Class- XII (Science)
Syllabus for the Session 2024-25
English

Book Prescribed: NCERT			
	Months	**Content**	**Learning Outcomes**
Term -I	**April & May**	Ch- The Last Lesson (Prose Flamingo)	• To develop interest in literature and appreciate author's style of writing. • To make students realise the importance of a teacher. • To evoke the sense of responsibility, patriotism and love for the mother tongue.
		Ch- My Mother at Sixty-Six (Poem)	• To develop aesthetic sense amongst students and make them able to find out the poetic devices such as simile, metaphor, personification and repetition. • To make them understand the importance of parents, aging and inevitable death.
		Ch- The Third Level (Prose, Vistas)	• The students will be able to develop interest in science fiction and find out the concept of time travel. • To develop interest in human psychology and know the impact of wars on human beings.
		• Notice Writing • Letter to the Editor	• The students will be able write notice with appropriate format and develop writing skills. • To be able to identify the purpose and importance of writing effective formal letters.
		Ch- Lost Spring (Prose, Flamingo)	• The students will be able to comprehend the text and appreciate the author's style of writing. • To analyse the importance of safe and secure childhood, to peruse and chase one's dream.
		Ch - The Tiger King (Prose, Vistas)	• The students will be able to comprehend, enjoy and critically analyse the text. • To get glimpses of pre-independent India, royalty of kings, their upbringing, hunting as their passion.
		Ch-Deep Water (Prose, Flamingo)	• To enable the students to enjoy text, comprehend and analyse the situation of the protagonist. • To enable the students to imbibe the values like self-discipline. consistency and determination to overcome any fear the life.
		Ch- Keeping Quiet (Poem, Flamingo)	• To develop aesthetic sense amongst students and to appreciate poet's style of composing poem, find out poetic devices. • To get acquainted with nature's cycle and power of silence resulting in bring peace and harmony.
		Article writing and Invitation including reply	• To be able to write articles and invitation with appropriate format and style. • To be able to compose articles and invitation.
	June	Ch- Indigo (Prose, Flamingo) –	• The students will be able to comprehend, enjoy and critically analyse the text. • To get glimpses of pre-independence India, freedom struggle, Gandhi ji's contribution in making Indians free from fear.
		SUMMER BREAK	
	July	**PERIODIC TEST-I**	

		Ch- Journey to the End of the Earth (Prose, Vistas)	• To make students aware of the destruction caused by human activity to Mother Earth. • To get a deeper understanding of the formation of Earth, continents and changing environment. • To feel responsible about the Earth.
	& **August**	Ch- The Rattrap (Prose, Flamingo)	• To appreciate, comprehend and enjoy the text. • To realise the power of love, care & compassion which can transform any individual at any point of time.
		A Thing of Beauty (Poem)	• To develop aesthetic sense amongst student about poetry and be able to find out the poetic devices. • To value and admire the beauty of nature which has permanent impact on everyone.
		Ch- The Enemy (Vistas)	• To be able to read, enjoy and comprehend the text critically. • To get a detailed account of medical profession, doctor's responsibility and how professionalism is above all national boundaries.
		Ch- A Roadside Stand (Poem)	• To develop interest in poetry and to understand about the composition and the style of writing. • To get a glimpse of poverty and helplessness of a vendor to sell his wares. • To feel the plight of below poverty line people.
		Ch-Poets and Pancakes (Prose, Flamingo)	• To develop interest in cinematography and to know the process of film making. • To feel the importance of each and every department of film making from story writing to direction.
		Ch- The Interview (Prose, Flamingo)	• To appreciate text and be able to critically analyse the importance of interviews in today's era. • To know the do's and don'ts while taking any interview.
		Writing Skills- Job Application and Report writing	• The students would be able follow appropriate format of job application to write Job Application with resume and report writing. • To be able to frame impactful letters and reports.
	September	**REVISION & TERM-I EXAMINATION**	
TERM-II	**October** **&** **November**	Aunt Jennifer's Tigers (Poem)	• To appreciate poem its poetic devices & to know how art can bring solace in one's life. • To feel the pain of a recessive woman who lives and dies in accordance with her husband.
		Ch-Going places (Prose, Flamingo)	• To make them understand the adolescence phase, dreams, aspiration and their dreams. • To make students aware about the difference in reality and imagination.
		Ch- Memories of Childhood (Prose, Vistas)	• To read, enjoy and critically appreciate the text. • To understand the social structure of nineteenth century where the social structure forces women to follow the old and rotten ways living.
		Ch- On the Face of it (Vistas)	• To develop students' interest in literature especially play. • To be able to enact the play in the class. • To know the importance of self-love, friendship, and the impact of good company.
	December	**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**	
	January	**WINTER BREAK**	
		BOARD PRACTICALS	
	February & **March**	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Physics

