



VISHWA BHRATI PUBLIC SCHOOL GR. NOIDA

SYLLABUS CLASS-X , SESSION 2026-27

Subject -ENGLISH LANGUAGE & LITERATURE

TEXTBOOKS -I) LITERATURE READER (FIRST FLIGHT)

II) SUPPLEMENTARY READER (FOOTPRINTS WITHOUT FEET)

MONTH	TOPIC		SUB-TOPIC	LEARNING OBJECTIVES
MARCH/APRIL	FIRST FLIGHT 1. A LETTER TO GOD 2. NELSON MANDELA - A LONG WALK TO FREEDOM SUPPLEMENTARY- 1. A TRIUMPH OF SURGERY	POETRY i. DUST OF SNOW ii. FIRE AND ICE ACTIVITY- ROLE –PLAY (BASED ON CHAPTER NELSON MANDELA's in LA)	WRITING SKILLS FORMAL LETTER- LETTER TO THE EDITOR INTEGRATED GRAMMAR TENSES	STUDENTS WOULD BE ABLE TO: ● DEVELOP CURIOSITY AND CREATIVITY THROUGH EXTENSIVE READING AND EXPLANATION BY THE TEACHER ● TO BUILD GREATER CONFIDENCE AND PROFICIENCY IN ORAL AND WRITTEN COMMUNICATION ● RECALL THE FORMAT OF LETTER WRITING AND LOGICALLY DEVELOP ANSWERS APPROPRIATELY
MAY	FIRST FLIGHT 3.TWO STORIES OF FLYING I & II 4.FROM THE DIARY OF ANNE FRANK SUPPLEMENTARY- 2.THE THIEF'S STORY	A TIGER IN THE ZOO HOW TO TELL WILD ANIMALS ACTIVITY- EXTEMPORE	WRITING SKILLS FORMAL LETTER- PLACING AN ORDER INTEGRATED GRAMMAR REPORTED SPEECH SUB-VERB CONCORD	STUDENTS WOULD BE ABLE TO: ● DEVELOP THE ABILITY AND KNOWLEDGE REQUIRED TO ENGAGE IN UNDERSTANDING THE LANGUAGE USED AND TO COMMUNICATE IDEAS EFFICIENTLY ● TO IMPROVE THEIR COMPREHENSIBLE TECHNIQUES USING PROPER INTONATIONS WHILE RECITING POEMS ● TO ENABLE STUDENTS TO EXPRESS ANSWERS ON THEIR OWN
JULY	FIRST FLIGHT 5.GLIMPSSES OF INDIA I. BAKER FROM GOA II. COORG III. TEA FROM ASSAM 6. MIJBIL THE OTTER	THE BALL POEM ACTIVITY- DEBATE	WRITING SKILLS FORMAL LETTER- ENQUIRY COMPLAINT INTEGRATED GRAMMAR EDITING THE ERROR	STUDENTS WOULD BE ABLE TO: ● RECALL THE GRAMMAR TOPICS PRACTISED EARLIER SO AS TO REINFORCE THE TOPICS ● TO FACILITATE, SELF-EXPRESSIONS, DEVELOP SENTENCE-STRUCTURES WITH APPROPRIACY IN ATTEMPTING TEXT AND

	SUPPLEMENTARY- 3.THE MIDNIGHT VISITOR 4.A QUESTION OF TRUST		GAP FILLING	EXTRA QUES-ANS AND TOPICS RELATED TO WRITING SKILLS
AUGUST	FIRST FLIGHT 7. MIJBIL THE OTTER SUPPLEMENTARY 5.FOOTPRINTS WITHOUT FEET 6.THE MAKING OF A SCIENTIST	AMANDA THE TREES ACTIVITY- ARTICLE WRITING (ON CURRENT AFFAIRS) ACTIVITY- ASL (LISTENING)	WRITING SKILLS ANALYTICAL PARAGRAPH INTEGRATED GRAMMAR MODALS DETERMINERS	STUDENTS WOULD BE ABLE TO: ● EXPLORE THE ANALYTICAL PARAGRAPH WRITING AND EXPRESS WITH SOME FLEXIBILITY AND APPROPRIACY ● TO DEVELOP ANSWERS FULLY AND COHERENTLY ● TO ENABLE THE STUDENTS TO RECALL AND REVISE THE GRAMMAR TOPICS
SEPTEMBER	FIRST FLIGHT 7.MADAM RIDES THE BUS SUPPLEMENTARY 7.THE NECKLACE	FOG ACTIVITY- ASL (SPEAKING)	WRITING SKILLS REVISION - ANALYTICAL PARAGRAPH, ALL THE 4 FORMAL LETTERS COMPREHENSION- PROSE & POETRY REVISION	STUDENTS WOULD BE ABLE TO: ● REVISE AND RECALL THE DIFFERENT FORMS OF STRUCTURING ANSWERS AND FRAMING IT LOGICALLY WHILE COMMUNICATING IDEAS ● TO REVISE THE CORRECT FORMAT OF WRITING SKILLS-FORMAL LETTER & ANALYTICAL PARAGRAPH
OCTOBER	FIRST FLIGHT 8.THE SERMON AT BENARES SUPPLEMENTARY 8.BHOLI FIRST FLIGHT 9.THE PROPOSAL (PLAY)	THE TALE OF CUSTARD THE DRAGON	REVISION COMPLETE SYLLABUS OF WRITING SKILLS REVISION INTEGRATED GRAMMAR	STUDENTS WOULD BE ABLE TO: ● REVIEW, ORGANISE AND EDIT THEIR OWN WORK WHILE ATTEMPTING THE QUES-ANS AFTER DETAILED EXPLANATION AND CLASS DISCUSSION ● TO BE ABLE TO READ AND COMPREHEND THE POEM AND ATTEMPT A SUMMARY USING ENOUGH VOCABULARY TO EXPRESS THEMSELVES

