

CARMEL CONVENT SR SEC SCHOOL, RATANPUR, YEAR PLANNER:2025-26

CLASS : XII

SUBJECT:ENGLISH

MONTH	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/ART INTEGRATED PROJECT	PRAC TICALS	KEY COMPETENCIES TO BE ACHIEVED.
APRIL	THE LAST LESSON	4.5 hrs.	Recognize the significance of one's language and identity; Reflect on the emotional impact of language loss.	ART INTEGRATED LEARNING PROJECT Make a collage /ppt/ video on any one of the following, supporting it with pictures and sketches	ALS	Value of one's mother tongue; Empathy for people under cultural oppression; Awareness of linguistic identity and nationalism.
	MY MOTHER AT SIXTY-SIX	2.25 hrs	Interpret themes of ageing, fear, and attachment; Appreciate use of imagery and poetic tone.	Take ideas from 'Lost Spring 'or ' On the Face of It'. 1)Child Labour –condition in my city and ways of combating it		Understanding emotions of ageing and separation; Sensitivity to familial bonds and impermanence.
	NOTICE WRITING	2.25 hrs	Structure short informative content with clarity; Use correct format, tone, and style.	2)Differently-abled people who emerged as achievers defying all the odds that life threw at them. (any one)		Precision and clarity in short informative writing; Understanding of format and tone.
	THE THIRD LEVEL	4.5hrs	Identify psychological responses to stress and war; Differentiate between fantasy and reality.			Exploring psychological escapism and anxiety; Understanding blending of fantasy and reality.
	LOST SPRING	4.5hrs	Interpret social issues like poverty and child labour; Develop empathy for marginalized communities			Sensitivity toward social injustice and child labour; Awareness of economic disparity; Critical thinking about societal roles.
JUNE	THE TIGER KING	6hrs	Understand satire and critique of power; Analyze			Critiquing power, pride, and ecological irresponsibility; Understanding irony and

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			environmental and moral themes		satire.
	ARTICLE WRITING	4.5hrs	Express opinions and ideas logically and coherently; Organize content with introduction, body, and conclusion.		Structuring coherent and impactful content; Encouraging informative and persuasive writing.
	READING COMPREHENSION	2.25hrs	Extract specific and implied information from texts; Develop inferential and analytical reading.		Enhancing inferential and analytical reading skills; Identifying tone, purpose, and context.
	KEEPING QUIET(Poem)	2.25hrs	Understand the value of silence and self reflection; Analyze poetic devices like symbolism and paradox .		Encouraging introspection and self-awareness; Fostering global peace and environmental mindfulness
JULY PT 1 1.The Last Lesson 2.My Mother at Sixty-Six 3.The Third Level	DEEP WATER	4.5hrs	Identify personal fears and reflect on overcoming them; Appreciate perseverance and self-discipline.		Recognizing the importance of determination and courage; Overcoming fear through self-belief.
	INVITATION	6hrs	Draft appropriate invitations with relevant details; Differentiate tone based on formality.		Using appropriate format and polite tone; Communicating event details effectively

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	JOURNEY TO THE END OF THE EARTH	4.5hrs	Appreciate Earth's geological and environmental diversity; Understand the urgency of climate change awareness.			Awareness of climate change and Earth's history; Encouraging scientific temperament.
	A THING OF BEAUTY	2.25	Appreciate the healing power of beauty; Understand poetic structure and literary devices.			Appreciation of beauty as a source of hope; Understanding poetic devices (imagery, metaphor).
	THE RATT RAP	6hrs	Analyse themes of redemption and human kindness; Understand the metaphor of life as a rattrap.			Understanding the human need for kindness and redemption; Development of empathy and compassion.
AUGUST	LETTER TO EDITOR	4.5hrs	Present views and arguments logically; Structure a formal letter with clarity.			Presenting logical arguments and opinions; Developing persuasive writing skills.
	THE ENEMY	6hrs	Analyze conflict between nationalism and humanity; Reflect on moral dilemmas in war.			Understanding moral conflict between duty and humanity; Sensitivity to war-time ethics.
	READING COMPREHENSION	2.25hrs	Extract specific and implied information from texts; Develop inferential and analytical reading.			Enhancing inferential and analytical reading skills; Identifying tone, purpose, and context.
	A ROADSIDE STAND (POEM)	2.25hrs	Identify rural challenges and social injustice; Analyze the poet's concern for economic disparity.			Sensitivity to the rural-urban divide; Empathy for the marginalized.
	INDIGO	6hrs	Evaluate the significance of leadership and moral courage; Understand historical movements			Understanding Gandhian principles and leadership; Value of non-violent protest for social reform.

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			like Champaran.		
	APPLICATION FOR JOB	4.5hrs	Present qualifications and experience effectively; Use formal tone and persuasive language.		Structuring formal content professionally; Expressing intent and qualifications persuasively
SEPTEMBER TERM 1 (All topics covered from April to August)	ON THE FACE OF IT	6hrs	Understand disability, prejudice, and acceptance; Analyze how perception shapes relationships.		. Breaking stereotypes about physical disability; Fostering self-worth and human connection.
	REPORT WRITING	4.5hrs	Present factual information clearly and sequentially; Use passive voice, objectivity, and formal tone.		Organizing factual information logically; Maintaining objectivity and clarity.
OCTOBER	POETS AND PANCAKES	6hrs	Understand autobiographical and workplace narratives; Identify satire and irony in the entertainment industry.		Awareness of gender roles and industry hierarchy; Understanding autobiographical narratives.
	THE INTERVIEW - I, THE INTERVIEW - II,	6hrs	Examine the purpose and impact of interviews; Understand varied viewpoints on the art of interviewing.		Developing critical understanding of media ethics; Analytical skills for evaluating personal narratives.
	MEMORIES OF CHILDHOOD	6hrs	Recognize social injustices like caste and racism; Appreciate autobiographical		Raising awareness of casteism and racism; Understanding autobiographical resistance and empowerment.