	Months	Content	Learning Outcomes
Book Prescribed: NCERT			
Term -1	**April & May**	Ch- Electric Charges & Fields	• To state the mathematical definitions of Coulomb force and electric field. • To construct physical representations of various types of electric field patterns as per the nature of charges involved. • To explain the relationship between electrical force (F) on a test charge and electrical field strength (E). • To state Gauss's theorem and deduce its applications.
		Ch- Electrostatic Potential & Capacitance	• To relate the electrical potential with electric field. • To understand the working of charge storing device i.e, capacitor and explore it in terms of spherical and parallel plate capacitors. • To identify significance and role of dielectrics in electrical devices.
		Ch- Current Electricity	• To understand the concept of potential difference and current and explore the process of finding the unknown current in a loop using KVL and KCL. • To understand the practical application of resistors and different combination of cells in real life. • To operate different electrical instruments like Meter bridge, Galvanometer, Voltmeter, ammeter etc. and learn to find the least count of given measuring instrument.
		Ch- Moving Charges & Magnetism	• To learn about the relation between electricity and magnetism and different methods to find the magnetic field due to different types of conductors. • To establish the force between two parallel conductors and deduce its mathematical analysis depending upon the directions of current. • To design the conversion of galvanometer into ammeter and voltmeter of desired range.
TERM-II	**June**	**SUMMER BREAK**	
		PERIODIC TEST-I	
	July & August	Ch- Dual Nature of Radiation and Matter	• To explain dual nature of radiation, Photoelectric effect, Hertz - Lenard's observations and Einstein's photoelectric equation (particle nature of light). • To understand wave nature of particles and de-Broglie relation. • To explain conclusions of Davisson- Germer experiment except • experimental details.
		Ch- Magnetism & Matter	• To formulate current loop as a magnetic dipole and its magnetic dipole moment and obtain magnetic dipole moment of a revolving electron. • To understand magnetic field intensity due to a magnetic dipole. • To understand the different kinds of magnetic material.
		Ch- Electromagnetic Induction	• To learn about different methods to induce an emf in a given conductor. • To understand the concept of mutual and self-induction.
		Ch- Alternating Currents	• To understand the application-based concept of Electromagnetic Induction in Generator and Transformer. • To acquire the basic knowledge about the principle, construction, working and real life applications of Transformer and Dynamo.

		Ch- Electromagnetic Waves	• To acquire knowledge about the practical application of EMW in our daily life and explore EM spectrum.
		Ch- Semiconductor, Electronics: Materials, Devices and Simple Circuits	• To understand the concept of conductors, insulators and semiconductors with the help of Band Energy Theory. • To understand the classification of semiconductors along with practical applications in PN diode and Rectifiers.
	September	**REVISION & TERM-I EXAMINATION**	
TERM-II	**October & November**	Ch- Ray Optics and Optical Instruments	• To learn about the different types of mirror and lenses and respective ray diagrams for image formation along with the mathematical tactics and analysis like lens makers formula, thin lens formula, combination of lens and mirror. • To explore optical instruments: Microscopes and astronomical telescopes (reflecting and refracting types) and their magnifying powers.
		Ch- Wave Optics	• To understand the difference between ray optics and wave optics and different optical phenomena such as interference, diffraction of the light wave using double slit and single slit experiment. • To prove the laws of laws of reflection and refraction using Wave theory and explore Huygens principle.
		Ch- Atoms	• To understand Alpha-particle scattering experiment and Rutherford's model of atom. • To interpret Bohr's model and concept of energy levels. • To derive the expression for energy of an electron in an orbit. • To illustrates the hydrogen spectrum incorporating Rutherford and Bohr concepts.
		Ch- Nuclei	• To determine the number of neutrons and protons in nuclei of different atoms and calculate the sizes of atomic nuclei. • To explain the nature of forces between nucleons and explain the terms 'mass defect' and 'binding energy'. • To draw binding energy per nucleon curve and discuss the stability of atomic nuclei. • To explain the terms controlled and uncontrolled fission chain reactions and describe working of a nuclear reactor.
	December	**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**	
	January	**WINTER BREAK**	
		BOARD PRACTICALS	
	February & March	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Chemistry