NOVEMBER	SUPPLEMENTARY 9.THE BOOK THAT SAVED THE EARTH	FOR ANNE GREGORY REVISION	REVISION FORMAL LETTERS & ANALYTICAL PARAGRAPH REVISION GRAMMAR	STUDENTS WOULD BE ABLE TO: TO FOCUS ON COMMUNICATING PROFICIENTLY AND TO ACQUIRE VARIOUS IDEAS WHILE ATTEMPTING LITERATURE SUMMARY AND EXTRA QUES TO DEVELOP CURIOSITY AND CREATIVITY THROUGH EXTENSIVE READING AND PRACTICE
DECEMBER	REVISION PRE- BOARD II	REVISION	FULL INTEGRATED SYLLABUS	STUDENTS WOULD BE ABLE TO: FACILITATE SELF-LEARNING TO ENABLE THEM TO BECOME INDEPENDENT LEARNERS
JANUARY	REVISION, PREBOARD			
FEBRUARY				

SUBJECT – HINDI

पाठ्य पुस्तक -स्पर्श भाग-2 , संचयन, व्याकरण संबोध

मास	खंड	उपखंड	अधिगम प्रतिफल
मार्च- अप्रैल	स्पर्श (पद्य) स्पर्श (गद्य) व्याकरण रचनात्मक लेखन अपठित बोध	कबीर साखी मीरा के पद बड़े भाई साहब पदबंध , वाक्य रूपांतर अनुच्छेद लेखन, अपठित गद्यांश	समानुभूति व सहानुभूति क्षमता में वृद्धि। जीवन में समय नियोजन की आवश्यकता। सत्य को स्वीकारने की क्षमता का विकास। शब्द को समझना। पद का समझना। शब्द व पद का अंतर समझना।

मई	स्पर्श (गद्य) स्पर्श (पद्य) संचयन व्याकरण रचनात्मक लेखन अपठित बोध गतिविधि	डायरी का एक पन्ना मनुष्यता हरिहर काका मुहावरे औपचारिक पत्र लेखन विज्ञापन लेखन अपठित गद्यांश किन्ही तीन स्वतन्त्रता सेनानियों की भारतीय स्वतन्त्रता आंदोलन मे योगदान से संबन्धित जानकारी एकत्र कर परियोजना तैयार कीजिए	अंग्रेजी शासन के अत्याचारों का पर्दाफाश करना स्वतंत्रता संग्राम का इतिहास बताना। मानवीय मूल्यों तथा जीवन कौशल को सीखाना। सोचने की क्षमता का विकास करना। विचारविश्लेषण क्षमता का विकास। पत्र लेखन की शैली को विकसित करना । व्याकरण का व्यवहारिक ज्ञान देना
जुलाई	स्पर्श (पद्य) स्पर्श (गद्य) संचयन व्याकरण रचनात्मक लेखन	पर्वत प्रदेश में पावस ततार्रा -वामीरो कथा तीसरी कसम के शिल्पकार शैलेंद्र सपनों के से दिन समास के भेद लघु कथा लेखन अनुच्छेद लेखन सपनों के दिन पाठ के माध्यम से भारत की विभिन्न नदियों	जनजातीय समाज में परंपरा के बीच पलकते-बिखरते प्रेम की कहानी बताना । वाचन,लेखन, चिंतन कला का विकास। देशप्रेम व विश्व एकता की भावना का निर्माण। जीवन गौरवपूर्ण हो ,औरों का व अपना उद्धार करना। आपसी सहयोग भावना का विकास जीवन के प्रति सकारात्मकता सहभागिता प्रवृत्ति का विकास, समाज की रुढ़ियों से अवगत कराना छात्रों के ज्ञान के स्तर को बढ़ाना।

	गतिविधि	तथा पर्वतों की जानकारी छात्रों को देना।	
अगस्त	स्पर्श (गद्य) स्पर्श (पद्य) व्याकरण संचयन रचनात्मक लेखन अपठित बोध गतिविधि	अब कहाँ दूसरों के दुख से दुखी होने वाले पतझर में टूटी पत्तियाँ रचना के आधार पर वाक्य रूपांतरण टोपी शुक्ला सूचना लेखन अपठित गद्यांश परिवार के सदस्यों के साथ विविध घटनाओं पर आधारित चर्चा तथा समस्या समाधान निकालने के लिए उपाय ढूँढना।	नैतिक मूल्यों का विकास त्याग बलिदान सहयोग परोपकार का विकास अहिंसा व करुणा के मूल्यों का विकास मुहावरों व उसके वाक्य प्रयोग जानकारी। अपने विचारों को व्यक्त करने की क्षमता का विकास। छात्रों बताना कि अब लोकतंत्र है। हर समस्या का समाधान बातचीत से निकल सकता है। प्रेम भावना का विकास करना। एक जागरूक और सक्रिय नागरिक बनने में छात्रों को मदद करना। जीवन में आत्मिक शांति के महत्व से छात्रों को अवगत करना पत्र लेखन की विधा से छात्रों को अवगत करना। सूचना लेखन प्रचलित पद्धति के बारे में बताना।
सितंबर	स्पर्श (पद्य) स्पर्श (गद्य) रचनात्मक लेखन	तोप कर चले हम फिदा आत्मत्राण कारतूस ईमेल -पत्र लेखन	एकांकी विधा का परिचय कराना। साहस भाव जगाना। समस्या व समाधान प्रेरणा का विकास। सुख दुख जीवन के दो पहलू हैं यह छात्रों को बताना। आत्मविश्वास की भावना का निर्माण करना।
अक्टूबर- फरवरी	पुनरावृत्ति	पुनरावृत्ति	पुनरावृत्ति