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			voices of protest.			
NOVEMBER	AUNT JENNIFER'S TIGERS (Poem)	2.5hrs	Explore themes of gender roles and resistance; Interpret symbolism in the poem.			Awareness of gender inequality and artistic expression; Understanding symbolism and feminist themes.
			REVISION & PRE BOARD			
	PRACTICE OF ALS	4.5hrs				
	REVISION	6.75 hrs	REVISION			
DECEMBER			PRE BOARD EXAM			
		6 hrs	REVISION			
JANUARY			PRE BOARD EXAM			
		4.5hrs	ALS			
FEBRUARY		BOARD	EXAM			

NAME OF INCHARGE TEACHERS: MARY THOMAS

SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL:

MONT H	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/ART INTEGRATED PROJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED.
April	गद्य: भक्तिन	6	जीवन की विभिन्न परिस्थितियों में विभिन्न चुनौतियों को स्पष्ट कर संघर्ष कर सकेंगे।	किसी नारी प्रधान फिल्म को देखकर उसकी समीक्षा लिखिए।	NA	आलोचनात्मक सोच
	पद्य: आत्म-परिचय, एक गीत	6	कवि के कल्पना संसार, भावार्थ और जीवन से जुड़े उद्देश्य को स्पष्ट कर सकेंगे।	बच्चन जी की अन्य रचनाओं को पढ़कर तुलनात्मक अध्ययन करते हुए उनकी रचनाओं पर प्रकाश डालिए।		रचनात्मकता
	अभिव्यक्ति और माध्यम: विभिन्न माध्यमों के लिए लेखन	6	विद्यार्थी जनसंचार के विभिन्न माध्यमों की खूबियां और खामियों को समझ सकेंगे।	दूरदर्शन समाचार एवं किसी निजी समाचार चैनल के समाचार बुलेटिन की तुलनात्मक रिपोर्ट तैयार कीजिए। आपके अनुसार प्रिंट माध्यम, रेडियो और टीवी में से सबसे सशक्त माध्यम कौन-सा है? पक्ष-विपक्ष में तर्क दें।		अनुसंधान कौशल
JUNE	गद्य: बाज़ार दर्शन	6	बाज़ार की आवश्यकता एवं सार्थकता को समझकर तदनु रूप आचरण करना सीखेंगे।	किसी उत्पाद के प्रचार-प्रसार हेतु आकर्षक विज्ञापन का निर्माण कीजिए।		रचनात्मकता
	पद्य: पतंग	5	अलंकृत भाषा के उचित रूप को समझकर उपयोग कर सकेंगे।	दुनिया की सबसे हल्की चीज पतंग का कलात्मक ढंग से निर्माण कीजिए।		कलात्मकता
	अभिव्यक्ति और माध्यम: पत्रकारीय लेखन	6	पत्रकारीय लेखन के विभिन्न रूप और प्रक्रिया को समझकर अपने लेखन कौशल को समृद्ध कर सकेंगे।	विभिन्न समाचार-पत्रों और पत्रिकाओं में से अपने पसंदीदा फीचर चुनकर कक्षा में सुनाइए।		मौखिक संचार
JULY	गद्य : काले मेघा पानी दे	6	पानी जैसी अत्यावश्यक चीज के लिए एक आम आदमी के प्रयासों और विश्वासों में छपी व्यवस्था को समझ सकेंगे।	'जल-संरक्षण' पर आधारित किन्हीं चार नारों का कलात्मक लेखन कीजिए।		कल्पनाशीलता एवं नवाचार
	पद्य : कविता के बहाने, बात सीधी थी पर	5	भाषा की सादगी और उचित प्रयोग का महत्व समझ सकेंगे।	किसी स्वैच्छिक विषय पर लगभग 70-80 शब्दों में कविता लेखन कीजिए।		रचनात्मकता