	Months	Content	Learning Outcomes
Term -1	**April & May**	Ch- Solution	Students will learn to: • describe the formation of different association or dissociation of the specific entity. • employ strategies to overcome the atmospheric conditions to deal with a situation like scuba diving, boiling at high altitudes etc types of solutions. • express concentration of solution in different units • State and explain Henry's law and Raoult's law . • understand the difference between ideal and non ideal solutions • explain the deviations of real solutions from Raoult's law • describe the colligative properties of solutions • explain abnormal colligative properties
		Ch- Electrochemistry	Students will be able to: • describe an electrochemical cell and differentiate between galvanic and electrolytic cells • apply Nernst equation for calculating the emf of galvanic cell and define standard potential of the cell. • derive relation between standard potential of the cell, Gibbs energy of cell reaction
		Ch- D & F Block Elements	Students will be able to: • learn the positions of the d– and f-block elements in the periodic table. • know the electronic configurations of the transition (d-block) and the inner transition (f-block) elements;general horizontal and group trends in them; • describe the properties of the f block elements and give a comparative account of the lanthanoids and actinoids with respect to their electronic configurations, oxidation states and chemical behaviour • appreciate the relative stability of various oxidation states in terms of electrode potential values; • understand the general characteristics of the d– and f–block elements and the
	June	Ch- Chemical Kinetics	Students will be able to: • describe an average and instantaneous rate of a reaction.to apply the rate law to calculate the order of a reaction. • derive integrated rate equations for zero, first order reactions. • analyse the collision theory and explain the effect of temperature satisfactorily for most of the reaction.
		SUMMER BREAK	
		PERIODIC TEST-I	
	July & August	Ch- Biomolecules	The students will able to: • define the biomolecules like carbohydrates, proteins and nucleic acids. • classify carbohydrates, proteins, nucleic acids and vitamins on the basis of their structures. • explain the difference between DNA and RNA.
		Ch-Amines	The students will able to: • understand Method of preparation of amines and their properties, distinguishing tests for primary, secondary and tertiary amines. • classify of polymers and their preparation and properties.

Book Prescribed: NCERT

		Ch- Coordination Compounds	• Students will be able to- • understand and define different types of isomerism in coordination compounds; • uunderstand the nature of bonding in coordination compounds in terms of the Valence Bond and Crystal Field theories. • appreciate the importance and applications of coordination compounds in our day to day life appreciate the postulates of Werner's theory of coordination compounds. • know the meaning of the terms: coordination entity, central atom/ ion, ligand, coordination number, coordination sphere, coordination polyhedron, oxidation number, homoleptic and heteroleptic, denticity; • learn the rules of nomenclature of coordination compounds and write formulas.
	September	**REVISION & TERM-I EXAMINATION**	
TERM-II	**October & November**	Ch Haloalkanes and Haloarens	Students will be able to: • name haloalkanes and haloarenes according to the IUPAC system of nomenclature from their given structures. • describe the reactions involved in the preparation of haloalkanes and haloarenes and understand various reactions that they undergo • correlate the structures of haloalkanes and haloarenes with various types of reactions. • use stereochemistry as a tool for understanding the reaction mechanism • highlight the uses and environmental effects of polyhalogen compounds.
		Ch-Alcohols,Phenols and Ethers	Students will be able to: • name Alcohol,phenol and ethers according to the IUPAC system of nomenclature from their given structures • describe the reactions involved in the preparation of alcohols phenol and ether correlate physical properties of alcohols, phenols and ethers with their structures • understand chemical reactions of the three classes of compounds on the basis of their functional groups.
		Ch- Aldehydes, Ketones and Carboxylic acids.	The student will be able to: • identify the common and iupac names of aldehydes, ketones and carboxylic acids. • structures of the compounds containing functional groups namely carbonyl and carboxyl groups • know physical properties and chemical reactions of aldehydes, ketones and carboxylic acids, with their structures and mechanism.
	December	**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**	
	January	**WINTER BREAK**	
		BOARD PRACTICALS	
	February & March	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Biology