SUBJECT: MATHEMATICS

TEXT BOOK PRESCRIBED: Mathematics for class X by NCERT

Month	Topic	Sub Topic	Learning Outcomes
March/April	Ch-1 Real Number	• Introduction • The Fundamental Theorem Of Arithmetic	Students would be able to Recall different number system and to apply concept of HCF and LCM in different situations.
	Ch-2 Polynomials	• Revisiting Irrational Numbers	Prove Irrational numbers • Recall the concept of polynomials.
May	Ch-3	• Introduction • Geometrical Meaning of The Zeros And Coefficients of a Polynomial	• Compare the relation between zeroes and coefficients of a polynomial
	Pair Of Linear Equations In Two Variables	• Relationship Between Zeros And Coefficients of a Polynomial	• Comprehend the method to form a polynomial.
	Ch-4 Quadratic Equations	• Introduction	• Recall the concept of Linear equation and its solution. • Compare the consistency for different equations.
	Ch-5 Arithmetic Progressions	• Pair Of Linear Equations In Two Variables • Graphical Method Of Solution Of A Pair Of Linear Equation	• Develop the skill of drawing graphs.

July	Ch-6 Triangles	• Introduction • Similar Figures • Similarity Of Triangles • Criteria For Similarity Of Triangles	• Recall different types of triangle and their properties. • Explore different methods to prove the theorem and its applications. • Apply the concept in different situation. • Correlate the subject with geometry in real life
	Ch-7 Coordinate Geometry	• Introduction • Distance Formula • Section Formula	• Select appropriate formula to find out length of a line segment. • Apply section formula in different situation. • Apply the concept to check for collinear points
	Ch-8 Introduction To Trigonometry	• Introduction • Trigonometric Ratios • Trigonometric Ratios of Some Specific Angles • Trigonometric Identities	• Identify T-ratios by taking ratio of sides with reference to an acute angle of a right triangle. • Prove Trigonometric identities. • Compare, explore and estimate trigonometric ratios & values of specific angles

August	Ch-9 Some applications of Trigonometry Ch-10 Circle	• Introduction • Heights And Distances • Introduction • Tangent to a Circle • Number of Tangents from a point on a Circle.	• Apply Trigonometric ratios in solving day to day life situation. • Develop problem solving skills. Develop logical reasoning skill by proving theorems related to Tangent to circle.
SEP	Ch-11 Areas Related to Circles Ch-12 Surface Areas And Volumes	• Areas Of Sector And Segment Of A Circle • Introduction • Surface Area of a Combination of Solids • Volume of a Combination of Solids.	• Recall the concept circle and parts of the circle. • Identify appropriate formula to find Length of an arc, area of sector and segment. • Recall different solid shapes and their properties. • Identify appropriate formula and to apply them to find out surface area and volume of combination of solids. • Develop computational skill.
OCTOBER	Ch-13 Statistics Ch-14 Probability	• Introduction • Mean Of Grouped Data • Mode Of Grouped Data • Median Of Grouped Data • Introduction • Probability – A Theoretical Approach	• Recall the concept Mean, Mode and Median of raw data. • Explore different methods to find out Mean, Median and mode. • Recall the concept experimental probability and to correlate with theoretical probability. • Understand the concept by various situations in real life.

NOV	REVISION	PRE-BOARD EXAMINATION	
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SCIENCE

PRESCRIBED TEXT BOOK : NCERT

PHYSICS			
MONTH	UNITS	Sub units	Learning Outcomes
			Students will be able to :
May	Ch-10 Light (Reflection & Refraction)	Reflection of Light, Image formation by Spherical Mirrors,	*recall the concepts of Light done in the previous classes.
		Uses, Sign Convention, Mirror Formula & Magnification,	*apply sign convention in numericals.
		Refraction of Light, Refraction through Glass Slab, Refractive index, Image Formation by Lenses, Sign Convention for Lens	*relate refraction of light to everyday events.
		Lens Formula & Magnification, Power of A Lens.	*define Power of a lens.
July	Ch- 11 The Human Eye & The Colourful World	The Human eye, Defects of vision and their correction,	*List the functions of each part of human eye.
		Refraction through a glass prism.	*identify the defect of vision and their correction.
			*explain refraction
July/Aug	Ch-11	Rainbow, Dispersion, Atmospheric Refraction, Scattering of Light.	*observe the effects of refraction in daily life.
	Practical- 1	Use a concave mirror to direct the sun rays on a sheet of paper and adjust the distanceto get a sharp spot of light. Find 'f'.	* determine the focal length of a concave mirror.
		Focus the light from the sun on a sheet of paper through a convex lens to obtain a sharp bright image of the sun.	* determine the focal length of a convex lens.
	Practical- 2	Keep observing the paper for a while, write your observation. Find 'f'.	
	Practical-3	Refraction through a rectangular glass slab.	* observe the path of a light ray through a glass slab.
	Practical-4	Refraction through an equilateral prism.	* observe the path of a light ray through a glass prism.
	Ch-12 Electricity.	Electric Current & Circuit, Electric Potential & Potential difference	* draw labeled circuit diagrams
			* solve numericals on the topic.
Sep	Ch-12	Ohm's Law, The factors on which resistance Of a conductor depends, Resistance in Series & in Parallel.	*verify Ohm's Law
	Electricity.	Resistance in Series & in Parallel	
		Heating Effect & Electric Power.	*apply heating effect in daily life.
Sep/Oct	Ist Preboard	Revision	