	PT-1 [17/7/25]		प्रथम त्रैमासिक परीक्षा	प्रथम त्रैमासिक परीक्षा	
	वितान: सिल्वर वेडिंग	8	पीढीगत अंतर को समझ कर तदनुरूप आचरण करना सीखेंगे।	अपने आस-पास रहने वाले किसी यशोधर बाबू जैसे चरित्र का चरित्र- चित्रण कीजिए।	नैतिकता एवं पारिस्थितिकी तंत्र की समझ
	अभिव्यक्ति और माध्यम: विशेष लेखन	5	विविध क्षेत्रों में विशिष्ट लेखन की प्रक्रिया को समझ कर लेखन कौशल को समृद्ध कर सकेंगे।	किसी समाचार पत्र में प्रतिदिन प्रकाशित होने वाले मंडी के भावों पर आधारित समाचारों को एकत्र कर उनका विश्लेषण कीजिए। क्या यह समाचार एक सामान्य पाठक की समझ में आ सकते हैं?	आर्थिक और वित्तीय साक्षरता
AUGU ST	गद्य: पहलवान की ढोलक	6	देश में खेल-खिलाड़ियों की परिस्थितियों, चुनौतियों और प्राप्त सुविधाओं पर चर्चा कर सकेंगे।	कहानी 'पहलवान की ढोलक' में वर्णित घटनाक्रम की रेडियो नाटक प्रस्तुति दीजिए।	मीडिया और इंटरनेट साक्षरता
	पद्य: कैमरे में बंद अपाहिज	5	शारीरिक चुनौतियों को झेलने वाले व्यक्तियों की त्रासदी को समझकर उनकी सहायता हेतु कदम उठा सकेंगे।	कविता के आधार पर पटकथा लेखन कीजिए।	कार्य-योजना एवं समस्या समाधान
	वितान: जूझ	8	जीवन के संघर्षों का सहजता से सामना करने हेतु प्रस्तुत होंगे।	लेखक की चारित्रिक विशेषताओं को बिंदुवार लिखिए।	जिज्ञासा, अनुकूलनशीलता एवं विश्लेषण
	अभिव्यक्ति और माध्यम: *कहानी का नाट्य रूपांतरण *कैसे बनता है रेडियो नाटक *नए और अप्रत्याशित विषयों पर लेखन	4 3 4	लेखन की कला को समझ कर भाषायी दक्षता प्राप्त कर सकेंगे।	अपने निकटवर्ती परिवेश एवं सामाजिक मुद्दों पर सूक्ष्म दृष्टि रखते हुए रचनात्मक लेखन कीजिए।	सूचना एवं संचार प्रौद्योगिकी साक्षरता
SEPT MBER	वितान : अतीत में दबे पांव	8	विभिन्न वक्तव्य के पक्ष और विपक्ष में विषय-वस्तु में से तथ्यों की खोज-परख कर सकेंगे। जैसे- सिंधु सभ्यता कितनी पुरानी है/ उसके विषय में कैसे पता चलता है?	भोपाल एवं उसके आसपास के किसी ऐतिहासिक महत्व की इमारत पर आधारित लघु फिल्म बनाइए।	नेतृत्व, टीमवर्क, सहयोग एवं सहकारिता
	TERM-1		अर्धवार्षिक परीक्षा	अर्धवार्षिक परीक्षा	अर्धवार्षिक परीक्षा

	[12/9/25]				
OCTOBER	गद्य: शिरीष के फूल	8	शिरीष के फूल की तरह किसी और प्राकृतिक वस्तु से जीवन की सहज प्रेरणा ले सकेंगे।	'राजनीतिक गलियारों में कुर्सी का मोह' विषय पर वाद-विवाद का आयोजन कीजिए।	तर्क, विश्लेषण, आलोचनात्मक सोच एवं समस्या समाधान
	गद्य : श्रम विभाजन	8	भारत देश में जातिवाद के कारण उत्पन्न विवादों को समझकर समस्या समाधान हेतु प्रयासरत होंगे।	अंबेडकर जी की सचित्र जीवनी लिखकर उनके विचारों की विशिष्टता पर प्रकाश डालिए।	वैचारिकता एवं भाषा कौशल
	पद्य: उषा	4	गतिशील वर्णन और बिंब वर्णन के लिए विशिष्ट शब्द-ज्ञान का संचय कर सकेंगे।	प्रातः कालीन सौंदर्य/वर्षा ऋतु में प्रकृति के सौंदर्य की आकर्षक चित्रात्मक प्रस्तुति कीजिए।	प्रकृति से निकटता एवं नवाचार
	पद्य : बादल राग	5	प्रगतिवादी विचारधारा और लघु मान संप्रदाय पर चर्चा कर सकेंगे।	कविता को लयात्मक ढंग से प्रस्तुत कीजिए।	संगीत के प्रति अभिरुचि
NOVEMBER	पद्य: कवितावली	10	विषय-वस्तु के आधार पर सामाजिक और सांस्कृतिक परिस्थितियों का विश्लेषण कर उसका औचित्य बता सकेंगे।	वर्तमान समय में समाज में आप किस तरह की विसंगतियां पाते हैं? उनके निराकरण हेतु उपाय बताइए। विस्तृत चर्चा।	बहुसांस्कृतिक साक्षरता एवं मानवतावाद
	पद्य :रुबाइयाँ	3	कविता में रूपक अलंकार के प्रयोग और भाव को समझ सकेंगे।	विविध अलंकारों का प्रयोग करते हुए स्वैच्छिक विषय पर कविता सृजन कीजिए।	अनुसंधान कौशल एवं रचनात्मकता
	पद्य : छोटा मेरा खेत, बगुलों के पंख TERM-2 [24/11/25]	6	प्राकृतिक दृश्य को किसी कला के माध्यम से दर्शाने में सक्षम होंगे। TERM 2	पक्षियों के संरक्षण हेतु आप कौन-से आवश्यक कदम उठाएंगे तथा अन्य लोगों को इस हेतु किस तरह प्रेरित करेंगे? अपने घर में रखे पुराने कबाड़ का कलात्मक ढंग से उपयोग करते हुए एक पक्षी घर बनाइए। TERM2	सृजनशीलता एवं कलात्मकता पर्यावरण और संरक्षण साक्षरता TERM2
DECEMBER	पाठ्यक्रम की पुनरावृत्ति एवं प्रायोगिक परीक्षा [10/12/25]		पुनरावृत्ति एवं प्रायोगिक परीक्षा	पुनरावृत्ति एवं प्रायोगिक परीक्षा	पुनरावृत्ति एवं प्रायोगिक परीक्षा
JANUARY	प्री-बोर्ड परीक्षा [02/01/2026]		प्री-बोर्ड परीक्षा	प्री-बोर्ड परीक्षा	प्री-बोर्ड परीक्षा

CLASS : XII

SUBJECT: HINDI CORE [302]