Book Prescribed: NCERT			

		Months	Content	Learning Outcomes
Term -1		**April & May**	Ch-1 Sexual Reproduction in flowering plants	• Students will be able to: • elaborate the concept of microsporogenesis, megasporogenesis, pollination and its types, double fertilization, pre-fertilization and post-fertilization events.
			Ch-2 Human Reproduction	• students are able to: • explain the process of spermatogenesis, oogenesis, fertilisation, implantation, parturition, menstrual cycle in detail.
			Ch-3 Reproductive Health	• students will be able to: • explain about different methods to terminate pregnancy, to avoid STD's and methods to have children like IVF, ZIFT, GIFT, IUT, ICSI, AI, IUI.
			Ch-4 Principles of inheritance & variation	Students will be able to: • illustrate and explain the monohybrid and dihybrid crosses, evaluate phenotypic and genotypic ratio in different generations, incomplete dominance, co-dominance, sex- determination, genetic and chromosomal disorders.
			Ch-5 Molecular basis of inheritance	Students will be able to: • elaborate the concept of DNA replication, translation, transcription, genetic code, Human Genome project, DNA fingerprinting.
		June		**SUMMER BREAK**
				PERIODIC TEST-I
		July & August	Ch-6 Evolution	students will be able to: • enumerate the origin of life, Homologous and analogous organs, Hardy-Weinberg principle, adaptive radiation and human evolution.
			Ch-7 Human Health & Disease	Students will be able to: • identify and explain the different parasites causing diseases in humans. • they are able to explain the difference between innate and acquired immunity, Cancer, AIDS, Drugs.
			Ch-8 Microbes in human welfare	Students will be able to: • enumerate the use of different microbes in industrial fermentation, household, sewage treatment, Biogas production.
			Ch-9 Biotechnology Principles and Processes	Students will be able to: • Explain the Genetic engineering- Processes of recombinant DNA technology.
		September		**REVISION & TERM-I EXAMINATION**
TERM-II		**October & November**	Ch-10 Biotechnology & its Application	students will be able to: • explain the applications of biotechnology in health, agriculture; human insulin, gene therapy; genetically modified organisms, biopiracy and biosafety.
			Ch-11 Organisms & Populations	Students will be able to: • interpret and explain the age pyramids, growth models, population interactions.
			Ch-12 Ecosystem	• Students will be able to: • explain the patterns, productivity of ecosystem, concept of energy flow, pyramids of number, biomass and energy.

		Ch-13 Biodiversity and Conservation	Students are able to: • explain the reasons for the loss of Biodiversity, its importance and methods of conservation of biodiversity.
	December	PROJECT SUBMISSION & PRE - BOARD EXAMINATION	
	January	**WINTER BREAK**	
		BOARD PRACTICALS	
	February & March	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Mathematics (041)

Book Prescribed: NCERT			

	Months	**Content**	**Learning Outcomes**
TERM-I	**April & May**	Ch-Matrices	• To define matrices, transpose of a matrix, symmetric and skew symmetric matrices, operations on matrices, invertible matrices and proof of the uniqueness of inverse, if it exists.
		Ch- Determinants	• To find Determinant of a square matrix (upto 3x3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix using determinants. • To solve system of linear equations in two or three variables (having unique solution) using inverse of a matrix.
		Ch -Relations and Functions	• The students will be able to understand: Types of relations: (reflexive, symmetric, transitive) and equivalence relations. • To know about One to one and onto functions.
	June	Ch- Inverse Trigonometric Functions	• The students will be able to define inverse trigonometric functions, range, domain, principal value branch. • To draw graphs of inverse trigonometric functions.
		SUMMER BREAK	
		PERIODIC TEST-I	
	July & August	Ch-Continuity and Differentiability	• To learn continuity and differentiability, chain rule, derivative of inverse trigonometric functions and implicit functions, differentiation. • To do derivatives of logarithmic and exponential functions, derivative of functions expressed in parametric forms. Second order derivatives.
		Ch- Application of Deriatives	• To find rate of change of quantities, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). • To solve simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).
		Ch- Indefinite Integration	• Integration as inverse process of differentiation. • Integration of a variety of functions by substitution, by partial fractions and by parts.Evaluation of simple integrals of the following types and problems based on them.
	September	**REVISION & TERM-I EXAMINATION**	
TERM-II	**October & November**	Ch- Definite Integration	• To know Fundamental Theorem of Calculus (without proof). • Basic properties of definite integrals and evaluation of definite integrals.
		Ch- Application of Integrals	• To apply integration in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only).

		Ch- Differential Equations	• To define differential equation, order and degree, general and particular solutions of a differential equation. • To solve differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type:$dy/dx+py=q$, where p and q are functions of x or constants. $dx/dy+px=q$,where p and q are functions of y or constants.
		Ch- Linear Programming	• To make them understand LPP, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).
		Ch- Vector Algebra	• To make them understand Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. • Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.
		Ch- Three Dimensional Geometry	• To understand direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines.
		Ch- Probability	• To be able to know Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.
	December	PROJECT SUBMISSION & PRE - BOARD EXAMINATION	
	January	WINTER BREAK	
		BOARD PRACTICALS	
	February & March	BOARD PRACTICALS & CBSE BOARD EXAMINATION	