Oct/Nov	Ch-13 Magnetic effect Of Electric Current.	Magnetic Field & Field Lines, Right Hand Thumb Rule	*define magnetic field, field lines.
		Magnetic Field due to a current through- a Straight Wire, a Circular Loop & a Solenoid	*apply right hand thumb rule.
		Force on a Current-Carrying Conductor in a Magnetic Field	*apply Fleming's left hand rule.
		Domestic electric circuits	
Nov/Dec	Practical-5	To study the dependence of current on potential difference across a resistor and plot a graph.	* illustrate V-I graph.
	PREBOARD-II	Revision	
Jan/Feb	PREBOARD-III	Revision	

CHEMISTRY

MONTH	UNITS	Sub units	Learning Outcomes
MARCH / APRIL	Ch-1 Chemical Reactions & Equations	Chemical Equation- Types : combination, Decomposition,	*Identify kinds of reactions.
		Displacement, Double Displacement, Oxidation & Reduction,	
		Effects Of Oxidation- Corrosion & Rancidity.	*relate to the effects of corrosion in daily life.
	Practical- 1	To identify the types of reactions: Combination, decomposition	*observe the different kinds of reactions and their characteristics.
		Displacement and Double-Displacement	
May	Ch-2 Acids, Bases & salts	Chemical Properties, acid-base indicators, Strengths of acids/bases/salts, Importance of pH, salts, Chemicals from Common-Salt.	*differentiate between acids,bases and salts. *list the different kinds of indicators.
	Practical- 2.	To study the pH of the following samples- HCl, NaOH, water, CH ₃ COOH, NaHCO ₃ - Solution & Lemon juice.	*identify acidic,basic and neutral solutions.
	Practical- 3.	To study the properties of acids and bases- Litmus, Zn-metal and solid Na ₂ CO ₃	*observe the reactions of acids and bases.
	Practical- 4	To observe the action of Zn, Fe, Cu & Al on the following salt solutions- ZnSO ₄ , FeSO ₄ , CuSO ₄ & Al ₂ (SO ₄) ₃ .	* Observe the reactivity of different metals
July	Ch-3 Metals & Non-metals.	Physical properties and Chemical properties of metals and non-metals, The Reactivity series	*list and compare the physical and chemical properties of Metals and non metals.
August	Ch 3 (Contd)	Properties of Ionic Compounds, Occurrence of metals and Corrosion	*explain the properties of ionic compounds.
			*List the steps to extract various metals.
Sept	Ch-4 Carbon & its Compounds.	Bonding in Carbon, Versatile nature, Saturated & Unsaturated Hydrocarbon	*define covalent bonding
		C-compounds, Chains, Branches & Rings, Homologous Series	*reason for the versatile nature of carbon.
Sep/Oct	PRE BOARD-I	Revision	
Oct/Nov	Ch-4 Carbon & its Compounds.	Chemical properties of carbon compounds	*Name the allotropes of Carbon.
		Combustion, Oxidation	*State the characteristics of Homologous series.
		Addition , Substitution	
		Ethanol and Ethanoic acid, Soaps and detergents	State properties of ethanoic acid and ethanol

Dec	PRE BOARD-II	Revision	
Jan/Feb		Revision	
BIOLOGY			
MONTH	UNITS	Sub units	Learning Outcomes
			Students will be able to :
Apr/May	Ch-5 Life Processes	What are Life Processes?	1. Understand the process of nutrition, respiration, transportation and excretion in plants and animals
			2. Analyse the steps involved in all processes
		Autotrophic Nutrition, Heterotrophic Nutrition,	
		How do organisms obtain their nutrition, Nutrition in Human Beings	
		Respiration	
		Transportation:	
		Transportation in Human Beings Transportation in Plants	
		Excretion:	
		Excretion in Human Beings	
		Excretion in Plants	
		Activity:	
		1. To prepare temporary mount of leaf peel to observe stomata	
		2. To study the action of saliva on starch	
		3. To observe that carbon dioxide is released during exhalation and it's action on lime water	
		4. To observe the process of transpiration in plants	
July	Ch-6: Control and Coordination Ch-7: How do organisms reproduce	Animals - Nervous system	Understand:
		What happens in reflex actions?	1. Nervous system in animals
		Human Brain	2. Structure of neurons
		Chemical Coordination	3. Neuro-muscular junction
		Animal Hormones	4. Reflex Action
		Coordination in Plants	5. Human Brain
		Tropic movements in plants	6. Coordination in Plants
		Introduction of plant hormones	7. Response to stimulus
		Movement due to growth	8. Hormones in animals and plants
		Activity:	
		1. To study relation between sense of smell	
		and sense of taste	
		2. To study tropic movement in plants	
		Do organisms create exact copies of themselves?	
		Immediate response to stimulus	
		The importance of variation Accumulation of variation during reproduction	1. Understand the significance of Reproduction Process