FEBRU ARY & MARC H	बोर्ड परीक्षा		बोर्ड परीक्षा	बोर्ड परीक्षा		बोर्ड परीक्षा
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NAME OF INCHARGE TEACHERS: SUNITA BHATNAGAR

SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL:

**CARMEL CONVENT SR SEC SCHOOL, RATANPUR, YEAR PLANNER:
2025-26**

CLASS: XII

SUBJECT: BIOLOGY

Month / No of Working Days	Name of the Unit / Chapter/Topic	Time for each unit	Learning Outcomes	Art Integrated Activity / Project	Practicals	Key Competencies to be Achieved
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.	Collage on asexual reproduction in lower organisms; Model of double fertilization	Pollen germination - slide preparation Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.	Concept clarity, diagram skills; Analytical and observation skills Anatomical understanding, memory skills
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	Poster on contraceptive methods; Pedigree analysis	Flowers adapted to pollination by different agencies (wind, insects, birds). pollen germination slide	Awareness and critical thinking; Logical reasoning, data analysis
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	DNA model using beads/straws	Study the plant population density by quadrat method. Study the plant population frequency by quadrat method.	Molecular concepts, model-making
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.	Project & poster on role of microbes	Identification of stages of gamete development. Meiosis in onion bud cell or grasshopper testis through permanent slides & specimen	Critical thinking, correlation; Health literacy, creativity
SEPTEMBER	REVISION *HALF YEARLY	2-hrs	critical thinking and problem solving, conceptual skill development.. assertion –reasoning and case study solving ability	Crosswords , MCQ quizzes	Revision	

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CLASS: XII

SUBJECT: BIOLOGY

OCT OBER	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	Biotech flowchart	onion root tip to study mitosis. Mendelian inheritance Flash cards models showing examples of homologous and analogous organs.	Integration of tech and bio concepts
NOV DEC	*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.	Model of ecosystem	Prepared pedigree charts of any one of the genetic traits. Controlled pollination - emasculation, tagging and bagging.	Application in real-life context; Awareness, environmental knowledge Environmental literacy, systems thinking
DEC JAN	REVISION *FINAL EXAM	3 hrs	critical thinking and problem solving, conceptual skill development.. assertion –reasoning and case study solving ability			
JAN FEB	REVISION *Pre Boards	3 hrs	Practice and learning			

NAME OF INCHARGE TEACHERS: Dr.NEERU THAKUR

Dr.NEERU THAKUR
SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL:

**CARMEL CONVENT SR SEC SCHOOL, RATANPUR, YEAR PLANNER:
2025-26**

CLASS: XII

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:2025-26(CLASS XII)

CLASS: 12th

SUBJECT: Chemistry

MONTH	NAME OF THE UNIT CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/ ART INTEGRATED PROJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED
APRIL	Unit I: Solutions Types of solutions, concentration, solubility, Raoult's law, colligative properties, abnormal molecular mass, Van't Hoff factor.	10 Hours	Define and classify solutions, understand solubility and colligative properties, calculate molecular mass using colligative properties.	Poster making on applications of colligative properties in daily life	Salt analysis (Sample 1-5)	Application of physical chemistry in life sciences and industries.
APRIL - JUNE	Unit VI: Haloalkanes and Haloarenes Nomenclature, nature of C-X bond, chemical properties, SN1/SN2 reactions, uses. Unit VII: Alcohols, Phenols and Ethers Preparation, properties, identification of alcohols, mechanism of dehydration, electrophilic	22 Hours	Understand nomenclature, reactions and uses of halo compounds, alcohols, phenols and ethers.	Role-play showing environmental effects of halogen compounds	Titration 1 & 2; Conversions worksheet	Understand organic reactions and their role in environment and health.

	substitution in phenols.					
JUNE	Unit II: Electrochemistry Redox reactions, EMF, Nernst equation, electrolytic and galvanic cells, corrosion, fuel cells.	16 Hours	Calculate EMF, understand electrochemical cells and their practical applications.	Model of electrochemical cells using daily materials	Numerical worksheet	Apply electrochemical concepts to understand batteries and corrosion.
JULY	Unit IV: d and f Block Elements Properties of transition elements, preparation and properties of KMnO_4 , $\text{K}_2\text{Cr}_2\text{O}_7$. Lanthanides - Electronic configuration, oxidation states, chemical reactivity and lanthanide contraction and its consequences. Actinides - Electronic configuration, oxidation states and comparison with lanthanides	24 Hours	Understand trends in d- and f-block elements, complex formation and uses.	Chart on colour and magnetic properties of coordination compounds	Titration 3 & 4	Explore role of transition metals in analytical and industrial chemistry.

	<p>Unit V: Coordination Compounds Nomenclature, structure, bonding theories, isomeris.</p> <p>PERIODIC TEST 1</p> <p>Ch. 1 & 6</p>					
AUGUST	<p>Unit VIII: Aldehydes, Ketones and Carboxylic Acids Nomenclature, preparation, properties, nucleophilic addition reactions.</p>	14 Hours	<p>Compare structure and reactivity of carbonyl compounds;</p>	<p>Collage on use of aldehydes and ketones in food and industry</p>	<p>Functional group tests;</p>	.
SEPTEMBER	<p>Revision + Term-1 Exam Chapters: Units 1, 2, 4, 5, 6, 7</p>	6 Hours	<p>Revise and consolidate knowledge before examination.</p>	NA	NA	<p>Evaluate conceptual clarity through practice.</p>
OCTOBER	<p>Unit III: Chemical Kinetics Rate law, order of reaction, integrated rate equations, Arrhenius equation.</p>	10 Hours	<p>understand reaction rate concepts.</p>	<p>Numerical worksheet</p>	<p>Salt analysis (Samples 6–12)</p>	<p>Investigate rates of chemical reactions in different conditions</p>

