nostalgia and a simpler life?.	
JUNE	LOST SPRING	4.5hrs	Develop an understanding of the harsh realities of poverty and its impact on the lives of children.	Organize a role-play activity where the students can act out the characters in the chapter.	odds that life threw at them.(any one)		Imagine you are a social worker tasked with addressing the issue of child labour in the community depicted in "Lost Spring." What strategies would you propose to tackle this complex problem and create a better future for the children?	6hrs
	ARTICLE WRITING	4.5hrs	Analyze and evaluate different types of articles.	Students will analyze and evaluate different types of articles from various sources.			Article- Vocational Education to be made essential for all children.	
	READING COMPREHENSION	2.25hrs						
	THE TIGER KING	6hrs	Students will be able to analyze the characters and their actions. Students will be able to identify and analyze the use of satire in the story	Group activity: Create a satirical cartoon or comic strip based on a scene from the story.			Write a paragraph analysing the use of satire in "The Tiger King" and its impact on the readers.	

JULY	KEEPING QUIET(Poem)	2.25hrs	Understand the central theme and message of the poem. Analyze the use of imagery, metaphors, and symbolism in the poem.	Group Work - Discussion about students' daily routines and how they feel about the pace of their lives.		Compose a creative writing piece inspired by the poem.	9hrs
PT 1 1.The Last Lesson 2.My Mother at Sixty-Six 3.The Third Level Notice	DEEP WATER	4.5hrs	To analyse the fact that anyone can achieve the target through proper training	Discussion on the level of confidence of the author in making himself a great swimmer.		Imagine you are a counsellor providing guidance to the protagonist in "Deep Water." What cognitive-behavioural techniques would you recommend to help him confront and overcome his fear of water?.	.
	INVITATION	6hrs	Understand the difference between formal and informal invitations	For a project, students could work on designing invitations for a school event		Create a formal or informal invitation for a fictional event.	.
	JOURNEY TO THE END OF THE EARTH	4.5hrs	. To realize the impact that human intervention could have on nature	Quiz and tests		MCQ questions based on the text.2.Five Short answer questions (30-40 words)	
AUGUST	A THING OF BEAUTY	2.25	Analyse the poem "A Thing of Beauty" and its themes. Understand the use of various poetic devices in the poem.	Writing their own poem on the theme of beauty or creating a visual representation of a line from the poem.		MCQ questions based on the text. 2.Five Short answer questions (30-40 words)	7hrs
	THE RATT RAP	6hrs	Identify the key themes and motifs in the story. Analyze the characters and their motivations.	Students will write an alternate ending to the story Character's motivations and the themes of the story must be taken in consideration when creating their ending.		Do you find people like Edla in the society? How could one play a pivotal role in awakening the essential goodness in a person?	
	LETTER TO EDITOR	4.5hrs	Analyze and evaluate different perspectives on a current event or issue	Assign a current event or issue for students to write .		Write a letter to the editor on a current event or issue.	
	THE ENEMY	6hrs	Understand the theme and message of the chapter Analyse the characters and their actions	Role-play of the characters		Five Short answer questions (30-40 words) 3. Two long answer questions. (100-120 words)	
	APPLICATION FOR JOB	4.5hrs	Learn how to write a cover letter and resume that highlight relevant skills and experiences.	Resume Writing: A resume template will be provided to the students and ask students to fill in their relevant education, skills, and accomplishments		Students will be assigned the task to create a final draft of their resume and cover letter.	
	READING COMPREHENSION	2.25hrs					

ACADEMIC PLAN :2024-25

CARMEL CONVENT SR SEC SCHOOL, RATANPUR, BHOPAL.

STD: XII

SUBJECT: ENGLISH

SEPTEMBER TERM 1 (All topics covered from April to August)	A ROADSIDE STAND (Poem)	2.25hrs	Understanding the theme and message of the poem Analyzing the literary devices used in the poem	Class discussion about the various ways in which roadside stands reflect the economic and cultural realities of their communities, both in the poem and in real life.		Debate- The role of poetry in addressing social and economic issues	. TERM 1 (All topics covered from April to August)
	INDIGO	6hrs	Students will be able to identify the resistance movements against the indigo cultivation system.	Conduct a debate on the indigo cultivation system and its impact on Indian society.		Analyze a specific case study related to indigo cultivation in India. Like Champaran Satyagraha	9hrs
	ON THE FACE OF IT	6hrs	Understand the themes and characters	Discuss on the challenges faced by the physically challenged people.		.MCQ questions based on the text. 2.Five Short answer questions (30-40 words)	
OCTOBER	POETS AND PANCAKES	6hrs	Understand the theme and style of the chapter .	Discussion based on – Today's film technology compared with that of the early days of Indian cinema.		You are the author of "Poets and Pancakes", write a letter to a fellow poet, expressing your thoughts and feelings about the challenges of being a writer.	9hrs
	THE INTERVIEW -I, THE INTERVIEW -II,	6hrs	Develop an understanding of the importance of interviews in our personal and professional lives.	Conducting mock interviews with peers and providing feedback to improve communication skills.		If you encountered a difficult or unexpected question during an interview, how would you approach finding how would you approach finding a solution or providing a satisfactory response?	
	REPORT WRITING	4.5hrs	Understand the purpose and structure of a report.	Students will be asked to gather reports from magazines and newspapers.		Write a report on the newly released movie.	
	GOING PLACES,	6hrs	To analyse the unrealistic	Discuss on the dreams and disappointments are all in the mind of teenagers		Discuss the significance of the title "Going Places" in relation to the protagonist's internal struggles and aspirations	
NOVEMBER	AUNT JENNIFER'S TIGERS (Poem)	2.25hrs	To analyse the status of women.	Discussion on women empowerment in the modern days		Contrast Aunt Jennifer's situation with that of another character from literature who faces societal oppression. What similarities and differences do you observe in their experiences and responses?	9hrs
	MEMORIES OF CHILDHOOD,	6hrs	Students will be able to compare and contrast the author's experiences with their own childhood experiences.	Have students write and perform a monologue as if they were the author, conveying her memories of childhood.		Write a reflective essay on your own memories of childhood, using the author's chapter as a model	
		4.5hrs	Practice of ALS				2hrs
		7 hrs	REVISION				4.5hrs
DECEMBER			FINAL EXAM	FULL SYLLABUS			

ACADEMIC PLAN :2024-25
CARMEL CONVENT SR SEC SCHOOL, RATANPUR, BHOPAL.