Computer Science

Book Prescribed: Computer Science with Python (Sultan Chand Pub.)			
	Months	Content	Learning Outcomes
Term -I	April & May	Ch- Python Revision Tour -II (up to Flow of Control)	The students will be able to: • revise the syllabus done in Class XI. (Programming in Python)
		Ch - Computer Networks	The students will be able to : • learn about the Evolution of networking, data communication terminologies, transmission media • understand the uses of Network devices for creating a network • understand the Network topologies and Network types, network protocol, web services and related terms

		Ch - Review of python Basics (String Manipulation to Dictionary)	The student will be able to: • revise the concepts of string, list, tuple and dictionary done in Class XI.
	June	Ch - Functions	The Students will be able to: • learn about the use of functions in programming. • how to create a user define function with parameter and without parameter. • write programs of functions.
		SUMMER BREAK	
		PERIODIC TEST-I	
	July & August	Ch - Functions	The Students will be able to: • learn about the arguments and parameters, types of parameter, returning value(s) practice the flow of execution of function (user defined) • learn about the scope of a variable (global scope, local scope)
		Ch- Exception Handling	The Student will be able to: • learn about the exception and types of exception. • learn how to handle exceptions using try-except-finally blocks
		Ch-Relational Data and SQL	The Students will be able to: • learn about the database concepts, terms used in database and dbms. • learn about the Relational data modal and its related terms • practice the SQL and its types (DDL, DML and DCL/TCT) • learn and practices the Joins and types of Joins.,
	September	**REVISION & TERM-I EXAMINATION**	
TERM-II	**October & November**	Ch- Data File Handling	The students will be able to: • understand the Introduction to files, need of file handling in programming. • understand the Types of files (Text file, Binary file, CSV file), creation and accessing all types of files. Also, the relative and absolute paths of file address with practical knowledge will be understand by the students. • understand the Text, Binary and CSV file operation.
		Ch- Data structures in Python	The Students will be able to: • understand the Data Structure: Stack, Operations on stack (push & pop) • implementation of stack using list. (Practical)
		Ch - Interface Python with MY SQL	The Students will be able to: • learn and practices how to connect SQL with Python by performing insert, update, delete queries using cursor and functions of display () and fetch ()
	December	**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**	
	January	**WINTER BREAK**	
		BOARD PRACTICALS	
	February & March	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Physical Education

	Months	Content	Learning Outcomes
Book Prescribed:			
	Months	**Content**	**Learning Outcomes**
Term -I	**April & May**	Ch-1 Management of sporting events	• To know how to organise sports tournaments. • To understand the principles of event management within the context of sports.
		Ch-2 Children and Women in Sports	• To know about exercise guidelines and common postural deformities. • To Recognize the importance of providing inclusive and equitable opportunities for children and women in sports.
	June	**SUMMER BREAK**	
		PERIODIC TEST-I	
	July & August	Ch-3 Yoga as preventing measure for lifestyle disease	• To learn all yoga asana and benefits of different asana. • To develop personalized yoga routines and wellness plans tailored to individual health needs and goals.
		Ch-4 Physical education and sports for CWSN (Children with special needs -divyang)	• To learn about the types & causes of disorders and disability. • To know about various types of professional support for children with special needs along with their roles and responsibilities.
		Ch-5 Sports and Nutrition	• To know the importance of balance diet and health. • To identify macronutrients and micronutrients essential for athletes.
TERM-II	**September**	**REVISION & TERM-I EXAMINATION**	
	October & November	Ch-6 Test and measurement in sports	• To learn the importance of test and measurement in sports. • To Explore the reliability and validity of various testing protocols used in sports performance assessment.
		Ch-7 Physiology and injuries in sports	• To know the effect of Physical activity on different body organs and management of sports injuries. • To explore the principles of first aid and emergency management for sports related injuries.
		Ch-8 Biomechanics and sports	• To know about the importance of biomechanics in sports. • To Identify the different types of forces acting on the human body during athletic activities, such as gravity, ground reaction forces and muscle forces.
		Ch-9 Psychology and sports	• To understand the Psychological aspects in sports. • To analyse the role of motivation and goal orientation in athletic achievement and success.
		Ch-10 Training in sports	• To learn different fitness training methods. • To explore different training methods and modalities used to develop specific fitness components in athletes.
	December	**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**	
	January & February	**WINTER BREAK**	
		BOARD PRACTICALS	
	March	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Early Childhood Care and Education