	Unit X: Biomolecules Carbohydrates, proteins, nucleic acids, enzymes, vitamins.	10 Hours	Understand the structure and functions of biomolecules.	Food testing experiments: glucose, protein, starch	Distinguish among carbohydrates, proteins and fats in given food sample	Relate biological molecules to daily nutrition and health.
NOVEMBER	Unit IX: Amines Classification, preparation, properties, diazonium salts. TERM 2	10 Hours	Identify amines and diazonium salts; learn their reactions and importance.	Demonstration: azo dye formation	Workshop practice	Recognize functional groups in synthetic organic chemistry.
DECEMBER	Pre-Board Practical Exams	6 Hour	Practical skill testing and viva preparation.	NA	Pre-board practical	Develop lab skills and analytical accuracy.
JANUARY	Pre-Board Exams	—	Written board preparation.	NA	Pre-board theory	Strengthen exam writing and revision skills.
FEBRUARY - MARCH	Final Board Exams	—	Final CBSE exam based on full syllabus.	NA	Board practical and theory	Mastery in all units of Chemistry Class 12.

NAME OF INCHARGE TEACHERS:

Bindu Dalal

Pragati Vijay

SIGNATURE OF SUBJECT COORDINATOR :

SIGNATURE OF PRINCIPAL :

ACADEMIC YEAR PLAN : 2025-26

Name of the Subject : Physics Part -1

XII A and B

MONTH / No. of working days	Name Of the Unit / Sub Topics	Time Allotted for each unit	Learning Outcomes	Art Integrated activity/ Art integrated project	Practicals	Key Competencies to be achieved				
APRIL -JUNE (26)	<p>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.</p> <p>Electrostatics Electric Charges; Conservation of charge, Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution.</p>	26(17.33h)	<p>Students will be able to understand --</p> <ul style="list-style-type: none"> *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.dependance 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. 	<p>Activity: 1) Demonstration to understand concept of Ohm's law. 2) Model making to verify Kirchhoff's current and voltage law.</p>	<p>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.</p>	<p>Understanding and applying concepts like Ohm's law, drift velocity, Kirchhoff's laws, resistance, resistivity and circuit analysis using combinations of resistors and ability to solve problems related to these concepts. Students will achieve Core and functional competency. Develop processes skills and experimental, observational, manipulative, decision making in learners.</p>				
JULY (18)	<p>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.)</p>	26(17.33h)	<p>The students will be able to explain the following facts and concepts--</p> <ul style="list-style-type: none"> *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 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 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, electric potential gradient *electric potential due to dipole, the potential energy and torque due to an electric dipole. *Dielectrics, polarization and capacitance and its derivations. 	<p>Activities--1) Find the pairs of materials having/ showing static charge accumulation to prove conservation of charges. 2) Make the cubes to solve the numerals 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 dependance of capacitance on medium and distance between the plates.</p> <p>Project: Different projects are given.</p>		<p>Knowledge of concepts like electric fields, potential and capacitance, applying laws like Coulomb's law and Gauss's Law and problems solving related to static electricity and charge distributions. Develop conceptual competence in the learners and make them realize and appreciate the interface of physics with other disciplines.</p>				
AUGUST (18)	<p>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.</p>	18 (12h)	<p>Students will be able to --</p> <ul style="list-style-type: none"> *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)st.infinity 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. 	<p>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.</p>	<p>EXP: 3) To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.</p>	<p>Core Competencies like understanding the relationship between electricity and magnetism, Comprehending magnetic fields and forces and applying these concepts to real world applications like moving coil galvanometer. Ability to make decision on uses of different types of magnetic materials in making permanent and electromagnets.</p>				

SEPTMBER (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 it's 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.	Activity -- 3) Make a chart showing differences between dia, para and ferromagnetic materials.	Activity1) 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/rheostat, key, ammeter and voltmeter. Mark the component that are not connected in proper order and correct the circuit and also the circuit diagram.	Understanding and applying concepts like Ohm's law, drift velocity, Kirchhoff's laws, resistance,resistivityand circuit analysis using combinations of resistors and to promote problem solving abilities and creative thinking in learners related to the concepts. Students will achieve Core and functional competency.	
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	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.	Understanding Faraday's law, Lenz's law and AC circuit principles as well as the ability to solve problems involving induced EMI, currents and impedance.Students will develop the ability to understand working of generator and transformer. To expose the learners to different processes used in Physics-related industrial and technological applications.	A
NOVEMBER (1)	Full Syllabus		Revision And Term-2 Exam.				
DECEMBER	Full Syllabus		Revision And Pre Board Exam.				
JANUARY			Pre Board Exam.				
	NAME OF INCHARGE TEACHER : ARCHANA TALELE						
	SUBJECT CO-ORDINATOR : ARCHANA TALELE						
	SIGNATURE OF THE PRINCIPAL :						

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

CLASS : XII

SUBJECT: PHYSICS PART 2

MON TH	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTE D FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/PR OJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED.
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. PT1 EXAM	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	1. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle. 2)To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.	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.	The child demonstrates a thorough understanding of the concepts of reflection and refraction of light. They accurately recall and apply technical terms associated with spherical mirrors, correctly use sign conventions for both mirrors and lenses, and proficiently draw ray diagrams to determine the nature and position of images. The learner is able to derive and explain all relevant mirror and lens equations, apply Snell's Laws of refraction, and understand the concept of relative refractive indices. Additionally, the child explains complex optical phenomena such as total internal reflection and the behavior of light through prisms. They derive mathematical relationships for light rays interacting with various optical elements including spherical surfaces and lenses. The child also demonstrates a clear understanding of optical instruments by deriving expressions for magnification in microscopes and telescopes,