STD: XII
SUBJECT: ENGLISH

		6 hrs	REVISION					5hrs
JANUAR Y			PRE BOARD EXAM	FULL SYLLABUS				
		4.5hrs	ALS					
FEBRUA RY		BOARD	EXAM					

NAME OF THE SUBJECT TEACHER: MARY THOMAS

SIGNATURE OF THE SUBJECT COORDINATOR:

CARMEL CONVENT SR.SEC SCHOOL RATANPUR BHOPAL YEAR PLANNER 2024-25

CLASS - XII

SUBJECT - Mathematics

Month	Name of the Unit / Chapter/Topic	Time allotted to each unit	Learning Outcomes	Suggested Activities/ Projects under Internal Assessment/Practicals	Assessment	Time spent for project and Homework
APRIL	<p>CHAPTER 3 MATRICES</p> <p>Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operations on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).</p>	10 Hrs	Evolves the idea of matrices as a way of representing and simplifying mathematical concepts.	Worksheet on Matrices		1 Hrs
	<p>CHAPTER 4 DETERMINANTS</p> <p>Determinant of a square matrix (up to 3×3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix.</p> <p>Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.</p>	08 HRS	Evaluates determinants of different square matrices using their properties.		Worksheet on Determinants	1Hr

CARMEL CONVENT SR.SEC SCHOOL RATANPUR BHOPAL YEAR PLANNER 2024-25

CLASS - XII

SUBJECT - Mathematics

	<p>CHAPTER 12 LINEAR PROGRAMMING Introduction, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).</p>	03 HRS	Formulates and solves problems related to maximization/ minimization of quantities in daily life situations using systems of inequalities/ inequations learn earlier	To minimise the cost of the food, meeting the dietary requirements. (Art integrated learning)	Power point presentation.	5 Hrs
	<p>CHAPTER 13 PROBABILITY Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.</p>	20 HRS		1) To explain the computation of conditional , probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice.		1.5 Hrs
JUNE	<p>CHAPTER 1 RELATIONS AND FUNCTIONS Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.</p>	15 HRS	identifies different types of relations and functions.	<p>2) To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \perp m\}$ is symmetric but neither reflexive nor transitive</p> <p>3) To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \parallel m\}$ is an equivalence relation.</p>		<p>1.5 Hrs</p> <p>1.5 Hrs</p> <p>1 Hrs</p> <p>M C Q Worksheet on Relations and Functions</p>

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CLASS - XII

SUBJECT - Mathematics

	<p>CHAPTER 2. INVERSE TRIGONOMETRIC FUNCTIONS Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.</p>	04 HRS	explores the values of different inverse trigonometric functions		M C Q Worksheet on Inverse Trigonometric Functions Assertion Reason questions	1 Hrs
JULY	<p>CHAPTER 5 CONTINUITY AND DIFFERENTIABILITY Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, <i>like</i> $\sin^{-1} x$, $\cos^{-1} x$ and $\tan^{-1} x$, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.</p>	15 HRS		4) To demonstrate a function which is not one-one but is onto. 5) To demonstrate a function which is one-one but not onto. 6) To draw the graph of $\sin^{-1} x$, using the graph of $\sin x$ and demonstrate the concept of mirror reflection (about the line $y = x$).	Extra Questions from NCERT Exemplar, And other refresher books PT-I Exams with competency based questions	1.5 Hrs 1.5 Hrs 1.5 Hrs 1Hr 1Hr

CARMEL CONVENT SR.SEC SCHOOL RATANPUR BHOPAL YEAR PLANNER 2024-25

CLASS - XII

SUBJECT - Mathematics

	<p>CHAPTER 6 APPLICATIONS OF DERIVATIVES Rate of change of quantities, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real Life situations)</p>	15 HRS		<p>7) To find analytically the limit of a function $f(x)$ at $x = c$ and also to check the continuity of the function at that point.</p> <p>8) To understand the concepts of decreasing and increasing functions.</p> <p>9) To understand the concepts of absolute maximum and minimum values of a function in a given closed interval through its graph.</p>		<p>1.5 Hrs</p> <p>1.5 Hrs</p> <p>1.5 Hrs</p> <p>1Hr</p>
AUGUST	APPLICATION OF DERIVATIVES CONTINUED					<p>M C Q Worksheet On Application of Derivatives. Assertion Reason questions</p>
	<p>CHAPTER 7 INTEGRALS Integration as inverse process of differentiation. Integration of variety of functions by substitution, by partial fractions and by parts. Evaluation of simple integrals of the following types and problems based on them. $\int dx \sqrt{x^2 \pm a^2}$, $\int dx \sqrt{x^2 - a^2}$, $\int dx \sqrt{a^2 - x^2}$, $\int dx \sqrt{ax^2 + bx + c}$, \int</p>	21 HRS				<p>Extra Questions from NCERT Exemplar, And other refresher books</p> <p>1 Hr</p>

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SUBJECT - Mathematics

	$\int \frac{dx}{\sqrt{ax^2 + bx + c}}$, $\int \frac{px + q}{ax^2 + bx + c} dx$, $\int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx$, $\int \frac{1}{\sqrt{a^2 \pm x^2}} dx$, $\int \frac{1}{\sqrt{x^2 - a^2}} dx$, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.					1 Hr
SEPTEMBER	INTEGRALS CONTINUED				Revision Term-I (with competency based questions)	3.15 Hrs
OCTOBER	CHAPTER 8 APPLICATION OF INTEGRALS Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only)	04 HRS			Extra Questions from NCERT Exemplar, And other refresher books	1Hr

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CLASS - XII

SUBJECT - Mathematics

	<p>CHAPTER 9 DIFFERENTIAL EQUATIONS Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type: $dy/dx + py = q$, where p and q are functions of x or constants. $dx/dy + px = q$, where p and q are functions of y or constants.</p>	11 HRS			Extra Questions from NCERT Exemplar, And other refresher books	1Hr
NOVEMBER	<p>CHAPTER 10 VECTORS Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.</p>	12 HRS		10) To verify that angle in a semi-circle is a right angle, using vector method.	Extra Questions from NCERT Exemplar, And other refresher Books.	1Hr
	<p>CHAPTER 11 THREE - DIMENSIONAL GEOMETRY Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines</p>	10 Hrs			Oral Questions MCQ Worksheet Assertion Reason questions	2 Hrs

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CLASS - XII

SUBJECT - Mathematics

DEC	REVISION				Revision Final Term (with competency based questions)	10 Hrs 3.15 Hrs
JAN	REVISION				Revision Pre-Board (with competency based questions)	10 Hrs 3.15 Hrs
FEB	REVISION					

INCHARGE TEACHER - Ms. Anamika Chugh

PRINCIPAL'S SIGN -

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SUBJECT CORDINATOR SIGN

ACADEMIC PLAN: 2024-25
CARMEL CONVENT SR SEC SCHOOL, RATANPUR, BHOPAL.