Book Prescribed: NCERT			
	Months	**Content**	**Learning Outcomes**
Term -I	**April & May**	Ch-Communication Skills IV	The students will be able to: • understand the various communication models. • develop effective verbal communication skills, including clarity, coherence, and appropriate language use.
		Ch- Foundations of Child Development	The students will be able to: • comprehend and evaluate major developmental theories. • analyse and describe the various domains of child development, including physical, cognitive, social, and emotional development.
		Ch- Self-Management Skills IV	The students will be able to: • learn to set smart (specific, measurable, achievable, relevant, time-bound) goals. • enhance decision-making skills by evaluating options & considering consequences.
	June	Ch- Educational Thought of Key Theorists and Pioneers	The students will be able to: • demonstrate an understanding of the theorist's core ideas & thoughts. • apply the key concepts & principles in educational planning.
		SUMMER BREAK	
		PERIODIC TEST-I	
	July & August	Ch- Developmentally Appropriate Activities for Holistic Development	The students will be able to: • demonstrate an understanding of developmentally appropriate practices (DAP) in education. • design activities that integrate multiple developmental domains to promote holistic development in learners.
		Ch- Fostering Socio-Emotional Competence in Children	The students will be able to: • demonstrate an understanding of social-emotional competence, including self-awareness, self-regulation & social awareness. • explore developmental frameworks relevant to social-emotional competence.
TERM-II	**September**	**REVISION & TERM-I EXAMINATION**	
	October & November	Ch- Creating Conducive Learning Environment	The students will be able to: • demonstrate an understanding of the components and characteristics of a conducive learning environment. • develop strategies for differentiating instruction and activities to meet diverse learning needs.
		Ch- ICT Skills IV	The students will be able to: • develop digital literacy and data management. • understand basic digital concepts.
		Ch- Entrepreneurship Skills IV	The students will be able to: • understand about business planning and conceptualisation. • learn about research and financial literacy.
		Ch- Green Skills IV	The students will be able to: • develop an understanding of environmental challenges. • understand about environmental conservation and sustainable practices.
	December	**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**	
	January & February	**WINTER BREAK**	
		BOARD PRACTICALS	
	March	**BOARD PRACTICALS & CBSE BOARD EXAMINATION**	

Library & Information Science

	Months	Content	Learning Outcomes
TERM-I	**April & May**	Ch-Communication Skills-IV	Students will be able to: • identify the different parts of a sentence. • address barriers to effective communication.
		Ch- Library Management	Students will be able to: • understand about collection development and its management. • understand about human resource management, financial management. • understand the functions of different sections of a library.
		Ch- Self-Management Skills-IV	Students will be able to: • understand about setting goals for efficiently managing time. • describe personality traits & common disorders.
	June	Ch- Organization of Library Resources: Advanced	Students will be able to: • understand about library classification. • understand about library cataloguing.
			SUMMER BREAK
	July & August		**PERIODIC TEST-I**
		Ch- Library and Information Services	Students will be able to: • learn about library and information services. • develop an overview of ICT applications
		Ch- ICT Skills-IV	Students will be able to: • develop digital literacy. • manage data and understand basic digital concepts.
	September		**REVISION & TERM-I EXAMINATION**
TERM-II	**October & November**	Ch- Entrepreneurial Skills-IV	Students will be able to: • understand about business planning. • understand about conceptualisation & research. • learn about financial literacy.
		Ch-Computer Applications in Libraries: Advanced	Students will be able to: • access to a range of electronic information resources. • manage materials (books, journals, videos, and other media) held in particular collections.
		Ch-Communication Skills	Students will be able to: • know about need & importance of communication skills.
		Ch- Green Skills-IV	Students will be able to: • develop an understanding of environmental challenges. • understand about natural conservation and sustainable practices.
	December		**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**
	January & February		**WINTER BREAK**
			BOARD PRACTICALS
	March		**BOARD PRACTICALS & CBSE BOARD EXAMINATION**