		Modes of reproduction used by single organisms	2. Differentiate between Asexual and Sexual reproduction
		Fission: Binary Fission, Multiple Fission Fragmentation	3. Enlist various parts of reproductive organs and their function
		Regeneration Budding	
		Vegetative Propagation Spore Formation	
Aug	Ch-7: How do organisms reproduce?	Sexual Reproduction	
		Why the sexual mode of reproduction Sexual reproduction in flowering plants Reproduction in Human Beings:	1. Understand about the various sexually transmitted diseases and their causative agents
		• Male Reproductive System	2. Understand the harmful effects of population explosion and the ways to control birth.
		• Female Reproductive System	
		• What happens when an egg is not fertilised?	
		• Reproductive Health	
		Activity:	
		1. To study binary fission in amoeba	
		2. Budding in yeast and hydra with the help of prepared slides	
Sep	Ch-8: Heredity	Inherited Traits	1. Understand the terms related to genetics (Gene, Allele, Phenotype, Genotype, Homozygous, Heterozygous etc.)
		Rules for inheritance of Traits - Mendel's	
		contribution	2. Observe the importance of sexual reproduction in genetic variation
		How do these traits get expressed?	
		Sex Determination	3. Explain the Laws of Inheritance (Dominance, Segregation and Independent Assortment)
		Activity:	4. Solve the questions by using Punnett Square
		1. To study inheritance of characters taking the example of free and fused earlobes in humans	
Sept/Oct	PRE BOARD-I	Revision	
Nov	Ch-13: Our Environment	Ecosystem Environmental Problems Ozone Depletion	1. Differentiate between biodegradable and non-biodegradable substances
		Waste Production and their solutions Biodegradable and non-biodegradable substances	2. Enlist various components of ecosystem
			3. How our activities effect the environment
			4. Ozone depletion
			5. Managing the garbage we produce
Dec	PRE BOARD-II	Revision	
Jan/Feb		Revision	

SUBJECT: SOCIAL SCIENCE

BOOKS: NCERT

Month	Topics	Sub-Topics	Learning Outcomes
March/ April	Pol.Sc Ls 1: Power Sharing Geo: Ls.1 Resources & Development History: Ls.1 The Rise of Nationalism in Europe.	Case Studies of Belgium & Sri Lanka. Why Is Power Sharing desirable? Forms Of Power Sharing Development of resources. Resource planning of India Land resources. Land utilization. Land use pattern in India. Land degradation & conservation measures Soil as a resource Classification of soils Soil erosion & soil conservation. The French Revolution & the idea of the nation. The making of Nationalism in Europe. The Age of Revolutions 1830 - 1848 The Making of Germany & Italy. The history of Great Britain Visualizing the nation Nationalism & Imperialism	Understand the need for power sharing in democracy through the case studies of Belgium & Sri lanka. To comprehend the forms of power sharing. Understand the value of resources & the need for their judicious Utilisation & conservation. The theme will discuss the forms in which nationalism developed along with the formation of nation states in Europe in the post 1830 period. To Understand the changing form of nationalism & the rise of imperialism during the early 20th century.

May	Economics : Ls.1 Development Geo Ls 2: Forest & Wildlife Pol Science Ls 2: Federalism	Different people, different goals. Income & other goals. National development. How to compare different countries or states ? Income & other criteria Public facilities & sustainability of development. Conservation of forest & wildlife in India. Types & distributions of forest & wildlife resources. Community & conservation. What is federalism? What makes India a federal country? How is federalism practiced in India? Decentralization in India.	To familiarise with some economic concepts. Sensitizing the children about the rationale for overall development in our country. Understanding the importance of forest & wildlife. To comprehend the ability & knowledge of how forest & wildlife conservation & management relate to the economy & environment, both currently & in the future. To comprehend the concept of federalism. To understand how federalism works in India.
July	Geo Ls 3: Water Resources Eco Ls 2: The sectors of Indian Economy History Ls 2: Nationalism in India Geo Ls 4:	Water Scarcity & need for water conservation & management. Multipurpose river projects & integrated water resources management. Rainwater harvesting Sectors of Economic Activities. Comparing the three sectors; primary, Secondary & tertiary sectors in India. The 1st world war, Khilafat & non-cooperation. Different strands within the movement. Towards the Civil Disobedience Movement. The sense of collective belonging.	To understand the importance of water as resources as well as to develop awareness towards its judicious use & conservation. To make aware of major employment generating sectors. To comprehend the importance & need of the public sector. To understand the features of Indian Nationalism through the case studies of non-cooperation & civil disobedience movement. Analyze the nature of diverse social movements of the time. Discuss the importance of pan-Indian belongingness. Explain various government policies for institutional & technological reforms since

	Agriculture	Types of farming. Cropping pattern. Major crops. Technological & institutional reforms.	independence.
August	Pol Sc Ls 4: Gender, religion & caste. History Ls 3: Making of a global world (Subtopics 1 to 1.3) Rest part for interdisciplinary project as part of multiple assessments. Eco Ls 3: Money & credit Geo Ls 5: Minerals & Energy Resources History Ls 4: The age of industrialisation (To be evaluated in periodic test) Pol sc Ls 6: Political Parties	Gender & politics. Women's political representation. Religion, communism & politics. Caste & politics. Politics in caste. Pre modern world to conquest, disease & trade. Money as a medium of exchange. modern forms of money. Loan activities of the banks. Two different credit situations. Terms of credit. Formal sector credit in India. Self help groups for the poor. What is a mineral? Mode of occurrence of minerals. Ferrous & non-ferrous minerals, non metallic & rock minerals. Conservation of mineral energy resources. Conventional & non-conventional conservation of energy resources. Before the industrial revolution. Hand labour & steam powered. Industrialisation in the colonies. Factories come up. The peculiarities of industrial growth. Market for goods. Why do we need political parties? How many parties should	Identify & analyze the challenges posed by communalism to Indian democracy Show that globalization has a long history & point to the shifts within the process. Understanding money as an economic concept. Understanding the role of financial institutions from a daily point of view. Identify the different types of minerals & energy resources. Create awareness for judicious utilization. Familiarise with the proto-industrial phase & early factory system. Understanding the need for political parties. To differentiate between state & national parties. To analyse the challenges faced by political parties & to discuss various laws passed to reform political parties. To recognize the importance of industries in the national economy as well as to understand the regional disparities which resulted