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

CLASS : XII

SUBJECT: PHYSICS PART 2

			<p>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</p>			<p>indicating strong analytical and application-based skills in the study of light.</p>
AJULY	<p>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).</p>	9	<p>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 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</p>	<p>3)Study of Interference using a Double Slit Experiment 4)Show that $i=e$,refraction of light through glass slab.Observe the dependence of i and thickness of glass slab on lateral displacement. 5)construction of wave front with model.</p>	<p>To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab..</p>	<p>Understands wave nature of light by comparing wave and corpuscular theories, and applies Huygens' principle to explain reflection, refraction, and total internal reflection. Demonstrates understanding of interference and diffraction through experimental explanation and mathematical derivations, and applies the superposition principle to analyze light intensity patterns.</p>

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CLASS : XII

SUBJECT: PHYSICS PART 2

			<p>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.</p>			
AUGUST	<p>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.</p>	6	<p>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</p>	<p>6)variation of barrier height with biasing. 7)Construction of rectifier.</p>	<p>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</p>	<p>The child demonstrates a clear understanding of the foundational concepts in semiconductor electronics. They take initiative to explore the historical evolution of semiconductor technology and accurately classify materials as conductors, semiconductors, or insulators based on their resistivity and energy band structure. The learner explains the lattice structure and behavior of intrinsic semiconductors and effectively describes the process of doping to convert intrinsic semiconductors into extrinsic types (n-type and p-type). The child identifies the pn junction as the fundamental building block of semiconductor devices and extrapolates this understanding to construct and</p>

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

CLASS : XII

SUBJECT: PHYSICS PART 2

			<p>describes pn junction as the basic building block of semiconductor devices.</p> <p>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.</p>			<p>analyze the behavior of a pn diode under both forward and reverse bias conditions. Furthermore, they explain the function of the pn junction diode as a rectifier, showcasing their ability to connect theoretical understanding with practical applications in electronic circuits.</p>
SEPTEMBER	<p>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. TERM 1</p>	5	<p>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</p>	8)Studying the Photoelectric Effect and Estimating Planck's Constant"		<p>The child understands key historical experiments leading to the discovery of the electron and recognizes the emission of valence electrons from metal surfaces. They explain the photoelectric effect, identify factors affecting photoelectric emission, and analyze the relationship between photoelectric current, intensity, potential, and frequency. The child also comprehends Einstein's theory of the photoelectric effect and its key features.</p>

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CLASS : XII

SUBJECT: PHYSICS PART 2

			<p>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</p>			
OCTOBER	<p>Atoms: 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).</p>	9	<p>Takes initiative to understand historical experiments related to the atomic model. Explains the nature of electron orbits basis Rutherford model of atom. Explains the characteristics of atomic spectra of hydrogen atom. Takes initiative to study the details of</p>	9)Exploring the Structure of the Atom: An Investigatory Study on Rutherford's and Bohr's Atomic Models"		<p>The child demonstrates a deep conceptual understanding of the evolution of atomic models. They take initiative to explore historical experiments and explain the structure of the atom based on Rutherford's and Bohr's models. The learner understands atomic spectra, identifies hydrogen's spectral lines, and explains them using Bohr's postulates. They also grasp the limitations of the Rutherford model and appreciate the improvements made by Bohr. Additionally, the</p>

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

CLASS : XII

SUBJECT: PHYSICS PART 2

			<p>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.</p>			<p>child connects modern concepts by understanding de Broglie's explanation of quantized angular momentum, reflecting a strong foundation in atomic theory</p>
NOVEMBER	<p>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. EM WAVES: Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only).</p>	5.4	<p>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</p>	Study of Binding Energy and Mass Defect in Nuclei		<p>The child understands the fundamental characteristics of nuclear force, recognizing it as a strong, short-range, and charge-independent force. They clearly describe nuclear fission as the process of splitting a heavy nucleus into smaller nuclei, demonstrating awareness of the underlying principles of nuclear reactions.</p>

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SUBJECT: PHYSICS PART 2

	Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.		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 e m wave.			The child understands the nature of electromagnetic waves as oscillating electric and magnetic fields perpendicular to each other and the direction of wave propagation. They accurately describe the electromagnetic spectrum, identify different types of EM waves in order of frequency, specify their frequency ranges, and state practical applications for each type.
NOVEMBER	FULL SYLLABUS					TERM 2
JANUARY	FULL SYLLABUS					PREBOARD

NAME OF INCHARGE TEACHERS:

SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL:

**CARMEL CONVENT SR SEC SCHOOL, RATANPUR, YEAR PLANNER:
2025-26**

CLASS: XII

SUBJECT: BIOLOGY

Month / No of Working Days	Name of the Unit / Chapter/Topic	Time for each unit	Learning Outcomes	Art Integrated Activity / Project	Practicals	Key Competencies to be Achieved
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.	Collage on asexual reproduction in lower organisms; Model of double fertilization	Pollen germination - slide preparation Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.	Concept clarity, diagram skills; Analytical and observation skills Anatomical understanding, memory skills
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	Poster on contraceptive methods; Pedigree analysis	Flowers adapted to pollination by different agencies (wind, insects, birds). pollen germination slide	Awareness and critical thinking; Logical reasoning, data analysis
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	DNA model using beads/straws	Study the plant population density by quadrat method. Study the plant population frequency by quadrat method.	Molecular concepts, model-making
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.	Project & poster on role of microbes	Identification of stages of gamete development. Meiosis in onion bud cell or grasshopper testis through permanent slides & specimen	Critical thinking, correlation; Health literacy, creativity
SEPTEMBER	REVISION *HALF YEARLY	2-hrs	critical thinking and problem solving, conceptual skill development.. assertion –reasoning and case study solving ability	Crosswords , MCQ quizzes	Revision	