Book Prescribed: CBSE

Yoga

	Months	Content	Learning Outcomes
Term – I	**April & May**	Ch- Communication Skills-IV	• Students will develop knowledge skills & judgement around human communication that facilitate their ability to work collaboratively with others. • Students will come to know about the components and addressing barriers to effective communication.
		Ch – Introduction to Yoga and Yogic Practices-II	• Student will develop knowledge about yoga. • Students will able to know how to improve internal organs with the help of Yogic kriyas.
	June		
		SUMMER BREAK	
	July & August	Ch- Self Management Skills-IV	• Helps to become a successful learner. • It will help to understand about setting goals and efficiently manage time.
		Ch- ICT Skills-IV	• Acknowledging the role of technologies in modern society. • It will help to develop digital literacy, data management and understand basic digital concepts.
	September	REVISION & TERM-I EXAMINATION	
Term – II	**October to November**	Ch – Introduction to Yoga Texts-II	• Students will develop knowledge about yoga. • Students will able to know about different asanas.
		Ch – Yoga for Health Promotion-II	• Students will develop knowledge about yogic diet. • Students will able to know about asanas and their benefits.
		Ch- Entrepreneurial Skills-IV	• It will allow students to identify & create business opportunities. • It will help to understand about business planning, conceptualisation, research and financial literacy.
		Ch- Green Skills-IV	• It will increase knowledge about the need of green skill for efficient society. • It will help to develop an understanding of environmental challenges, conservation and sustainable practices.
	December	PROJECT SUBMISSION & PRE - BOARD EXAMINATION	
	January to February	WINTER BREAK	
		BOARD PRACTICALS	
	March	BOARD PRACTICALS & CBSE BOARD EXAMINATION	

Marketing

Book Prescribed: CBSE Notes			
	Months	**Content**	**Learning Outcomes**
TERM-I	**April & May**	Ch- Product	The students will be able to: • understand the concept, features, importance, components and levels of a product. • describe the factors and components of product mix. • classify the products on the basis of durability, tangibility, consumer goods and industrial goods. • understand the stages of product life cycle and packaging, designing related decisions.
		Ch- Communication Skills - IV	The students will be able to: • identify the different parts of speech. • understand types of sentences. • address barriers to effective communication.

	June	Ch- Unit II Price Decision	The students will be able to: • understand the pricing strategies and objectives of pricing. • understand various factors affecting pricing decisions. • learn types of pricing and various pricing methods.
			SUMMER VACATION
	July & August	Ch-Self-Management Skills - IV	The students will be able to: • understand about setting goals for efficiently managing time. • describe personality traits & common disorders.
		Ch- Place Decision: Channels of Distribution	The students will be able to: • understand types of channels of distribution. • explain the functions performed by various channels of distribution. • learn various factors affecting the selection of the channel of distribution.
		Ch- ICT (Information and Communication Technology) Skills - IV	The students will be able to: • understand types and components of spreadsheet. • develop digital literacy. • manage data and understand basic digital concepts.
		Ch- Promotion	The students will be able to: • understand the concept, importance and various elements of promotion mix. • describe merits and demerits of modes of promotion like advertisement, sales promotion etc.
	September		**REVISION &TERM-I EXAMINATION**
TERM-II	**October**	Ch- Emerging Trends in Marketing	The students will be able to: • understand the new trends in marketing and how it has affected modern business. • understand services marketing, its characteristics and types. • explain online marketing, social media marketing and their advantages and disadvantages. • identify various social media platforms used for marketing.
		Entrepreneurial Skills - IV	The students will be able to: • understand about business planning and entrepreneurship. • learn about barriers to entrepreneurship. • learn about financial literacy.
		Green Skills - IV	The students will be able to: • develop an understanding of environmental challenges. • understand about natural conservation and sustainable practices.
	November		**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**
	December		**WINTER BREAK**
	January		**BOARD PRACTICALS**
	February & March		**BOARD PRACTICALS & CBSE BOARD EXAMINATION**

Applied Mathematics (241)

Book Prescribed: NCERT			
	Months	**Content**	**Learning Outcomes**
Term -I	**April & May**	Ch- Matrices	• To define matrix. Identify different kinds of matrices. To find the size / order of matrices. • To determine equality of two matrices. Write transpose of given matrix. • To define symmetric and skew symmetric matrix.