STD: XII

SUBJECT: Chemistry

Month	Name of the Unit /Chapter/Topic	Time allotted for each unit	Learning Outcomes	Practical	Assessment (Includes 50% Competency based questions)	Time spent for project and homework
APRIL	<p>Unit I: 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.</p>	14 Hours	<ul style="list-style-type: none"> • Students will be able to define and classify different types of solutions based on their concentration and properties. • Students will understand the concept of solubility and factors that affect the solubility of solids, liquids, and gases in different solvents. • Students will learn about colligative properties such as relative lowering of vapour pressure, Raoult's law, elevation of boiling point, depression of freezing point, and osmotic pressure. • Students will be able to calculate the molecular mass of solutes using different colligative properties. • Students will learn about the ideal and non-ideal solutions and how they differ from each other. • Students will understand the concept of vapour 	Salt analysis Sample 1,2,3,4,5	Numerical based worksheet	8 Hours

Unit VI: 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
Alcohols:

14 hours

- pressure of solutions and deviations from Raoult's law.
- Students will learn about the determination of molecular mass using elevation in boiling point, depression in freezing point, and vapour pressure methods.
 - Students will learn the application of solutions in daily life, such as in medical science, food preservation, and industrial processes.
 - Understand the classification and nomenclature of haloalkanes and haloarenes.
 - Describe the methods for the preparation of haloalkanes and haloarenes.
 - Analyse the chemical reactions of haloalkanes and haloarenes, including nucleophilic substitution, elimination, and reduction reactions.
 - Explain the mechanism of nucleophilic substitution reactions, including SN1 and SN2 mechanisms.
 - Understand the biological and environmental significance of haloalkanes and haloarenes, including

Worksheet based on Competency based questions

			<p>their use as pesticides, herbicides, and refrigerants.</p> <ul style="list-style-type: none"> Analyse the physical properties of haloalkanes and haloarenes, including their boiling and melting points, solubility, and density. Describe the uses of haloalkanes and haloarenes in industry, such as in the manufacture of plastics and pharmaceuticals. 			
APRIL-JUNE	<p><u>Unit VII: Alcohols, Phenols and Ethers</u> 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 to methanol and ethanol. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.</p>	14 hours	<ul style="list-style-type: none"> Understand the general formula and nomenclature of alcohols, phenols, and ethers. Understand the physical and chemical properties of alcohols, phenols, and ethers. Identify and differentiate between primary, secondary, and tertiary alcohols. Understand the formation and reactions of alcohols, phenols, and ethers. Understand the properties and uses of methanol, ethanol, and phenol. Understand the preparation of ethers using the Williamson synthesis method. Understand the physical 	Titration -1 & 2	Worksheet based on conversions & name reactions	6 Hours

	<p>Unit II: 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, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion.</p>	<p>18 hours</p>	<p>and chemical properties of ethers.</p> <ul style="list-style-type: none"> • Identify and differentiate between symmetrical and unsymmetrical ethers. • Understand the structure and properties of phenols. • Understand the acidic nature of phenols and their reactions with metals and bases <ul style="list-style-type: none"> • Students will understand the concept of redox reactions and the various types of electrochemical cells. • Students will be able to calculate the standard electrode potential and understand the Nernst equation and its application in chemical cells. • Students will be able to calculate the EMF of a cell and understand the relation between Gibbs energy change and EMF of a cell. • Students will be able to understand the concept of conductance in electrolytic solutions, specific and molar conductivity, and variations of conductivity with concentration. • Students will be able to study the effect of temperature and 		<p>Worksheet based on numericals</p>	
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			<p>concentration on the rate of electrolysis and the variation of conductance with temperature of electrolytes.</p> <ul style="list-style-type: none"> • Students will be able to explain the process of electrolysis using an aqueous solution of CuSO₄ with copper electrodes. • Students will be able to understand the working of a dry cell, electrolytic cells, and Galvanic cells. • Students will be able to study the lead accumulator and fuel cells. • Students will be able to calculate the Van't Hoff factor and perform calculations involving it. • Students will be able to explain the applications of electrochemistry in various fields such as metallurgy, electroplating, and batteries 			
JULY	<p>Unit IV: d and f Block Elements General introduction, electron configuration, occurrence and characteristics of transition metal general trends in properties of the first row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation preparation and properties of K₂Cr₂O₇ and KMnO₄. Lanthanoids – Electronic configuration</p>	18 hours	<ul style="list-style-type: none"> • Students will be able to identify the properties of transition elements and understand their electronic configurations. • Students will learn about the occurrence, isolation, and properties of some important compounds of transition elements. • Students will gain an 	Titration 3 & 4	PT-1 Unit- 1 & 6	8 hours

	<p>oxidation states, chemical reactivity ar lanthanoid contraction and i consequences. Actinoids - Electronic configuratio oxidation states and comparison with lanthanoids.</p> <p><u>Unit V: Coordination Compounds</u> 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, the importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).</p>	14 hours	<p>understanding of the preparation, properties, and uses of important alloys such as brass and stainless steel.</p> <ul style="list-style-type: none"> • Students will learn about the electronic configuration and oxidation states of lanthanides and actinides. • Students will understand the preparation, properties, and uses of important compounds of lanthanides and actinides. • Students will be able to distinguish between lanthanides and actinides based on their properties. <ul style="list-style-type: none"> • Understand the concept of coordination compounds and their formation. • Identify the types of ligands and their properties. • Describe the nomenclature and isomerism in coordination compounds. • Discuss the structures of coordination compounds and the different theories of their bonding. • Explain the importance of coordination compounds in biological and industrial processes. 			
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			<ul style="list-style-type: none"> Analyse the chemical reactions and properties of coordination compounds. Interpret the colour and magnetic properties of coordination compounds. Understand the application of coordination compounds in various fields, including medicine, agriculture, and environment. 			
AUGUST	<p><u>Unit VIII: Aldehydes, Ketones and Carboxylic Acids</u></p> <p>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.</p>	18 hours	<ul style="list-style-type: none"> Understand the IUPAC nomenclature and structure of aldehydes, ketones and carboxylic acids. Understand the preparation methods of aldehydes, ketones and carboxylic acids with their chemical equations. Discuss the physical and chemical properties of aldehydes, ketones and carboxylic acids, and compare them with each other. Explain the acidic nature of carboxylic acids and their reactions with metals, bases, and carbonates. Understand the reaction of aldehydes and ketones with hydrogen cyanide and sodium bisulfite. Discuss the nucleophilic 	Tests for the functional groups present in organic compounds: alcoholic, phenolic, aldehydic, ketonic, carboxylic acid groups.	Worksheet based on reasoning question	8 hours