**CARMEL CONVENT SR SEC SCHOOL, RATANPUR, YEAR PLANNER:
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CLASS: XII

SUBJECT: BIOLOGY

OCT OBER	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	Biotech flowchart	onion root tip to study mitosis. Mendelian inheritance Flash cards models showing examples of homologous and analogous organs.	Integration of tech and bio concepts
NOV DEC	*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.	Model of ecosystem	Prepared pedigree charts of any one of the genetic traits. Controlled pollination - emasculation, tagging and bagging.	Application in real-life context; Awareness, environmental knowledge Environmental literacy, systems thinking
DEC JAN	REVISION *FINAL EXAM	3 hrs	critical thinking and problem solving, conceptual skill development.. assertion –reasoning and case study solving ability			
JAN FEB	REVISION *Pre Boards	3 hrs	Practice and learning			

NAME OF INCHARGE TEACHERS: Dr.NEERU THAKUR

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**CARMEL CONVENT SR SEC SCHOOL, RATANPUR, YEAR PLANNER:
2025-26**

CLASS: XII

SUBJECT: BIOLOGY

NAME OF THE SUBJECT TEACHER: Dr. NEERU THAKUR

SIGNATURE OF THE SUBJECT COORDINATOR: Dr. NEERU THAKUR

CARMEL CONVENT SR SEC SCHOOL, RATANPUR

Y E A R P L A N N E R : 2 0 2 5 - 2 6

CLASS XII

SUBJECT: APPLIED MATHEMATICS (241)

MONTH	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/PROJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED
APRIL	UNIT 2: Algebra UNIT 8: Linear Programming (Formulation and Graphical Method) UNIT 3: Calculus (Differentiation only)	16 periods	Understand matrices, solve LPPs graphically, apply rules of differentiation		Matrix multiplication and the inverse of a matrix	Algebraic reasoning, optimization, introductory calculus
JUNE	UNIT 3: Calculus (Applications of Derivatives and Integration)	18 periods	Apply differentiation and integration in business contexts, optimization		Collect data from newspapers on traffic, sports activities and market trends and use excel to study future trends	Analytical thinking, calculus in real-life context
JULY PT-1 (Matrices, Determinants and LPP)	UNIT 3: Calculus (Differential Equations and Modelling) UNIT 4: Probability Distribution	20 periods	Solve differential equations, understand and compute distributions	PPT ON LINEAR PROGRAMMING	Graphs of an exponential function, demand and supply functions on Excel	Logical modelling, statistical reasoning

AUGUST	UNIT 5: Inferential Statistics UNIT 6: Time- Based Data	18 periods	Conduct statistical inferences, analyze time series data		Use of Venn diagram in solving practical problems	Interpretation skills, temporal data analysis
SEPTEMBER Half Yearly Exam (All chapter till August)	UNIT 7: Financial Mathematics (Perpetuity, Sinking Funds, EMI)	16 periods	Understand and calculate perpetuity, sinking fund, EMI		Financial modelling and calculation sheets in Excel	Financial awareness, numerical calculation
OCTOBER	UNIT 7: Financial Mathematics (Returns, Growth, and Depreciation)	16 periods	Compute growth, returns, and depreciation			Investment analysis, comparative reasoning
NOVEMBER	UNIT 1: Numbers, Quantification and Numerical Applications	14 periods	Apply number operations in real contexts, use modulo and alligation strategies			Practical numeracy, logical sequencing
DECEMBER (Final Exam Full Course)	Final Exams					
JANUARY (Pre-Board Full Course)	Pre-Board Examinations	-				

Name of the In charge teacher : Mr. Nikhilesh Puraswani

Signature of the Subject Coordinator : Mrs. Anamika Chugh

MONTH	NAME OF THE UNIT/CHAPTER AND SUB TOPICS	TIM E ALL OTTED FOR EAC H UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/ART INTEGRATED PROJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED
APRIL	<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>	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.</p> <p>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 are mostly worked with, inside program. A file is buch of bytes stored on same storage device like hard-disk, thumb-drive etc.</p>	<p>Create a digital gallery using Python's file handling capabilities.</p> <p>Store and display artwork information in a file</p> <p>Use Functions to create reusable and modular code.</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 the file stu.dat, which</p>	<p>Use Python's built-in file handling functions.</p> <p>Implement functions to add, view, modify and search data from any file like Binary, Text or CSV.</p> <p>Use functions to draw shapes and patterns (squares, triangles, circles etc.)</p>
JUNE	<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(),</p>					

	seek and tell methods, manipulation of data in a text file 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				has been modified. Read the last 15 bytes from a text file.	
JULY	Data File handling continued 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()	10	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. Learning how to deal with some contradictory or unexpected situation or in short, an error that is unexpected.	Create a CSV file to store information about art pieces, including : Title, Artist, Medium, Year created and price.	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	Knowing the different file modes and when to use them ('r','w','a') Knowing how to read and write in a CSV file.
AUGUST	Data Structure <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 • Implementing Stack in Python <ul style="list-style-type: none"> ◦ Stack Applications 	30	Students learn the difference between Raw data and Data Item..types of 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. The working of STACK data structure using Last In First Out principle.	Create a program that allows users to : <ul style="list-style-type: none"> • Add Art pieces to a stack (push operation) • Remove art pieces from the stack (pop operation) • View the top art piece(peek operation) 	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 node in the stack (b) POP() To remove a node from the stack	Knowing how to implement common data structures such as lists, tuples, dictionaries, sets and stacks. Understanding the different trade-offs between different data structures.