	Geo Ls 6: Manufacturing Industries	we have? National & state political parties. Challenges to political parties. How can parties be reformed? Importance of manufacturing industries. Industrial location. Contribution of manufacturing industries to the national economy. Classification of industries. Spatial distribution. Industrial pollution & industrial degradation. Control of environmental degradation.	due to concentration of industries in some areas.
September	Eco Ls : 4 Globalization Geo Ls 7: Lifelines of the national economy History Ls 5: Print culture & the modern world. Pol sci Ls 7: Outcomes of democracy	What is globalisation? Factors that enabled globalisation. Rest parts are for interdisciplinary project as part of multiple assessments. Interdisciplinary project as part of multiple assessments First printed books. Print comes to Europe. Print revolution & its impact. The reading mania. The 19th century India & the world of print. Religious reforms & public debates. New forms of publication. Print & censorship. How do we assess democracy's outcomes? Accountable, responsive & legitimate govt. Economic growth and development. Reduction of inequality & poverty. Accommodation of social diversity. Dignity & freedom of the citizens.	To comprehend the term globalisation. To explain the workings of global economic phenomena. To understand the importance of transport & communication in the modern era. Identify the link between the print culture & the circulation of ideas. To familiarise with pictures, cartoons. To analyse why democracy is better than other forms of govt. To discuss its accountability, legitimacy & responsiveness towards the citizens. To understand the reasons for the continuation of democracy in India.
October	Pre Board-1		

	Revision		
November & December	Revision & Pre- Board- 2		

SUBJECT: ARTIFICIAL INTELLIGENCE(417)

BOOKS PRESCRIBED: N.C.E.R.T

Reference Book: Artificial Intelligence by Touchpad

Artificial Intelligence (Subject Code: 417)

Month	Unit No/Chapter No	Topic & Sub headings
March	PART-B Unit 1: Revisiting AI Project Cycle & Ethical Framework for AI PART A - Employability Skills : Unit 1 Communication Skills	● Introduction to Intelligence, Artificial Intelligence , Type of Intelligence ● Decision Making: How do you make decisions? ● What is Artificial Intelligence and what is not? ● Introducing AI, ML & DL. ● Introduction to AI Domains (Data Sciences, CV & NLP) ● Gamified tools for each domain- - o Data Sciences- Impact Filter (Impact of rise in temperature on different species) https://artsexperiments.withgoogle.com/impactfilter/ - o CV- Autodraw (It pairs machine learning with drawings from talented artists to help you draw stuff fast.) https://www.autodraw.com/ ● NLP- Wordtune (AI writing tool that rewrites, rephrases, and rewords your writing) https://www.wordtune.com/ ● Applications of AI – A look at Real-life AI implementations ● AI Ethics ● Moral Machine Activity : a platform for gathering a human perspective on moral decisions made by machine intelligence, such as self-driving cars. http://moralmachine.mit.edu/ Introduction to AI Project Cycle ● Understanding Problem Scoping & Sustainable Development Goals ● Simplifying Data Acquisition ● Visualizing Data ● Introduction to modelling ● Introduction to Rule Based & Learning Based AI Approaches ● Activity : Teachable machine to demonstrate Supervised

		Learning https://teachablemachine.withgoogle.com/ ● Activity : Infinite Drum Machine to demonstrate Unsupervised learning https://experiments.withgoogle.com/ai/drum-machine/view/ ● Introduction to Supervised, Unsupervised & Reinforcement Learning ● Neural Networks ● Evaluating the idea PART A: Communication Skills ● Communication Cycle ● Impact of Body language ● Effective communication ● Barriers to effective communication ● Writing skills ● Use of articles ● 7Cs of communication ● Parts of speech.
April	PART-B Unit 2 : Advanced concepts of Modelling in AI PART A - Employability Skills : Unit II Self Management skills-II	● Session: Differentiate between AI, ML, and DL ● Common terminologies used with data ● Types of AI Models: Rule Based Approach, Learning Based Approach ● Categories of Machine learning based models: Supervised Learning (https://teachablemachine.withgoogle.com/). Unsupervised Learning (https://experiments.withgoogle.com/ai/drum-machine/view/) Reinforcement Learning ● Subcategories of Supervised Learning Model: Classification Model, Regression Model ● Subcategories of Unsupervised Learning ● Model: Clustering, Association ● Subcategories of Deep Learning: Artificial Neural networks (ANN), Convolutional Neural Network (CNN) ● What is Neural Network? ● How does AI make a Decision? ● Activity: Human Neural Network - The Game ● Suggested Neural Network Activity: https://playground.tensorflow.org/ Part A Self Management skills-II