	<p><u>Unit III: Chemical Kinetics</u> Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation.</p>	14 hours	<p>addition reactions of aldehydes and ketones with hydrogen cyanide, sodium bisulphite, and alcohols.</p> <ul style="list-style-type: none"> • Understand the reactions of carboxylic acids with alcohols, ammonia, and amines to form esters, amides, and salts. • Discuss the importance and uses of aldehydes, ketones, and carboxylic acids in our daily life. • Relate the concept of aldehydes, ketones, and carboxylic acids with the formation and properties of different biomolecules. • Perform various practical experiments related to the chapter such as the preparation of carboxylic acids, the detection of the presence of carbonyl compounds, and the test for the acidic nature of carboxylic acids. <ul style="list-style-type: none"> • Understanding the concept of chemical kinetics, rate of reaction, and factors affecting the rate of reaction. • Understanding the order and molecularity of a reaction, rate law, and the specific rate constant. • Familiarity with the integrated rate equations 		Worksheet based on numericals	
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			<p>and half-life for zero and first-order reactions.</p> <ul style="list-style-type: none"> • Understanding the collision theory, activation energy, and the effect of catalysts on the rate of reaction. • Applying the knowledge of chemical kinetics to practical situations such as studying the effect of concentration and temperature on the rate of reaction. • Developing analytical and critical thinking skills to analyse and interpret experimental data related to chemical kinetics. <p>Appreciating the role of chemical kinetics in various fields, such as in the study of chemical reactions in biological systems, environmental chemistry, and industrial processes.</p>			
September					Term-1 1,2,4,5,6,7	8 hours
October	<p>Unit X: Biomolecules Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures</p>	14 hours	<ul style="list-style-type: none"> • Understanding the classification of biomolecules into carbohydrates, proteins, nucleic acids, and lipids. • Understanding the structure and function of carbohydrates, including monosaccharides, 	<p>Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.</p> <p>Salt analysis Salt sample 6,7, 8, 9, 10, 11, 12</p>	Worksheet	6 hours

(qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure. Vitamins - Classification and functions. Nucleic Acids: DNA and RNA.

- disaccharides, and polysaccharides.
- Understanding the structure and function of proteins, including primary, secondary, tertiary, and quaternary structures, and the role of proteins in various biological processes.
- Understanding the structure and function of nucleic acids, including DNA and RNA, and their role in genetic information storage and transfer.
- Understanding the structure and function of lipids, including fatty acids, phospholipids, and steroids, and their role in membrane structure and various metabolic processes.
- Understanding the concept of enzymes as biological catalysts and their role in various metabolic pathways.
- Understanding the importance of biomolecules in various biological processes, such as digestion, respiration & photosynthesis.
- Appreciating the interdependence of different biomolecules in maintaining the integrity and function of living organisms

	<p>Unit IX: Amines Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines. Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.</p>	14 hours	<ul style="list-style-type: none"> • Understand the concept of amines & their classification based on their structures. • Describe the preparation methods of primary, secondary, and tertiary amines. • Learn the physical and chemical properties of amines, including basicity, solubility, and nucleophilic substitution reactions. • Understand the preparation, properties, and uses of some important amines such as aniline, benzylamine, and ethylamine. • Understand the role of amines in biological systems, including their structure and function in amino acids and proteins. • Understand the environmental impact of amines and their derivatives, including the harmful effects of nitrogen-containing pollutants. • Develop experimental skills in the preparation and identification of amines through laboratory experiments and analysis. 		Worksheet	
November	Revision	8 hours				

December					Final exam Pre-board Practical	6 hours
January					Pre-board exam	
February & March					Final board exam	

NAME OF THE SUBJECT TEACHERS: Mrs Bindu Dalal & Dr Pragati Vijay

SIGNATURE OF THE SUBJECT COORDINATOR:

ACADEMIC YEAR PLAN : 2024-25								
Name of the Subject : PHYSICS (Code 042)-Part-1 Class: XII A & B								
MONTH	Name Of the Unit / Topics	Time Allotted for each unit	Learning Outcomes	Suggested Activities / Projects under internal assessment/ Inclusive activity (weekly)	Art Integrated activity/ Art integrated project	Practicals	Assessment (include 50% competency based assessment)	Time spent for project and Homework
APRIL -JUNE (26)	Electrostatics 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 polarisation, 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)	26(17.33h)	The students will be able to explain the following facts and concepts- *Electric charges; Conservation of charges *Coulomb's law-force between two point charges *Forces between multiple charges ; superposition Principle and continuous charge distribution * Electric field, electric field due to 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 it's applications to find electric field due to (i) infinitely long st. conductor, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (inside and outside) *Electric potential and potential difference, electricpotential gradient *electric potential due to dipole, the potential energy and torque due to an electric dipole * Dielectrics, polarization and capacitance and its derivations.	* Presentation *Worksheets *Questions from CBSE sample papers * Lab Demonstration *Small models to understand the concepts	Activities-- 1) Find the pairs of materials having/ showing static charge accumulation to prove conservation of charges. 2) Make the cubes to solve the numericals based on Gauss Theorem. 3) Make a flow chart on electric potential. 4) Make a small model showing that capacitor stores the charges and then use that energy to light LED. 5) With the help of two metal plates, battery, plastic/cardboard and multimeter check the dependence of capacitance on medium and distance between the plates. Project: Different projects are given.	Explanation of Projects.	Class Test *Worksheets *MCQs *Assertion-Reasoning *Question-Answers	7h
JULY (18)	Current Electricity Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and nonlinear), 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.		Students will be able to understand -- *Concept of electric current, drift velocity, mobility of electrons in a conductor. * Ohm's law, and ohmic conductors * the concept of electric power, electrical resistivity and conductivity, temp dependence of resistance. * the internal resistance of a primary cell, cells in series and parallel, difference between emf and potential difference * Kirchhoff's current and voltage law. * the concept of Principle of Wheatstone bridge and it's proof.	*Competency based questions *Worksheets *Short answer type questions *Numericals based on each topic *Competency based questions *Practical based	Activity: 1) Demonstration to understand concept of Ohm's law. 2) Model making to verify Kirchhoff's current and voltage law.	EXP: 1) To determine resistivity of a two/three wires by plotting a graph of potential difference versus current. 2) To find resistance of a given wire/standard resistance using a metre bridge.	PT-1 *MCQs *Assertion-Reasoning *Question-Answers *Numericals	8.5h
AUGUST (18)	Magnetic Effects of Current and Magnetism 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 and toroidal solenoids, 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; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.	18 (12h)	Students will be able to -- *understand the concept of magnetic field ,Oersted's experiment. *understand Biot Savart's law and it's application *understand Ampere's law and it's applications to find magnetic field due to (i) infinitely long wire and (ii) toroid *understand the force on a moving charge in uniform magnetic and electric fields *understand the force on a current carrying conductor in a uniform magnetic field. *understand force between two parallel current carrying conductors, definition of ampere. *understand the torque experienced by a current loop in uniform magnetic field *understand the moving coil galvanometer and related terms.	*Demonstration *Worksheets *Numericals based on each topic *Competency based questions *Practical based	Activities-- 1) Demonstration of force between two long straight current carrying conductors. 2) Activity to show : current carrying conductor when placed in magnetic field experiences a force.	EXP: 3) To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.	Class Test Worksheets	8h
SEPTEMBER (07)	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- Para-dia- and ferro- magnetic substances with examples. Magnetization of materials, effect of temperature on magnetic properties.	7 (4.66h)	Students will be able to-- *understand bar magnet as a solenoid *understand the magnetic field intensity due to a magnetic dipole(bar magnet) along its axis and perpendicular to its axis *understand torque on amagnetic dipole(bar magnet) in a uniform magnetic field *understand para, dia and ferro magnetic substances, with examples *understand the effect of temperature on magnetic properties.	*Demonstration *Worksheets *Short answer type questions *Numericals based on each topic *Competency based questions *Practical based	Activity -- 3) Make a chart showing differences between dia, para and ferromagnetic materials.	Activity 1) To measure resistance,voltage(AC/DC), current(AC) and check the continuity of a given circuit. 2) To study the variation in potential drop with length of a wire for a study current. 3) To draw a diagram of a given circuit comprising at least a battery, a resistor/heatst, key, ammeter and voltmeter. Mark the component that are not connected in proper order and correct the circuit and also the circuit diagram.	Term-1 *MCQs *Assertion-Reasoning *Question-Answers *Numericals	7.5h
OCTOBER (24)	Electromagnetic Induction and Alternating Currents : 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 and transformer.	24 (16h)	*To make the students to understand about the EMI phenomenon, Faraday's law, Lenz's rule, Fleming's right hand rule and working principle of ac generator and transformer, methods to reduce losses in transformer *to make the students to define the following concepts-- EMI, self induction and inductance, mutual induction and mutual inductance *to make student to differentiate between--EMI and magnetic effect of electric current, self and mutual inductance, step up and step down transformer * to develop skill in --carrying out activities by collecting required materials, in drawing the diagrams, drawing important conclusions * to develop logical reasoning and logical thinking in deriving the important relations of various concepts * to apply the knowledge of concepts in solving the numericals from the chapter. * to identify the special features of ac, recognize the importance of rms values, phase lag/ lead of current/ in resistor/inductor and capacitor *understand the resonance in LCR ac circuit *to understand the power factor and wattless current of ac	*Demonstration *Worksheets *Short answer type questions *Numericals based on each topic *Competency based questions *Practical based	Activities: 1) Demonstration of conversion of mechanical energy into electrical energy. 2) Demonstration of Lenz's rule. 3) Activity showing mutual induction. 4) Make a chart showing differences between dia, para and ferromagnetic materials.	EXP. 4) To find the frequency of AC mains with a sonometer.	Class Test Worksheets	7h
NOVEMBER (1)	ELECTROMAGNETIC WAVES: Basic idea of displacement current	1 (0.67)	Students will be able to understand the concept of displacement current in capacitor, Ampere Maxwell law.	*Worksheet * short answer type questions			Class Test Worksheets	7.5h
DECEMBER -JANUARY	Full Syllabus						Term - 2 Pre-Board	7h 1.5h

CARMEL CONVENT SR SEC SCHOOL,RATANPUR, YEAR PLANNER:2024-25

CLASS : XII

SUBJECT: PHYSICS PART 2

MONTH	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	PRACTICALS	ASSESSMENT(INCLUDE 50% COMPETENCY BASED ASSESSMENT)	TIME SPENT FOR PROJECT AND HOMEWORK
APRIL + JUNE	Ray Optics and Optical Instruments Ray Optics: 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	10	Recalls all the technical terms defined for spherical mirrors and identifies the correct sign conventions for mirrors and lenses. Draws ray diagram to determine the position of the image of an object and derives all the equations related to spherical mirrors. Knows Snell's laws of refraction and obtains the relationship among relative refractive indices of different materials Explains various phenomena related to refraction and the phenomenon of total internal reflection Derives the relationship between object and image distances and derives lens maker's and thin lens formula. Derives various relationships for a light ray passing through a prism. Explains the magnification by a microscope. Derives the expression for the magnification by a telescope	EXPERIMENTS EXP)To find the value of v for different values of u in case of a concave mirror and to find the focal length. EXP) To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$. EXP) To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation. ACT) To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.	WORK SHEET. CASE STUDY QUESTIONS. DIAGRAM BASED QUESTIONS	10
JULY	WAVE OPTICS :Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts.	9	Compares wave theory with corpuscular theory and explains geometrical optics in terms of wave optics. States Huygens principle, explains Snell's law of refraction, law	To observe diffraction of light due to a thin slit.	WORK SHEET. CASE STUDY QUESTIONS. DIAGRAM BASED QUESTIONS.	3