<p>Sep tem ber</p>	<p>Database management : Database Concepts Relational data model Simple queries in SQL Table creation and Data Manipulation commands Grouping Records, Joins in SQL Interface Python with MySQL Introduction Connecting to MySQL from Python Parameterised queries Performing Insert and Update Queries</p>	<p>20</p>	<p>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>	<p>Create a database to store information about art pieces, including : Title, Artist, Medium, Year created and price.</p>	<p>Why are foreign keys allowed NULL values? Explain. Compared to a file system, how does a database management system avoid redundancy in data through a database.</p>	<p>Knowing the basic concept of databases such as relational databases, NoSQL databases and database design. Understanding the importance of database management in software sevelopment.</p>
<p>OCTO BER</p>	<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. 	<p>20</p>	<p>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.</p>	<p>Create a server program that acts as the central hub for the art galleries. Allow art galleries to : Send msgs to each other Share information about art pieces Request information from others</p>	<p>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 4800bits</p>	<p>Knowing concepts of computer networking such as : Network Protocols (TCP/IP, HTTP, FTP rtc.) Network Architecture Network devices (Router, switches etc.)</p>

NOV EMB R	<p>Computer Networks – II</p> <ul style="list-style-type: none"> • Network Devices • Network Protocols • Wireless/Mobile <p>Computing Technologies</p> <ul style="list-style-type: none"> • Internetworking Terms and Concepts • Network Security Concepts 	5	Learning about the various and most prevalently used used Network devices, various network protocols and related communication technologies		What is a modem, Ethernet card, RJ-45, Hub, Witch, Bridge, Router Gateway, Host... and other list of abbreviations	Key concepts: Network protocols Socket programming Network architecture Error handling Network Security
DECEM BER	FULL SYLLABUS		Term-II			
JANUA RY	FULL SYLLABUS		Pre-Board			

NAME OF INCHARGE TEACHERS: Lata Iyer

SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL:

CLASS : XII

SUBJECT: Sanskrit

MONTH	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/ART INTEGRATED PROJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED.
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 प्रस्तुत् करें	बिहार और मध्य प्रदेश के प्रमुख नेता अभिनेता एवं शिक्षकों की प्रमुख उपलब्धियों को कोलाज के माध्यम से प्रदर्शित कीजिये		सेवाप्रियता
June	तृतीयः पाठ मातुराजा गरीयसी व्याकरण समास संस्कृत साहित्य का	10 8	माता पिता की महिमा श्रेष्ठता और गरिमा माँ की आज्ञा राम की तरह अवधार्य होती है नाटक के दरा दियों के बारे में जाने	कालिदास की प्रमुख कृतियों का सचित्र संक्षिप्त विवरण दीजिये?		मातृभक्ति

CLASS : XII

SUBJECT: Sanskrit

	इतिहास गद्यकाव्य और चम्पूकाव्य					
July	चतुर्थ पाठ प्रजानुरञ्जको नृपःव्याकरण प्रत्यय	10 8	एक अच्छे रामसक के गुणों से अवगत कराना			सुशासन के नियम
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	विद्या इस विषय पर आधारित पांच श्लोकों का संकलन कीजिए। 9.5 घण्टे		कर्तव्यनिष्ठता
September	षष्ठः पाठः सूक्ति सौरभम् व्याकरण कारक सप्तमः पाठः नैकेनापिसम	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

CLASS : XII

SUBJECT: Sanskrit

	म् गता वसुमती		अतिलोभो न कर्तव्यः तो भ विनाश का कारण होता है			
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			नारी अस्मिता
November	एकादशः पाठः- कार्याकार्य व्यवस्थितः	10 6	कार्याकार्य व्यवस्थित देवी सम्पत और आसुरी सम्पत का भेद बताया गया			अध्यात्म प्रेम
December	अपठित- अवबोधनम् अनुवाद वाक्यप्रयोग इत्यादि।	10 6				
January						
February						
March						

CARMEL CONVENT SR SEC SCHOOL,RATANPUR,YEAR PLANNER:2025-26(CLASSES IX TO XII)

CLASS : XII

SUBJECT: Sanskrit

NAME OF INCHARGE TEACHERS: Sangeeta. Yadav

SIGNATURE OF SUBJECT CORDINATOR:

SIGNATURE OF PRINCIPAL:

CARMEL CONVENT SR SEC SCHOOL, RATANPUR

Y E A R P L A N N E R : 2 0 2 5 - 2 6

CLASS XII

SUBJECT: APPLIED MATHEMATICS (241)

MONTH	NAME OF THE UNIT / CHAPTER AND SUB TOPICS	TIME ALLOTTED FOR EACH UNIT	LEARNING OUTCOMES	ART INTEGRATED ACTIVITY/PROJECT	PRACTICALS	KEY COMPETENCIES TO BE ACHIEVED
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DECEMBER (Final Exam Full Course)	Final Exams					
JANUARY (Pre-Board Full Course)	Pre-Board Examinations	-				

Name of the In charge teacher : Mr. Nikhilesh Puraswani

Signature of the Subject Coordinator : Mrs. Anamika Chugh