		• What is stress • What is stress Management • Stress Management Techniques • Self Awareness, Self-Regulation • Time Management and its importance • Self Motivation, • SMART GOALS
May	UNIT 3: Evaluating Models PART A - Employability Skills : Unit-III ICT Skills-II	• What is evaluation? • Session: Need of model evaluation • Train-test split • Accuracy • Error • Activity: Find the accuracy of the AI model • What is Classification? • Classification metrics • Activity: Build the confusion matrix from scratch • Activity: Calculate the accuracy of the classifier mod • Activity: Decide the appropriate metric to evaluate the AI model • Bias, Transparency, Accuracy Part A ICT Skills-II • Computer System • Windows OS • Keyboard • Basic File operations • Computer Security and Privacy • Computer Operations • Computer care and management • Protecting computer
July	UNIT 5: COMPUTER VISION PART A - Employability Skills : Unit-IV	• Introduction to Computer Vision • Applications of CV • Understanding CV Concepts • * Computer Vision Tasks • * Basics of Images-Pixel, Resolution, Pixel value • * Grayscale and RGB images • Activities: • * Game- Emoji Scavenger Hunt • https://emojiscavengerhunt.withgoogle.com/

	Entrepreneurial skills	● * RGB Calculator: ● https://www.w3schools.com/colors/colors_rgb.asp ● * Create your own pixel art: ● www.piskelapp.com ● * Create your own convolutions: ● http://setosa.io/ev/image-kernels/ Part A Entrepreneurial Skills-II ● Entrepreneurship and society ● Work done by entrepreneur ● Functions of an entrepreneur ● Importance of entrepreneur ● Entrepreneurship as Career Option ● Customer's needs, wants and demands ● Role of entrepreneur ● Misconceptions about entrepreneurship
August	UNIT 6: NATURAL LANGUAGE PROCESSING PART A- Employability Skills Unit-V Green skills	● Understand the concept of Natural Language Processing (NLP) and its importance in the field of Artificial Intelligence (AI) ● Various real-life applications of NLP ● Activity: Keyword Extraction ● https://cloud.google.com/natural-language ● Explore the various stages of NLP that involve in understanding and processing human language. ● Activity: Play with chatbots ● Elizabot - https://www.masswerk.at/elizabot/ ● Mitsuki - https://www.kuki.ai/ ● Cleverbot - https://www.cleverbot.com/ ● Singtel - https://www.singtel.com/personal/support ● Script Bot V/s Smart Bot ● Text Processing ● Text Normalisation * Bag of Words Hands-on: Text processing * Data Processing * TFIDF Part A Green Skills-II ● What is sustainable development ● Problem related to SDGs ● Green skills

		• Importance of SDG • Challenges of sustainable development • SDGs. Agenda 2030
September	UNIT 7: ADVANCE PYTHON	Understand to work with Jupyter Notebook, creating virtual environments, installing Python Packages. Session: Jupyter Notebook Able to write basic Python programs using fundamental concepts such as variables, data types, operators, and control structures. Session: Introduction to Python Able to use Python built-in functions and libraries. Session: Python Basics
October		Preboard-1
November	UNIT 4 : STATISTICAL DATA	• Define the concept of Statistical Data and understand its applications in various fields. • Define No-Code and LowCode AI. • Identify the differences between Code and No-Code AI concerning Statistical Data • Relate AI project stages to the stages of No-Code AI projects • Able to use no-code tool Orange Data mining. • To perform data exploration, modeling and evaluation with Orange data mining. Session: No code AI tool • Introduction to Data Science & its applications • Meaning of No-Code AI • No-Code and Low-Code. • Some no-code tools Orange Data Mining Tool: https://orangedatamining.com/download/ Session • Important concepts in Statistics. • Orange data mining • AI project cycle in Orange data mining (Palmer penguins case study) Activity: MS Excel for Statistical Analysis. Link: https://docs.google.com/spreadsheets/d/1f5

		GJXyP7EV2fy1hax47YVaH5gyq8KZy/edit?usp=drive_link&ouid=109928090180926267402&rtpof=true&sd=true Case study using Orange data mining (Palmer Penguins). Link: https://drive.google.com/drive/u/0/folders/1fmcRVbilTyUhmUv4DWT1BFsaCoQ2BmF
December		Preboard-II

SUBJECT: INFORMATION TECHNOLOGY(402)

BOOKS PRESCRIBED: N.C.E.R.T

Reference Book: Artificial Intelligence by Touchpad

Artificial Intelligence (Subject Code: 402)

Month	Unit No/Chapter No	Topic & Sub headings
March	PART-B Unit 1: Digital Documentation (Advanced) using LibreOffice Writer	• Styles/ categories in Writer → Page → Paragraph → Character → Frame → List → Table • Styles and Formatting Fill Format • Creating a new style → From Selection method → Drag and Drop method Updating a new style • Load style from template or document. Applying styles • Inserting an Image in a Document → Insert Image Option → Drag and Drop option → Copy and Paste method → Inserting an image by linking • Options to modify image using image toolbar, resize, crop and delete an image. • Drawing Objects • Creating drawing objects • Setting or changing its properties. • Resizing and grouping drawing objects. • Positioning image in the text. • Arrangement • Anchoring • Alignment • Text Wrapping • Table of contents • Hierarchy of headings • Creating a Table of Content (ToC) • Customization of Table of Contents(ToC) • Maintaining a Table of Contents(ToC) • Updating ToC • Deleting ToC • Using templates • Creating a Template • Using In-built/Saved Templates • Using

		Online Templates • Importing a Template • Editing a Template • Moving a Template • Exporting a Template • Applying Templates to a Blank Document • Track Changes Feature • Preparing a Document for Review • Recording Changes • Accepting and Rejecting Changes • Adding Comments • Deleting Comments • Comparing Documents
April	PART-B Electronic Spreadsheet (Advanced) using LibreOffice Calc PART A - Employability Skills : Unit II Self Management skills-II	Consolidating Data • Groups and Subtotals • What-if Scenarios • What-if Analysis Tool • Goal Seek Chapter 5: Using Macros in Spreadsheet Recording a Macro • Running a Macro • Creating and Organising a Simple Macro • Macro as a Function • Setting up multiple sheets. • Creating reference to other sheets by using keyboard and mouse. • Creating reference to another document by using keyboard and mouse. • Hyperlinks to the Sheet • Relative and Absolute Hyperlinks • Creating Hyperlinks • Editing a Hyperlink • Linking to External Data • Linking to Registered Data Sources • Sharing Spreadsheet • Opening and saving a shared spreadsheet. • Recording changes. • Add, Edit and Format the comments. • Reviewing Changes – View, Accept or Reject Changes • Merging and comparing. Part A Self Management skills-II • What is stress • What is stress Management • Stress Management Techniques • Self Awareness, Self-Regulation • Time Management and its importance • Self-Motivation, • SMART GOALS
May	Part B Unit 3: Database Management System using LibreOffice Base	Chapter 8: Introduction to Database Management System • Data and Information • Databases and DBMS • Advantages of database, • Data Models → Hierarchical Data Model → Network Data Model → Relational Data Model • Relational database Model → RDBS Terminology → Objects of an RDBMS

		Chapter 9: Starting with LibreOffice Base • Introduction to LibreOffice Base • Data types • Starting with LibreOffice • User Interface Of LibreOffice Base • Opening a Database • Creating a Table → Using a Wizard → Using design view, • Setting primary key • Saving a Table Entering data into table • Navigating through the table • Editing Data • Deleting Records from Table • Sorting Data in the Table Chapter 10: Working with Multiple Tables • Editing and Deleting tables, • Relationships between tables • Types of Relationships– one to one, one to many, many to many • Advantages of Relating Tables in a Database • Creating Relationships between Tables • Referential Integrity
July	Part B Unit 3: Database Management System using LibreOffice Base Continued... Part-B Unit 4: Maintain Healthy, Safe and Secure Working Environment	Chapter 11: Queries in Base • Queries • Query creation using wizard • Creation of query using design view • Editing a query, • Working with Numerical Data Chapter 12: Forms and Reports • Forms in BASE. • Creating form using wizard, • Modifying a Form • Form Controls Toolbar • Report in Base • Inserting other controls in report • Inserting Titles & Headings • Inserting Date & Time Chapter 13. Health, Safety and Security at Workplace Introduction to Health, Safety, and Security At Workplace • Policies and Procedures for Healthy, Safety and Security • Reasons for Health, Safety, and Security Programs or Policies in the Workplace • Workplace Safety Hazards • Physical Hazards • Falling Off Heights, Slipping and Tripping • Electrical Hazards • Fire Hazards • Health Hazards • Potential Sources of Hazards in an Organization • Hazards using Computers • Handling Office Equipment • Handling Objects • Stress at Work • Working Environment • Hazard Control • Safety Guidelines Checklist

		Chapter 14. Workplace Quality Measures Introduction • Air and Water Quality Monitoring Process • Guidelines for Clean Air and Clean Water • Importance of Cleanliness at Workplace • Office Ergonomics • Computer Health and Safety Tips • Musculoskeletal Problems: Occupational Overuse Syndrome, Strain in Legs and Feet, Eye Strain, • To reduce the risks of visual problems: Headaches, Obesity, Stress Disorders, Injuries from Laptop Use, Sleeping Problems • Health and Safety Requirements for Computer Workplace • Cautions while Working on the Computer. Chapter 15. Prevent Accidents and Emergencies Accident and Emergencies: → Notice and Correctly Identify Accidents and Emergencies → Get help Promptly and in the Most Suitable Way → Follow Company Policies and Procedures for Preventing Further Injury While Waiting for Help to Arrive → Act within the Limits of your Responsibility and Authority when Accidents and Emergencies Arise, → Promptly Follow Instructions given by Senior Staff and the Emergency Services Types of Accidents , Trip and Fall, Slip and Fall ,Injuries caused due to situations. Escalators or Elevators (or lifts) → → Accidents due to Falling of Goods → Accidents due to Moving Objects • Handling Accidents: → Attend to the Injured Person Immediately, → Inform your Supervisor → Assist your Supervisor • Types of Emergencies → First Aid, → Electrical Safety → Evacuation • General Evacuation Procedures • Fire Hazards in the Workplace • Fire Prevention • Identification of Material and Ignition Sources • First Aid for Electrical Emergencies • Electrical Rescue Techniques
August	PART A - Employability Skills : Unit-III ICT Skills-II	Part A ICT Skills-II • Computer System • Windows OS • Keyboard • Basic File operations • Computer Security and Privacy • Computer Operations • Computer care and management Protecting computer
September	PART A- Employability Skills	Part A Green Skills-II • What is sustainable development

	Unit-V Green skills PART A - Employability Skills : Unit 1 Communication Skills-II	• Problem related to SDGs • Green skills • Importance of SDG • Challenges of sustainable development • SDGs. Agenda 2030 PART A: Communication Skills • Communication Cycle • Impact of Body language • Effective communication • Barriers to effective communication • Writing skills • Use of articles • 7Cs of communication Parts of speech.
October		Preboard-1
November	PART A - Employability Skills : Unit-IV Entrepreneurial skills-II	Part A Entrepreneurial Skills-II • Entrepreneurship and society • Work done by entrepreneur • Functions of an entrepreneur • Importance of entrepreneur • Entrepreneurship as Career Option • Customer's needs, wants and demands • Role of entrepreneur
December		Preboard-II Revision, Project work