			• To perform operations like addition & subtraction on matrices of same order. • To perform multiplication of two matrices of appropriate order. • To perform multiplication of a scalar with matrix.
		Ch- Determinants	• To find determinant of a square matrix. Use elementary properties of determinants. • To define the inverse of a square matrix. Apply properties of inverse of matrices. • To solve the system of simultaneous equations using i) Cramer's Rule ii) Inverse of coefficient matrix. • To formulate real life problems into a system of simultaneous linear equations and solve it using these methods.
		Ch- Financial Mathematics.	• To explain the concept of perpetuity and sinking fund. • To calculate perpetuity. • To differentiate between sinking fund and saving account. • To explain the concept of EMI. • To calculate EMI using various methods. • To explain the concept of rate of return and nominal rate of return. Calculate rate of return and nominal rate of return. • To understand the concept of Compound Annual Growth Rate. • To Differentiate between Compound Annual Growth Rate and Annual Growth Rate. • To Calculate Compound Annual Growth Rate. • To Define the concept of linear method of Depreciation. • To Interpret cost, residual value and useful life of an asset from the given information. Calculate depreciation.
	June	Ch- Numbers, Quantification and Numerical Applications	• To define modulus of an integer. • To apply arithmetic operations using modular arithmetic rules. • To define congruence modulo. • To apply the definition in various problems. • To understand the rule of allegation to produce a mixture at a given price. • To determine the mean price of a mixture. • To solve real life problems mathematically. • To distinguish between upstream and downstream. • To express the problem in the form of an equation. • To determine the time taken by two or more pipes to fill or empty the tank. • To compare the performance of two players w.r.t. time, distance. • To describe the basic concepts of numerical inequalities. • To understand and write numerical inequalities.
		SUMMER BREAK	
	July & August	**PERIODIC TEST-I**	
		Ch-Differentiation and its Applications	• To determine second and higher order derivatives. • To understand differentiation of parametric functions and implicit functions. • To determine the rate of change of various quantities. • To understand the gradient of tangent and normal to a curve at a given point. • To write the equation of tangents and normal to a curve at a given point. • To define marginal cost and marginal revenue. • To find marginal cost and marginal revenue.

			• To determine whether a function is increasing or decreasing. • To Determine critical points of the function. • To find the point(s) of local maxima and local minima and corresponding local maximum and local minimum values. • To find the absolute maximum and absolute minimum value of a function. • To solve applied problems.
		Ch- Linear Programming	• To familiarize with terms related to Linear Programming Problem. • To formulate Linear Programming Problem. • To identify and formulate different types of LPP. • To draw the Graph for a system of linear inequalities involving two variables and to find its solution graphically. • To identify feasible, infeasible, bounded and unbounded regions. • To understand feasible and infeasible solutions. • To find optimal feasible solution.
		Ch- Index numbers and Time-based data	• To identify time series as chronological data. • To distinguish between different components of time series. • To solve practical problems based on statistical data and Interpret the result. • To understand the long-term tendency. • To demonstrate the techniques of finding trend by different methods.
	September	**REVISION & TERM-I EXAMINATION**	
TERM-II	**October & November**	Ch- Integration and its Applications	• To understand and determine indefinite integrals of simple functions as anti-derivative. • To evaluate indefinite integrals of simple algebraic functions by method of: i) substitution ii) partial fraction iii) by parts. • To define definite integral as area under the curve. • To understand fundamental theorem of Integral calculus and apply it to evaluate the definite integral. • To apply properties of definite integrals to solve the problems. • To identify the region representing C.S. and P.S. graphically. • To apply the definite integral to find consumer surplus-producer surplus.
		Ch- Differential Equations and Modelling	• To recognize a differential equation. • To find the order and degree of a differential equation. • To formulate differential equation. • To verify the solution of differential equation. • To solve simple differential equation. • To define Growth and Decay Model. • To apply the differential equations to solve Growth and Decay Models.

		Ch- Inferential statistics	- To define Population and Sample. - To differentiate between population and sample. - To define a representative sample from a population. - To differentiate between a representative and nonrepresentative sample. - To draw a representative sample using simple random sampling. - To draw a representative sample using and systematic random sampling. - To define Parameter with reference to Population. - To define Statistics with reference to Sample. - To explain the relation between Parameter and Statistic. - To explain the limitation of Statistic to generalize the estimation for population. - To interpret the concept of Statistical Significance and Statistical Inferences. - To State Central Limit Theorem. - To explain the relation between Population-Sampling Distribution-Sample. - To define a hypothesis. - To differentiate between Null and Alternate hypothesis. - To define and calculate degree of freedom. - To test Null hypothesis and make inferences using t-test statistic for one group / two independent groups.
		Ch- Probability Distribution	- To understand the concept of Random Variables and its Probability Distributions. - To find probability distribution of discrete random variable. - To apply arithmetic mean of frequency distribution to find the expected value of a random variable. - To calculate the Variance and S.D. of a random variable. - To identify the Bernoulli Trials and apply Binomial Distribution. - To evaluate Mean, Variance and S.D of a binomial distribution. - To understand the Conditions of Poisson Distribution. - To evaluate the Mean and Variance of Poisson distribution. - To understand normal distribution is a Continuous distribution. - To evaluate value of Standard normal variate. Area relationship between Mean and Standard Deviation.
	December		**PROJECT SUBMISSION & PRE - BOARD EXAMINATION**
	January &		**WINTER BREAK**
	February		**BOARD PRACTICALS**
	March		**BOARD PRACTICALS & CBSE BOARD EXAMINATION**