CARMEL CONVENT SR SEC SCHOOL,RATANPUR, YEAR PLANNER:2024-25

CLASS : XII

SUBJECT: PHYSICS PART 2

	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).		of reflection and total internal reflection using the principle. States the Superposition principle of waves and derives the expressions for intensity of light for interference from coherent and incoherent light sources. Explains the Young's double slit experiment and derives the expression for fringe width in Young's experiment. .Explains what is diffraction of light waves and the pattern observed for diffraction from a single slit.		PROJECT. PT1	
AUGU ST	Semiconductor Electronics: Materials, Devices and Simple Circuits 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.	6	Takes initiative to understand the history of development of semiconductor electronics. Classifies solids as conductors, semiconductors and insulators on the basis of resistivities and energy bands. .Explains the lattice structure and behaviour of intrinsic semiconductors. Explains how intrinsic semiconductors can be converted into extrinsic semiconductors. Defines and describes pn junction as the basic building block of semiconductor devices. Extrapolates the understanding of pn junction to create a pn diode and describes its behaviour under the effect of forward and reverse external bias. Explains the working of pn junction diode as a rectifier in electronic circuits.	EXP). To draw the I-V characteristic curve for a p-n junction in forward bias and reverse bias ACT)To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items	WORK SHEET. CASE STUDY QUESTIONS. DIAGRAM BASED QUESTIONS. PROJECT	
SEPT EMBE R	Dual Nature of Radiation 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 waveswave nature of particles, de-Broglie relation.	5	Describes the three significant historical experiments that lead to the discovery of electrons and recognises that valence electrons can be emitted from the metal surfaces under certain conditions. Describes how photoelectric effect was first observed historically and identify the factors that leads to photoelectric emission in metals. Explains the variation of photoelectric current as a function of intensity of incident radiation & potential difference and describes the variation of stopping potential with frequency of the incident radiation. Describes the basic features of Einstein's explanation for photoelectric effect		WORK SHEET. CASE STUDY QUESTIONS. DIAGRAM BASED QUESTIONS. PROJECT. TERM 1	5
OCTO BER	Atoms: Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model of hydrogen	9	Takes initiative to understand historical experiments related to the atomic model. .Explains the nature of electron orbits basis		WORK SHEET. CASE STUDY QUESTIONS. DIAGRAM BASED	4

CARMEL CONVENT SR SEC SCHOOL,RATANPUR, YEAR PLANNER:2024-25

CLASS : XII

SUBJECT: PHYSICS PART 2

	atom, Expression for radius of nth possible orbit, velocity and energy of electron in his orbit, of hydrogen line spectra (qualitative treatment only).		Rutherford model of atom. Explains the characteristics of atomic spectra of hydrogen atom. 0.Takes initiative to study the details of simplest atomic spectra of hydrogen atom. States and explains why Rutherford nuclear model failed and how Bohr model was a better model of atom. Identifies the energy levels of single electron in the hydrogen atom as per Bohr model. .Explains line spectra of hydrogen atom basis Bohr's postulate. Takes initiative to understand de-Broglie explanation of Bohr postulate of quantisation of angular momentum.		QUESTIONS. PROJEC	
NOVEMBER	Nuclei: Composition and size of nucleus, nuclear force Massenergy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion. Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.	5.4	Describes the important characteristics of nuclear force. Describes nuclear fission as breaking up of large nucleus into smaller nuclei. Describes the nature of electromagnetic waves in terms of time-varying electric and magnetic fields. .Describes the electromagnetic spectrum, the different em waves, the order of their distribution in the em spectrum, the frequency ranges and states the applications of each of the type of em wave.		WORK SHEET. CASE STUDY QUESTIONS. DIAGRAM BASED QUESTIONS. PROJECT. CBQ	2.6
DECEMBER					TERM 2	5
JANUARY					PREBOARD	5

ACADEMIC PLAN :2023-24
CARMEL CONVENT SR SEC SCHOOL ,RATANPUR,BHOPAL. STD: XII -B
SUBJECT: BIOLOGY

Month / No of Working Days	Name of the Unit / Chapter/Topic	Time for each unit	Learning Outcomes	Practicals	Assessment 50% competency based	Time spent on project & homework
APRIL	Reproduction •Sexual Reproduction in flowering plants. •Reproduction in humans	UNIT-1 30 hrs	Understand the role of different floral parts in sexual reproduction. Knowledge of microsporogenesis and megasporogenesis. understand events of fertilization.	Pollen germination - slide preparation Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.	Written test Lab activity Quiz Oral questioning	2 hrs practicals 2 hrs for project 3 hrs on homework
JUNE	• Reproductive health *Principles of inheritance and variations	UNIT-2 15 hrs	Learn the importance of reproductive health • sexually transmitted disease and its prevention Empathize with children suffering from genetic disorders	Flowers adapted to pollination by different agencies (wind, insects, birds). pollen germination slide	Interactive method Students will be asked to revise the work done in class. Quiz PT-1	2hrs for practicals 2 hrs on assignment
JULY	*Molecular Basis of Inheritance *Evolution	UNIT-2 25 hrs	Students will know and understand DNA, RNA, replication, transcription, genetic code, translation, regulation of gene expression Evolution theories	Study the plant population density by quadrat method. Study the plant population frequency by quadrat method.	Oral test Written test Presentation of given topic questions	2 hrs for project 3 hrs for Practicals 2 hrs on assignment
AUGUST	*Human Health and Disease *Microbes in Human Welfare	UNIT-3 29 hrs	Develop the process of observational, manipulative decision and investigatory skills in learners.	Identification of stages of gamete development. Meiosis in onion bud cell or grasshopper testis through permanent slides. T.S. of blastula through slide.	Random questioning of different types, worksheets	4 hrs for practical 2 hr for project 1 hr on worksheet

ACADEMIC PLAN :2023-24
CARMEL CONVENT SR SEC SCHOOL ,RATANPUR,BHOPAL. STD: XII -B
SUBJECT: BIOLOGY

				Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides		
SEPTEMBER	REVISION *HALF YEARLY	2-hrs	critical thinking and problem solving, conceptual skill development.. assertion –reasoning and case study solving ability	Revision	Discussion of previous year question paper Half yearly exams	3 hrs exams
OCTOBER	Biotechnology : Principles and processes Biotechnology and its Applications	UNIT-4 29 hrs	Understand mechanism of Polymerase chain reaction, difference between sparged and stirred tank bioreactor competencies developed in students: collaborative learning, critical thinking	Prepare a temporary mount of onion root tip to study mitosis. Mendelian inheritance using seeds of different colour/sizes of any plant Models specimen showing symbolic association in root modules of leguminous plants, Cuscuta on host, lichens. Flash cards models showing examples of homologous and analogous organs.	sharing of ideas and information to advance scientific understanding, processes, theories and discoveries	4 hrs for practicals 2 hrs for homework

ACADEMIC PLAN :2023-24
CARMEL CONVENT SR SEC SCHOOL ,RATANPUR,BHOPAL. STD: XII -B
SUBJECT: BIOLOGY

NOVEMBER	*Organisms and Populations *Ecosystem *Biodiversity and Conservation	UNIT-5 24 hrs	Understand and differentiate between organism attributes and population attributes. Understand mechanism of growth models and population attributes, Understand Recall and recognize Students are able to explain the importance of bio diversity for the existence of the entire life on the earth.	Prepared pedigree charts of any one of the genetic traits. Controlled pollination - emasculation, tagging and bagging.	Written test Lab activity Oral questioning MCQ practice Assertion-reason & case based , diagram based practice	5 hrs for practicals 3hrs for revision 2 hrs assignmet
DECEMBER	REVISION *FINAL EXAM	3 hrs	critical thinking and problem solving, conceptual skill development.. assertion –reasoning and case study solving ability		Oral questioning MCQ practice Assertion-reason & case based , diagram based practice Final exam	3hrs exams
JANUARY	REVISION *Pre Boards	3 hrs	Practice and learning		Pre board exams	3hrs

ACADEMIC PLAN :2023-24
CARMEL CONVENT SR SEC SCHOOL ,RATANPUR,BHOPAL. STD: XII -B
SUBJECT: BIOLOGY

NAME OF THE SUBJECT TEACHER: Dr. NEERU THAKUR

SIGNATURE OF THE SUBJECT COORDINATOR: Dr. NEERU THAKUR

CARMEL CONVENT SR SEC SCHOOL, RATANPUR YEAR PLANNER 2024-25

Class: XII

Subject: Sanskrit

MONTH	NAME OF THE UNIT/CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	SUGGESTED ACTIVITIES/INTERNAL ASSESSMENT(SEA&MT)/INCLUSIVE ACTIVITY (WEEKLY)	ART INTEGRATED ACITIVITY/ART INTEGRATED PROJECT	PRACTICALS	ASSESEMENT (INCLUDE 50% COMPETENCY BASED ASSESSEMENT)	TIME SPENT FOR PROJECT AND HOMEWORK
April	1. प्रथमपाठः अनुशासनम् , व्याकरण समास संस्कृत साहित्य का इतिहास महाकाव्य	10.4 8	गुरुओं का सम्मान करें देव पितृकार्यों में आलस न करें अनुशासन विषय पर अपने विचार प्रस्तुत करें	गुरु शिष्य परम्परा पर चर्चा	बिहार और मध्य प्रदेश के प्रमुख नेता अभिनेता एवं शिक्षकों की प्रमुख उपलब्धियों को कोलाज के माध्यम से प्रदर्शित कीजिये		अस्माकं कानि उपास्यानि?	परियोजना कार्य रामायण के प्रमुख पात्रों की पांच पांच विशेषताएं चार्ट के माध्यम से प्रदर्शित कीजिये? 15 घण्टे
June	तृतीयः पाठ मातुराजा गरीयसी व्याकरण समास संस्कृत साहित्य का इतिहास गद्यकाव्य ओर चम्पूकाव्य	10 8	माता पिता की महिमा श्रेष्ठता और गरिमा माँ की आजा राम की तरह अवधार्य होती है नाटक के दरा दियों के बारे में जाने	नाट्य कौशल नाटक के भेदों का चार्ट तैयार करें	20 घण्टे कालिदास की प्रमुख कृतियों का सचित्र संक्षिप्त विवरण दीजिये?		स्वजनः कुत्र प्रहरति? रामः लक्ष्मणस्य रोषं कथं प्रतिपादयति ?	समास एवं प्रत्ययों को उदाहरण सहित चार्ट के माध्यम से प्रदर्शित कीजिये?? 15 घण्टे

					10 घण्टे		
July	चतुर्थ पाठ प्रजानुरञ्जको नृपः व्याकरण प्रत्यय	10 8	एक अच्छे रामसक के गुणों से अवगत कराना	गायन कौशल किन्हींदों श्लोकों का सस्वर गायन करें			उत्तमः शासकः कः भवति? PT 1 Chapter 1,3
August	पंचमः पाठः दौवारिकस्य निष्ठाः व्याकरण प्रत्यय संस्कृत साहित्य का इतिहास नाट्य साहित्य	10 8	द्वारपाल को अपने कार्यों को निष्ठा और ईमानदारी के साथ करना चाहिए	लेखन कौशल की कोई पांच चारित्रिक विशेषताएं लिखें	विद्या इस विषय पर आधारित पांच श्लोकों का संकलन कीजिए। 9.5 घण्टे		के उत्कोच लोभेन स्वामिनं वञ्चयति?
September	षष्ठः पाठः सूक्ति सौरभम् व्याकरण कारक सप्तमः पाठः नैकेनापिसमम् गता वसुमती	10 8	षष्ठः पाठः- सूक्ति सौरभम् संसार में शारीरिक सुन्दरता की अपेक्षा विद्वता ही सुन्दरता होती है लाख कोशिश करने पर भी दुष्ट सज्जन नहीं बन सकता सप्तमः पाठः	गायन कौशल का विकास किन्हीं पांच सूक्तियों का संग्रह कीजिये			सर्वस्य लोचनं किम् अस्ति? Term 1 Chapter 1,3,4,5
				बुद्धिसागर की पांच विशेषताएं लिखें			

			अतिलोभो न कर्तव्यः तो भ विनाश का कारण होता है			वस्तुतः ज्योतिषः किम् भवति?	
October	नवमः पाठः मदालसा व्याकरण सन्धि	10 8	मदालसा मदालसा के स्वाभिमान और नारी की अस्मिता की रक्षणीय होती है। नारी नर की खान है	ऋतध्वज की शालीनता अपने शब्दों में बताएँ		ऋतध्वजः लक्ष्म्याः वर्णनं कथं करोति ?	
November	एकादशः पाठः- कार्याकार्य व्यवस्थितः	10 6	कार्याकार्य व्यवस्थित देवी सम्पत और आसुरी सम्पत का भेद बताया गया	गायन कौशल गीता के किसी एक श्लोक का सस्वर गायन करें		कामभोगेषु प्रसक्ताः कुत्र पतन्ति?	
December	अपठित-अवबोधनम् अनुवाद वाक्यप्रयोग इत्यादि।	10 6		अधिगम कौशल विकास अनुवाद वाक्यप्रयोग लेखन।		Final Exam -1 dec Chapter 1,3,4,5,6,7,9,11 Practical Exam- 14 dec	
January						Pre Board exam	
February							

March								
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MONT H	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTT ED FOR EACH UNIT	LEARNING OUTCOMES	PRACTICALS	ASSESSMENT(IN CLUDE 50% COMPETENCY BASED ASSESSMENT)	TIME SPENT FOR PROJECT AND HOMEW ORK
April and June	<p>Computational Thinking and Programming Revsn. of Python topics covered in class XI</p> <p>Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)</p> <p>Python Libraries: What is Library? Importing Modules in a Python Program. Using standard Python Library's Functions and Modules. Creating a Python Library.</p> <p>Data File Hnadling : Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths</p> <p>Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data</p>	20	<p>Large programs are difficult to manage...therefore it is broken down into smaller units known as functions.... which is a named unit of a group of program statements. This unit can be invoked from other parts of the program.</p> <p>Students learn how a data is stored in a file thru python program and the different operations implemented on the data file.</p> <p>Students learn to store information permanently. Database programs create files of information; compilers read source files and generate executable files. So it is the files that</p>	<p>How are objects stored in lists and dictionaries different?</p> <p>What is the length of tuple shown below: t=((('a',1), 'b', 'c'), 'd',2), 'e', 3)</p> <p>write a program that rotates the elements of a list so that element at the first index moves to the second index, the element at the second index moves to the third index ...etc and the last element moves to the first index.</p> <p>Write a program create a data file and then modify the name of rollno 12 as Gurnam in file stu.dat.</p> <p>Display the records of</p>	<p>MCQ s from Python revision tour -1 and MCQs from Python revision tour-2</p> <p>Assertion and reasoning questions 6 from each chapter i.e. revision tour 1 & 2</p> <p>Finding the output from a given code to be solved in class Aman is a python programmer. He has created a binary file record.dat with employee id, ename and salary and has 10 records. He now has to update a</p>	20

	<p>in a text file</p> <p>Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file</p>		<p>are mostly worked with, inside program. A file is bunch of bytes stored on same storage device like hard-disk, thumb-drive etc.</p>	<p>the file stu.dat, which has been modified.</p> <p>Read the last 15 bytes from a text file.</p>	<p>record based on the employee id entered by the user and update salary. The updated records to be written in the temp.dat file alongwith the non-updated records.</p>	
July	<p>Data File handling continued</p> <p>CSV file: import csv module, open / close csv file, write into a csv file using csv.writerow() and read from a csv file using csv.reader()</p> <p>Exception handling: Exceptions and Exception Handling Concept of Exception Handling</p>	10	<p>Csv module of Python provides functionality to read and write tabular data in csv format. The 2 specific types of objects – reader and writer used for reading and writing into csv files.</p> <p>Learning how to deal with some contradictory or unexpected situation or in short, an error that is unexpected.</p>	<p>Program to create a CSV file to store student data(Rollno,Name,marks). Obtain data from the user and store random number of records.... Program to handle multiple exceptions</p>	<p>Program to handle multiple exceptions.... Questions on : Types of Exceptions 10 output based questions on Csv files</p>	20
August	<p>Data Structure</p> <ul style="list-style-type: none"> • Elementary Data representation • Different Data Structures <ul style="list-style-type: none"> ◦ Linear Lists Arrays ◦ Stacks ◦ Queues ◦ Linked Lists ◦ Trees • Operations on Data Structures <ul style="list-style-type: none"> ◦ Stacks 	10	<p>Students learn the difference between Raw data and Data Item..types of data structures...designing data structures and the operations applied on data structures. It is the physical implementation that clearly defines a way of storing, accessing, manipulating data stored in a data structure.</p>	<p>Write a program to implement the following operations in the following stack: Each node of the stack contains : Pin code of a city and Name of the city. (a) PUSH()- to push a</p>	<p>MCQ questions using lists, dictionary to perform different operations on a sample STACK.</p>	20

	<ul style="list-style-type: none"> ▪ Implementing Stack in Python ▪ Stack Applications 		The working of STACK data structure using Last In First Out principle.	node in the stack (b) POP() To remove a node from the stack		
September	<p>Database management :</p> <ul style="list-style-type: none"> • Database Concepts • Relational data model • Simple queries in SQL • Table creation and Data Manipulation commands • Grouping Records, Joins in SQL <p>Interface Python with MySQL</p> <ul style="list-style-type: none"> • Introduction • Connecting to MySQL from Python • Parameterised queries • Performing Insert and Update Queries 	10	Learning about database which is the repository of information needed in running certion functions in a corporation or organization. Which permits retrieval of data but also modification of data needed for control of operations	<p>Why are foreign keys allowed NULL vales? Explain.</p> <p>Compared to a file system, how does a database management system avoid redundancy in data through a database.</p>	<p>Categories of MySQL commands : Ddl, DML, TCL:</p> <p>Atleast creating 5 tables , with 10 questions of which 5 output based and 5 query commans.</p>	20
October	<p>Computer Networks – I</p> <ul style="list-style-type: none"> • Introduction • Computer Networks – An introduction • Types of Networks • Evolution of Networking • Switching Techniques • Data Communication Terminologies • Transmission Media • Network Topologies • Identifying nodes on a Computer Network. 	20	Making the students understand that connections among humans make human network and connections among computers make computer network. There are ways of connecting one computer to another so also the placement of the systems i.e. the distance the the way communication takes place is an important part of study.	Your school administration wants to upload an excel file having about 100 worksheets at the rate of 10 sheets per 20 seconds. What will be the required data rate of the channel? (Assume that every sheet has a standard size of 4800bytes.)	<p>What are the type of addresses that play role in identifying a node on a network?</p> <p>Prepare a presenation using powerpoint of min.10 slides depicting the different layers of Networking</p>	10
November	<p>Computer Networks – II</p> <ul style="list-style-type: none"> • Network Devices 	20	Learning about the various and most	What is a modem, Ethernet card, RJ-45,	A school library is connecting	10

	<ul style="list-style-type: none"> • Network Protocols • Wireless/Mobile Computing Technologies • Internetworking Terms and Concepts • Network Security Concepts 		prevalently used Network devices, various network protocols and related communication technologies	Hub, Witch, Bridge, Router Gateway, Host... and other list of abbreviations	computers in its units in a LAN. The library has 3 units, whicre : Teacher's unit, Student's unit and Circulaation Unit. Suggest the best INetwork layout, communication channel to be used and placement of Router, Switch...	
December					Term2	10
January					Preboard	10

NAME OF INCHARGE TEACHERS:

SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL: