DELHI PUBLIC SCHOOL
CHAS, BOKARO

CBSE Affiliation No. 3430369

TERM AND MONTH-WISE SPLIT-UP SYLLABI OF CLASS – XI FOR THE SESSION 2022-2023

SUBJECT: ENGLISH CORE

Text Books : 1. HORNBILL
2. SNAPSHOTS

Month	W. D.	Chapter/ Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
July	23	Unit 1 The Portrait of the Lady (Hornbill)	-make the students identify the genre to which the story belongs. -to understand the techniques used by the author - to enhance vocabulary -to strengthen family bonds - to enable them to comprehend the cultural background of the story. -to facilitate making connections between similar situations in different storylines/life experiences	What is the theme of the story? How does the author use time, place and character to convey this theme? Select a character form in the lesson. Write a message this character would write on social media on education. Imagine you are Khuswant Singh. How would you portray your grandmother? Mention one characteristics trait of her which is similar to the grandmother of the story.	Prepare a Thank You Card for your grandmother and in it mention one of her character traits that inspires you the most.	Research on Old age homes in Jharkhand and a report on it.
		Unit 1 A Photograph (Hornbill)	-to encourage the students to appreciate poetry and read aloud with proper intonation -to prepare the students for poetic forms and adept them with the figures of speech, rhyme and rhythm -to read and recognize the purpose of economy of words and the hidden pathos	A comparative study of the prose The Portrait of a Lady and the poem A	A hand made creative photo frame with a self-created ten lines poem on your mother.	Talk to discover the hidden aspirations of your mother as a growing up teenager and make points on it.

			and nuances of the lines, correlating them with author's background and personal experiences. to build up didactics, empathy and sympathy with the loss of the speaker.	Photograph.		
		The Summer of the Beautiful White Horse [Snapshots]	-To enhance familiarizing with specific background information of author / book excerpt / history - To facilitate an attitude to become honest and trustworthy in thought and action, responsible cooperative, understanding and tolerance, respect for national identities in relation to other people - democratic citizenship. [global aim]. Recognize Marginalization. -to recognize the technique of repetition as an element of style.	Collect photographs of the Armenian Tribe.	Sthavi Asthana – India's grand hope for an Asian Games Gold in Horse Riding.	Research on the Armenian genocide. (PPT Presentation)
		Unit 4 The Voice of the Rain (Hornbill)	To recognize the purpose of economy of words and the nuances of the lines that highlights the cyclic nature of rain and appreciates the diligence and divine quality of the speaker.	Poetry writing on the wind, sun, moon or snow-highlighting the pride in their narration.	Musical presentation of rain	Kinds of Rainfall and its characteristics.
		WRITING SKILLS	Speech and Debate Writing: Guide and motivate students to express			

Aug	23		and write effectively. -Develop knowledge and purpose of writing the skills			
		Speech and Debate	-Awareness of the form, content and process of writing. i) Guide and motivate students to express and write effectively. ii) Develop knowledge and purpose of writing an article and speech. iii) Able to retain a data and information. iv) Organize ideas on a particular subject.	Sample speech and debate will be read out in the class.	Speech Videos	Read popular speeches.
		Unit 3 The Laburnum Top (Hornbill)	To enable the students to i) understand, enjoy and appreciate different genre of English writings ii) Enhance vocabulary iii) Have better understanding of rhyme scheme and other poetic devices iv) Know about the poet and his contributions v) Understand hardships of life vi) Celebrate energy and life of nature	Painting of Goldfinch and Laburnum Tree	Pics of Laburnum tree and goldfinch bird will be shown with an animated video.	Research on various trees and birds used in the poems and their significance.
		Poster	i) Guide and motivate students to express and write effectively. ii) Develop knowledge and purpose to design a Poster. iii) Awareness of the form, content and process of writing. iv) Able to retain a data and information. v) Organize ideas on a particular subject.	Newspaper cuttings of posters.	Presentations based on skills. (PPT/Word file)	Sample Posters

			vi) Practice to enhance the skills. vii) Create social awareness. viii) design the poster with appropriate expressions and vocabulary. ix) link ideas x) use proverbs/ phrasal words and idiomatic expressions while writing the skill.. xi) encourage the students to develop their reading habit (newspapers, articles, journals etc) xii) Retain information of events, incidents or accidents and describe the same and adhe			
		We're Not Afraid to Die [Hornbill]	To allow a problem solving: identifying the problem; considering the options; weighing the pros and cons of each option; reaching a decision -To facilitate making connections between similar situations in different storylines/life experiences -To help learners distinguish different perspectives; analysing them; drawing conclusion/s -To encourage the uncovering of motives.	Read and write the summary of the poem 'The Rime of Ancient Mariner'	Video clipping of Titanic movie.	Ten most luxurious cruise ships in the world.
Sept	13	READING	-To summarize information from different written text, reconstructing arguments and accounts in a coherent presentation. -To express spontaneously, concisely and precisely, differentiating finer shades of significance even in the most			

		SKILLS Note Making	complex situations -To express ideas with extra information and complexity, fluently, and without difficulty in sentence construction.		Group comprehension comprising all range of learners	
		The Address (Snapshots)	To enable the students to i) read effectively with proper voice modulation. ii) comprehend the chapter. iii) enhance their vocabulary. iv) analyse the situations and characters. v) express themselves effectively in the written form. vi) communicate their ideas with a lot of conviction. vii) appreciate the theme and the message conveyed. viii) develop their skills. ix) able to analyse the situations and characters of the chapter. x) use appropriate vocabulary and expressions.	Paragraph – Memory about a place where you lived earlier	Reading novel – Great Expectations	Collect childhood facts, memories and the place where the author lived.
		The Adventure (Hornbill)	To enable the students to i) understand the relation between science and history ii) appreciate and enjoy the science fiction iii) know the life of a great scientist Prof. Jayant Naralikar iv) understand the principles of physics and the application v) learn various phrases used in the text vi) know the historical events of the past vii) understand quantum	List some scientific theories you know.	Guest lecture by Science faculty on "Quantum Theory	Brief up about the scientist and author- Jayant Narlikar

			theory and theory of relativity			
Oct	12	Discovering Tut: The Saga Continues (Hornbill)	To enable the students to i)understand the meaning and usage of phrases like resurrection, circumvented, computed Tomography, scudded across etc. ii) understand advancement in technology iii) know about Egyptian belief of mummification iv) have the historical knowledge about King Tut's family line v) know about pyramids and their history vi) know how archaeology has changed in the intervening decades	Collage of the pictures of Egyptian Pyramids.	Coffin mask. Formed according to the range of learners.	Facts about Egyptian Pyramids
		Classified Advertisement (Writing Skill)	Students to apply the correct format while drafting an advertisement. -to make students comprehend why an advertisement is drafted to get them acquainted with the style and procedure.	Exercises: Different topics on different fields of an advertisement for all range of learners.		
Nov	24	Silk Road (Hornbill)	The students will be able to- i) comprehend the chapter and enhance their vocabulary. ii) know the physical and mental stress occurred while travelling. iii) understand the difficulties faced while travelling in different situations and places. iv) understand that silk was the main commodity that was	Discussion on "Adventure in life" and "Importance of Travelling"	Video on 'Mount Kailash'	Collect information about one place of Religious importance

		Father to Son (Hornbill)	To enable the students to i) comprehend the poem ii) critically analyse the poem on the basis of the text read, know the importance of bonding of the family members, indifferences and lack of communication.	Write a diary entry expressing your confession of being responsible of cold indifferences between you and your parents and finding solutions to the problem.	Song for father	Talk to your father and make a ppt showcasing his life's journey, achievements and regrets
		Mother's Day (Snapshots)	To enable the students to i) perceive the overall meaning and organisation of the text ii) identify and understand the central/main point and supporting details along with the phrases used in the lesson iii) promote advanced language skills with an aim to develop the skills of reasoning and drawing inferences iv) recognize one of the most important educators in a child's life v) understand that our mothers have equal rights to enjoy their lives and deserve acknowledgement and appreciation	Script a drama showcasing family ties.	A video on generation gap will be shown followed by discussion "How do you value elderly?"	Genetic Construction and traits
Dec	24		To enable the students to i) understand, enjoy			.

traded in those areas.
v) know the purpose of the author's journey to Mount Kailash

		Childhood (Hornbill)	and appreciate different genre of English writings ii) Enhance vocabulary iii) Have better understanding rhyme scheme and other poetic devices iv) Know about the poet and his contributions v) Childhood is a bliss vi) Think when and where has the childhood gone vii) understand how childhood is innocence while maturity leads to individuality, rationalism and gaining understanding of hypocrisy viii) to think rational	Write up on the most memorable and adorable childhood experiences.	Collect pictures and write smll details about some lost Childhood games.	. Heredity and habits that children acquire.
		Birth (Snapshots	To enable the students to i) comprehend the chapter and enhance their vocabulary ii) analyse the situations and characters of the chapter. iii) the duty of a Doctor- Noble profession. iv) the efforts to restore hope, life and determination. v) the selfless service to mankind vi) realise the process of growth and development. vii) gain knowledge and practical approach.	Noble profession of doctors and service to mankind.	Video clipping of the movie 3 Idiots	Advancements in Medical Science.

			To enable the students to i) comprehend the poem and enhance their vocabulary. ii) identify the figures of speech and the rhyming scheme. iii) understand that no one is ready to own up his fault. iv) understand the attitude of the common people in choosing their rulers spell disaster if it is thoughtlessly implemented vi) understand irony and humour, although the kind of the ruler they have directly affects the quality of their lives. v) understand that law is not only blind it can also process of fair and important judgement.	Article - How can peace and liberty be maintained in a state?	Skit - Akbar Birbal	Qualities of famous kings and rulers.
		The Tale of Melon City (snapshots)				
Jan	18	Revision				
Feb	13	Final Exam				
March	24					

SUBJECT: MATHEMATICS

PRESCRIBED TEXT BOOKS : Mathematics -A Textbook for class XI (NCERT).
REFERENCE BOOKS: 1. Mathematics class XI (volume I and II) R.D Sharma
Mathematics: Textbook for class XI by Gupta and Bansal, Sultan chand Educational publishers.
2. Laboratory manual Mathematics class XI by **Arihant Prakashan.**

Month	Topics to be taught	Activity
JULY + AUGUST 23+23	**Sets:** Sets and their representations. Empty set. Finite and Infinite sets. Equal sets. Subsets. Subsets of a set of real numbers especially intervals (with notations). Power set. Universal set. Venn diagrams. Union and Intersection of sets. Practical Problems based on sets. **Relations & Functions:** Ordered pairs, Cartesian product of sets. Number of elements in the Cartesian product of two finite sets. Cartesian product of the sets of real with itself. Definition of relation, pictorial diagrams, domain, co- domain and range of a relation. **Function;** Function as a special kind of relation from one set to another. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions: constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs.	**Activity -6**

	Trigonometric Functions: Positive and negative angles. Measuring angles in radians and in degrees and conversion of one into other. Definition of trigonometric functions with the help of unit circle. Truth of the $\sin^2 x + \cos^2 x = 1$, for all x. Signs of trigonometric functions . Domain and range of trigonometric functions and their graphs. Expressing sin (x±y) and cos (x±y) in terms of sinx, siny, cosx & cosy and their simple application. Deducing identities like the following: $$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x}$$ $$\sin x + \sin y = 2\sin\frac{x+y}{2}\cos\frac{x-y}{2}, \cos x + \cos y = 2\cos\frac{x+y}{2}\cos\frac{x-y}{2},$$ $$\sin x - \sin y = 2\cos\frac{x+y}{2}\sin\frac{x-y}{2}, \cos x - \cos y = -2\sin\frac{x+y}{2}\sin\frac{x-y}{2},$$ Identities related to sin2x, cos2x, tan2x, sin3x, cos3x and tan3x.	Activity -10
SEPTEMBER 13	Revision for half yearly examination. Half yearly examination. Discussion of half yearly exam question paper. **Complex Numbers and Quadratic Equations** Need for complex numbers, especially -1 , to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane. Statement of Fundamental Theorem of Algebra, solution of quadratic equations in the complex number system.	Activity -12
OCT 12	**Linear Inequations** Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Graphical solution of system of linear inequalities in two variables. **Limits and Derivatives** Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials and rational functions, trigonometric, exponential and logarithmic functions. Definition of derivative, relate it to slope of tangent of a curve, derivative of sum, difference, product and quotient of functions. The derivative of polynomial and trigonometric functions. **Sequence & Series** Arithmetic Progression (A.P.).	**Activity 11** **Activity -29**
NOV 24	Arithmetic Mean (A.M.) Geometric Progression (G.P.), general term of a G.P., sum of n terms of a G.P., infinite G.P. and its sum, geometric mean (G.M.), relation between A.M. and G.M. **Permutations and Combinations:** Fundamental principle of counting. Factorial n. (n!) . Permutations and combinations and their connections, simple applications.	Activity -18
DEC 24	**Probability** Random experiments, outcomes, sample spaces (set representation). Events; occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events,. Probability of an event, probability of 'not', 'and' and 'or' events. **Straight Lines** Brief recall of two dimensional geometry from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a line:	Activity -14
	parallel to axis, point-slope form, slope-intercept form, two-point form, intercept form and normal form. General equation of a line. Distance of a point from a line.	
JAN 18	**Conic Sections** Sections of a cone: circles, ellipse, parabola, hyperbola . Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.	Activity-15 Activity- 32
FEB 13	**Introduction to Three–dimensional Geometry** Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula. **Statistics** **Measures of dispersion**; Range, mean deviation, variance and standard deviation of ungrouped/grouped data. Comprehensive Revision for annual examination. Annual examination. Result analysis.	**Activity 26**
MAR 13	**ANNUAL EXAM**	

SUBJECT: PHYSICS

Text Book: 1. Physics Part-I, Textbook for Class XI, Published by NCERT
2. Physics Part-II, Textbook for Class XI, Published by NCERT

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Activity	Project / Practical Work	Smart Board Activity
July	23	**Unit I: Physical World and Measurement** **Chapter–1: Physical World** **Chapter–2: Units and Measurements**	**Chapter–1: Physical World**: Physics-scope and excitement; nature of physical laws; Physics, technology and society. **Chapter–2: Units and Measurements**: Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures. Dimensions of physical quantities, dimensional analysis and its applications.		To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume. To measure diameter of a given wire and thickness of a given sheet using screw gauge.	Smart Board to explain precision of measuring instruments, errors in measurement.
Aug	23	**Unit-II: Kinematics**	**Chapter–3: Motion in a Straight Line** Frame of reference, Motion in a straight line: Position-time graph, speed and velocity. Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, average speed and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment). **Chapter–4: Motion in a Plane** Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, relative velocity, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of	To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).	To determine volume of an irregular lamina using screw gauge. To determine radius of curvature of a given spherical surface by a spherometer.	Smart Board to explain average speed and instantaneous velocity.

			uniform velocity and uniform acceleration projectile motion, uniform circular motion.			
Sept	13	**REVISION** **HALF – YEARLY EXAMINATION** **DISCUSSION OF QUESTION PAPER**				
Oct	12	**Unit III: Laws of Motion** **Unit IV: Work, Energy and Power**	**Chapter–5: Laws of Motion**: Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).		To study the relationship between force of limiting friction and normal reaction and to find the co- efficient of friction between a block and a horizontal surface.	Smart Board to explain law of conservation of angular momentum and its applications. Smart Board to explain Kepler's laws of planetary motion.
Nov	24	**Unit V: Motion of System of Particles and Rigid Body** **Unit VI: Gravitation**	**Chapter–6: Work, Engery and Power**: Work done by a constant force and a variable force; kinetic energy, work energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: conservation of mechanical energy (kinetic and potential energies); non conservative forces: motion in a vertical circle; elastic and inelastic collisions in one and two dimensions. **Chapter–7: System of Particles and Rotational Motion**: Centre of mass of a two-particle system, momentum	To observe the decrease in pressure with increase in velocity of a fluid.	To determine the mass of two different objects using a beam balance.	Smart Board to explain Kepler's laws of planetary motion.

Month	Days	Unit	Content	Activity	Teaching Aids
			conservation and centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation). Statement of parallel and perpendicular axes theorems and their applications.		
Dec	24	**Unit VII: Properties of Bulk Matter**	**Chapter–9: Mechanical Properties of Solids**: Elastic behaviour, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity, Poisson's ratio; elastic energy. **Chapter–10: Mechanical Properties of Fluids**: Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise. **Chapter–8: Gravitation**: Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential,	To study the relationship between the temperature of a hot body and time by plotting a cooling curve.	Smart Board to explain First law of thermodynamics, isothermal and adiabatic processes.

Month		Unit	Content			

			escape velocity, orbital velocity of a satellite, Geo-stationary satellites.			
Jan	18	**Unit VIII: Thermodynamics** **Unit IX: Behaviour of Perfect Gases and Kinetic Theory of Gases**	**Chapter−11: Thermal Properties of Matter**: Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law, Greenhouse effect. **Chapter−12: Thermodynamics**: Thermal equilibrium and definition of temperature (zeroth law of thermodynamics), heat, work and internal energy. First law of thermodynamics, isothermal and adiabatic processes. Second law of thermodynamics: reversible and irreversible processes, Heat engine and refrigerator. **Chapter−13: Kinetic Theory**: Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.	To study the factors affecting the rate of loss of heat of a liquid.	To find the weight of a given body using parallelogram law of vectors.	Smart Board to explain First law of thermodynamics, isothermal and adiabatic processes.
Feb	13	**Unit X: Oscillations and Waves**	**Chapter−14: Oscillations:** Periodic motion - time period, frequency, displacement as a function of time, periodic functions. Simple harmonic motion (S.H.M) and its equation; phase; oscillations of a loaded spring- restoring	To study dissipation of energy of a simple pendulu	To study variation of	Smart Board to explain Kinetic interpretation of temperature; rms speed of gas

| | | | force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period. Free, forced and damped oscillations (qualitative ideas only), resonance.
Chapter–15: Waves: Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats, Doppler effect. | m by plotting a graph between square of amplitude and time. | time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result. | molecules.

Smart Board to explain principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes. |
| March | 24 | **REVISION**
ANNUAL EXAMINATION
DISCUSSION OF QUESTION PAPER | | | |

Text Book : 1. NCERT – Chemistry (XI) (Part I & II)
Reference book   1. New Course Chemistry (Pradeep Publication) by Pradeep Jain
                 2. ABC of Chemistry (Modern Publication) by S P Jauhar
                 3. New Era Chemistry (G. R. Bathla Publication) by O.P. Tandon and Virmani

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work
June	21	Chapter : Some Basic Concept of Chemistry	General Introduction : Importance and scope of chemistry. July 24 Atomic and molecular masses. Mole concept and molar mass; percentage composition, empirical and molecular formula: chemical reactions, stoichiometry and calculations based on stoichiometry	A. Basic Laboratory Techniques 1. Cutting glass tube and glass rod 2. Bending a glass tube 3. Drawing out a glass jet 4. Boring a cork
July	23	Chapter: Structure of Atom –	Bohr's model and its limitations, concept of shell and subshells, dual nature of matter and light, de-Broglie's relationship, Heisenberg uncertainty principle, concept of Orbitals, quantum numbers. Shapes of s, p, and d–orbitals, rules for filling electrons in orbitals, Aufbau principle, Pauli's exclusion principle, Hund's Rule. Electronic configuration of atoms. Stability of	B. Characterization and Purification of Chemical Substances 1. Determination of melting point of an organic compound. 2. Determination of boiling point of an organic compound.

			half filled and completely filled orbitals.	
August	23	Chapter: Classification of Elements and Periodicity in Properties Chapter: Chemical Bonding & Molecular Structure	Modern periodic law and the present form of periodic table. Periodic trends in properties of elements (atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency) Nomenclature of elements with atomic number greater than 100. Introduction: Octet rule, Valence electrons, types of chemical bonding, ionic bond, covalent bond and their examples, Lewis dot structure, Polar character of covalent bond, covalent character of ionic bond valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, Concept of hybridization, involving s, p and d-orbitals, shapes of some simple molecules. Molecular orbital theory of homo nuclear diatomic molecules (qualitative idea only) hydrogen bond.	C. Quantitative Estimation i. Using a mechanical balance/electronic balance. ii. Preparation of standard solution of Oxalic acid. iii. Determination of strength of a given solution of Sodium hydroxide by titrating it against Standard solution of Oxalic acid.
September	13	Chapter : Redox Reactions Chapter: Organic Chemistry: Some basic Principles and Techniques	Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions in terms of loss and gain of electrons and change in oxidation number General introduction, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of acovalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions. **Revision First term Examination**	iv. Preparation of standard solution of Sodium carbonate. v. Determination of strength of a given solution of hydrochloric acid by titrating it against Standard Sodium Carbonate solution.

Oct	12	Chemical Thermodynamics:	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. H, Hess's law∆U and ∆First law of thermodynamics -internal energy and enthalpy, measurement of of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution	Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid.
November	24	Chemical Thermodynamics: Equilibrium:	Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and nonspontaneous processes. Third law of thermodynamics (brief introduction). Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium – Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, buffer solution, solubility product, common ion effect (with illustrative examples).	Inorganic Salt Analysis
December	24	s -Block Elements:	Group 1 and Group 2 Elements - General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens, uses.	Inorganic Salt Analysis

Month			Hydrocarbons:	Classification of Hydrocarbons Aliphatic Hydrocarbons: Alkanes – Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions. Alkenes – Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition. Alkynes – Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of – hydrogen, halogens, hydrogen halides and water.	Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.
Jan	18				
Feb	13		Aromatic Hydrocarbons:	Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.	
March	24	Revision + Annual Exam Bridge Classes.			

SUBJECT: BIOLOGY

Text Book :

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching
April	23				
May	4				
June	21	**Unit-I Diversity of Living Organisms**	**Chapter-1: The Living World** What is living? Biodiversity; Need for classification; three domains of life; concept of species and taxonomical hierarchy; binomial nomenclature.	B.1 Parts of a compound microscope. B.2 Specimens/slides/models and identification with	**Activity – Making a Herbarium File**

			Chapter-2: Biological Classification	reasons - Bacteria, *Oscillatoria, Spirogyra, Rhizopus*, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.	
			Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids. **Chapter-3: Plant Kingdom** Salient features and classification of plants into major groups - Algae, Bryophyta, Pteridophyta and Gymnospermae. (salient and distinguishing features and a few examples of each category).		
July	23	**Unit-II Structural Organizatio n in Animals and Plants**	**Chapter-4: Animal Kingdom** Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (salient features and distinguishing features of a few examples of each category). (No live animals or specimen should be displayed.) **Chapter-5: Morphology of Flowering Plants** Morphology of inflorescence and flower, Description of 01 family: Solanaceae or Liliaceae (to be dealt along with the relevant experiments of the Practical Syllabus). **Chapter-7: Structural Organization in Animals** Animal tissues.	B.3 Virtual specimens/slides/m odels and identifying features of - *Amoeba, Hydra,*liverfluke, *Ascaris*, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit. Study and describe a locally available common flowering plant, from any one family: Solanaceae or Liliaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams). B.4 Tissues and diversity in shape and size of animal	Activity : Make a bouquet of flowers using paper cutting / origami & decorative materials. The flowers to belong to various inflorescence categories.

				cells (squamous epithelium, smooth, skeletal and cardiac muscle fibers and mammalian blood smear) through temporary/permanent slides.	
Aug	23	**Unit-III Cell: Structure and Function**	**Chapter-8: Cell-The Unit of Life** Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus. **Chapter-9: Biomolecules** Chemical constituents of living cells: biomolecules, structure and function of proteins carbohydrates, lipids, nucleic acids; Enzymes- types, properties, enzyme action.	Study of osmosis by Potato osmometer.	Activity : Make 3D models of biomolecules using balls & sticks
Sept	13		REVISION & HALF YEARLY **Chapter-10: Cell Cycle and Cell Division** Cell cycle, mitosis, meiosis and their significance	B.5 Mitosis in onion root tip cells and animal cells (grasshopper) from permanent slides.	
Oct	12	**Unit-IV Plant Physiology** **Unit-V Human Physiology**	**Chapter-17: Breathing and Exchange of Gases** Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.	• Separation of plant pigments through paper chromatography. • Study of distribution of stomata in the upper and lower surfaces of leaves. • Study of the rate of respiration in flower	

				buds/leaf tissue and germinating seeds.	
Nov	24	**Unit-V Human Physiology**	**Chapter-18: Body Fluids and Circulation** Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure. **Chapter-19: Excretory Products and their Elimination** Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant		
Dec	24	**Unit-V Human Physiology**	**Chapter-20: Locomotion and Movement** Skeletal muscle, contractile proteins and muscle contraction. **Chapter-21: Neural Control and Coordination** Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse. **Chapter-22: Chemical Coordination and Integration** Endocrine glands and hormones; human endocrine system -	• Test for presence of sugar in urine. • Test for presence of albumin in urine.	Activity : Make a info-graphic poster related to occupational hazards (any one)

			hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease. **Note:** Diseases related to all the human physiological systems to be taught in brief.		
Jan	18	**Unit-IV Plant Physiology**	**Chapter-13: Photosynthesis in Higher Plants** Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis. **Chapter-14: Respiration in Plants** Exchange of gases; cellular respiration –		Activity : Draw a concept map on endocrine glands
Feb	13	**Unit-IV Plant Physiology**	glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient. **Chapter-15: Plant - Growth and Development** Growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.		Activity : Paper presentation on any one hormonal disorder.
March	24	Annual Exam			

SUBJECT : Computer Science

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
July	23	**Unit I: Computer Systems and Organization:** a. Basic Computer Organization: Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit, Byte, KB, MB, GB, TB, PB) B. Types of software: system software (operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software C. Operating system (OS): functions of operating system, OS user interface D. Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's laws and logic circuits E. Number system: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems.	Learning objectives are: A. Define computer system B. Explain parts of computer system C. Explain various input and output devices D. Explain different types of memory Explain types of software	Students will check the hardware specification of their devices and check the performance of device.	-	Students must be able to identify the hardware specification of the devices.
August	23	**Basic Computer**	Learning objectives	Students	Make a robot	1. Students are

		Organization: (continued) E. Emerging trends: Cloud computing, cloud services (SaaS, IaaS, PaaS), blockchains, Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT) **Unit II: Computational Thinking and Programming –** a. Introduction to problem solving: Steps for problem solving (analyzing the problem, developing an algorithm, coding, testing and debugging). representation of algorithms using flow chart and pseudo code, decomposition B. Familiarization with the basics of Python programming: Introduction to Python, features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens (keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments	are: A. Define Artificial Intelligence B. Explain sub system of AI like machine learning, Natural language processing C. Define Internet of things Define cloud computing and category of cloud computing	will solve the conversion question.	using waste material. The robot should give few drops of sanitizer when we place our hand near the robot.	able to solve questions based on number conversion and Boolean logic. 2. Students will get a chance to learn about Artificial intelligence and cloud computing.
Sept	13	**Unit II:**	Learning objectives	Students	Make a flow	

		Computational Thinking and Programming – b. Knowledge of data types: number (integer, floating point, complex), boolean, sequence (string, list, tuple), none, mapping (dictionary), mutable and immutable data types c. Operators: arithmetic operators, relational operators, logical operators, assignment operator, augmented assignment operators, identity operators (is, is not), membership operators (in, not in) d. Expressions, statement, type conversion & input/output: precedence of operators, expression, evaluation of expression, python statement, type conversion (explicit & implicit conversion), accepting data as input from the console and displaying output e. Errors: syntax errors, logical errors, runtime errors	are: A. Explain the steps in Problem solving B. Explain characteristics of an algorithm C. Define algorithm and flowchart D. Construct a flowchart for an algorithm E. Define Pseudo code and its benefits F. Understand the basic program and programming language G. Explain Python modes Explain how to use Python identifiers	will do practical.	chart of Free Body Diagram. Use different colour to show different shapes.	

		Flow of control: introduction, use of indentation, sequential flow, conditional and iterative flow control				
Oct	12					Students will understand about programming language and how to write it. Students will understand how to use statements and keywords to write a program.
Nov	24		Learning objectives are: A. Explain data types B. Describe mutable and immutable data types C. Explain arithmetic operations and relational operators D. Explain about statements in Python E. Explain Logical, Syntax and Run time errors Explain the flow of control in Python program	Students will do the practical in Python.	Make a maze puzzle which follows the flow of control and there will be one way to reach on center of the maze.	Students will use different operators and data types to write a program. They will understand how to write code if any scenario or condition is given.
		Revision and Project work				
Dec	24	**Unit II: Computational Thinking and Programming –** f. Conditional statements: if, if-else, if-elif-else,	Learning objectives are: A. Explain iterations and loops B. Learn for and while loop	Students will do the practical in Python.	-	Students will learn about iterative statements and what we can with string. Working and

		flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number g. Iterative statements: for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc h. Strings: introduction, indexing, string operations (concatenation, repetition, membership & slicing), traversing a string using loops, built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split() i. Lists: introduction, indexing, list operations (concatenation,	C. Explain break and continue D. Explain tuples E. Describe built in function for tuple			benefits of list.

		repetition, membership & slicing), traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list

Tuples: introduction, indexing, tuple operations (concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple | | | |
| Jan | 18 | **Unit II: Computational Thinking and Programming –**

j. Dictionary: | Learning objectives are:
A. Explain use of dictionary
B. How to access dictionary items
C. Properties of | Students will do the practical in Python. | - | Students will understand about dictionary and its uses. They will be able to use modules in |

		introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions: len(), dict(), keys(), values(), items(), get(), update(), del(), clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them k. Sorting techniques: Bubble and Insertion sort Introduction to Python modules: Importing module using 'import ' and using from statement, Importing math module (pi, e, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, randrange), statistics module (mean, median,mode)	dictionary D. Traverse a dictionary E. Create or manipulate dictionary F. Dictionary methods and built in functions Creating dictionary, character occurrence			Python.
Feb	13	**Unit III: Society, Law and Ethics:** a. Digital Footprints b. Digital society and Netizen: net etiquettes, communication etiquettes, social media	Learning objectives are: A. Define digital footprint B. Active and passive digital footprint C. Internet etiquette	Students can learn more about cyber security and follow it.	Create a chart paper on the topic "My idea of Peaceful Cyber world".	Students will learn about how they can use technology and internet without any harm and protect our data.

Month	W. D	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
		etiquettes c. Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache) Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime	D. Explain about copyright, patent and trademark Explain cyber crime			
March	24	**Unit III: Society, Law and Ethics:** d. Cyber safety: safely browsing the web, identity protection, confidentiality, cyber trolls and bullying. e. Safely accessing web sites: malware, viruses, trojans, adware f. E-waste management: proper disposal of used electronic gadgets g. Indian Information Technology Act (IT Act) Technology & Society: Gender and disability issues while teaching and using computers	Learning objectives are:- A. Explain how to prevent cyber crime B. Define IT Act Explain impact of digital technology on health	Students will see how E-waste harm the environment and how it can be recycle.	Recycle E-waste and explain how we can use it save the environment. You can make any kind of module using E-waste. OR Write an article on IT Act. What are the points you think should be added in IT Act.	Students will learn about E-waste management and IT Act. What are the important points are there in IT Act which everyone should know.

SUBJECT : ECONOMICS

Text Book :   1.   N.C.E.R.T

2. Introductory Microeconomics by T. R. Jain (by V. K. Global Pub)

3. Statistics for Economics by T. R. Jain (by V. K. Global Pub)

Month	W. D	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning

July	23	Part A: Statistics for Economics ● Introduction ● Collection, organization and presentation of data Part B: Introductory Microeconomics ● Introduction	● What is economics? ● Meaning, scope, functions and importance of statistics in Economics ● Collection of data: Sources of data-- primary and secondary ● Methods of collecting data ● Important source of secondary data: Census of India and National sample survey ● Organization of data: Meaning ; types of variables; Frequency distributions ● Meaning of microeconomics and macroeconomics; positive and normative ● economics ● What is an economy? ● Central problems of an economy: what, how and ● for whom to produce; ● Opportunity cost.	<u>Project on Central problems of an economy</u>	Prepare and deliver group/individual presentation on functions and importance of statistics in Economics. Group Discussion On Central problems of an economy.	● Students are required to find out the Methods of collecting data, Important sources of secondary data. ● Collect the information of Census of India and National sample survey. Find out the differences between microeconomics between positive and normative economics.
August	23	Part A: Statistics for Economics ● Presentation of data: ● Tabular and diagrammatic presentation Part B: Introductory Microeconomics Consumers equilibrium and demand	● Bar diagram ; Pie charts; Histogram, Frequency polygon; Ogive ● Consumer's equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer's equilibrium using marginal utility analysis. ● Indifference curve analysis of consumer's equilibrium-the	<u>Project on Consumers</u>	Prepare a presentation on Presentation of data: Bar diagram ; Pie charts; Histogram, Frequency polygon; Ogive Group Discussion On Utility analysis and marginal utility.	Find out relevant of Consumer's equilibrium in real life.

			consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.		Indifference curve analysis of consumer's equilibrium.	
Sept	13	Part B: Introductory Microeconomics Demand, law of demand and price elasticity of demand	• demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; Price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method		Debate on Demand and price elasticity of demand	Find out relevant of Demand and price elasticity of demand in real life.
Oct	12	Part B: Introductory Microeconomics Demand, law of demand and price elasticity of demand Part A: Statistics for Economics Statistical Tools Interpretation .	• demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; Price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method		Debate on Demand and price elasticity of demand	Find out relevant of Demand and price elasticity of demand in real life.
Nov	24	Part A: Statistics for Economics Karl pearson's method,Spearman's method • Part A :- Introductory microeconomi	Meaning, types - wholesale price index, consumer price index, uses of index numbers; Inflation and index numbers.		Numerical solving	Students are required to find out the uses of Index Number

		cs • Demand, Market Demand determinants of demand, Demand schedule, demand curve and its slope.	Absolute dispersion standard deviation; Relative dispersion co-efficient of variation •			Find out relevant of Producers Behaviour and Supply in real life.omics.

Dec	24	Part A: Statistics for Economics Statistical Tools and Interpretation . gram,Measures of correlation-Karl pearson's method,Spearman's method
		
		 Part B: Introductory Microeconomics
		 • Producers Behaviour and Supply
		  • Cost:
		  • Revenue:
		  • Producers equilibrium:
		  • Supply:
			• Meaning of production function: Short run and long run
			 • Total product, average product and marginal product.
			 • Returns to a factor
			 • short run; total cost. Average cost. Marginal cost and their relationship
			 • Total, average and marginal and their relationship
			 • Meaning and its conditions in terms of marginal revenue and marginal cost
			 • Market supply, determinants of supply; Supply schedule ; supply curve
			 • Price elasticity of supply
			 • Simultaneous increase and decrease of demand and supply.
				• Make a project on Producers Behaviour and Supply	• Debate on Producers Behaviour and Supply	

Jan	13	Part B: Introductory Microeconomics
		 • Forms of market and price determination factor
		  • Perfect Competition
		  • Monopoly Market:
		  • Monopolisti
			• Features; determination of market equilibrium; effects of shifts in demand and supply
			 • meaning and features
			 • meaning and features
			 • meaning and features
				• Make a project on different forms of market.		• Collect the information about different forms of market.
						
						 • Find out relevant of Price ceiling and price

Month	W. D.	Chapter/Unit	Concepts/Terms/Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
			c market: ● Oligopoly market: ● Price ceiling; price floor etc.			floor in real life.
Feb	13	Revision Annual examination				

SUBJECT : BUSINESS STUDIES

Text Book : 1. Business Studies

Month	W. D.	Chapter/Unit	Concepts/Terms/Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
April	23					
May	04					
June	21					
July	23	**PART- A Foundation of Businesss Nature and Purpose of business** **Forms of Business Organistion**	● Modern Concept of business. ● Characteristics ● Comparison of business , profession and employment ● Classification of business activities: Industry, Commerce, Trade and auxiliaries to trade ● Objectives of Business ● Business risk ● Nature of business risk ● Causes of business risk ● Introduction ● Sole proprietorship ● Features, merits and demerits ● Join Hindu family business ● Features, merits and demerits ● Partnership ● Features, merits and demerits, Types of partners ● Types of partnership ● Partnership deed: Registration and consequences of non registration		Statistics and Economics	Critical thinking and economical values and social values

			• Co-operative societies • Features, merits and demerits, Types of Co-operatives • Joint Stock Company • Features of Jon Stock Companies • Types of companies • Distinguish between private and public companies • Choice of form of business organisaion			
Aug	23	**Private, Public and Global enterprises** **Business Services**	• Introduction • Private and public sector • Forms of public sector • Departmental undertaking: Meaning,Features, merits and demerit • Statutory Corporation: Meaning,Features, merits and demerit • Government Company: Meaning,Features, merits and demerit • Global enterprises: Meaning,Features, merits and demerit • Comparison of public sectors • Nature of services • Types of services • Differences between goods and services • Banking: Types of Banks; • Functions of commercial bank • E- banking: Benefits • Insurances: Fundamental principles of insurance • Types of insurance • Life insurance: Types • Fire insurance • Marine Insurance: Types • Differences between life, fire and marine insurance • Communication services • Postal services, Telecom services • Warehousing: Meaning , Types, Functions.		Statistics and Economics	Critical thinking and economical values and social values
Sept	13	• Emerging modes of	Concept of e-business and scope and benefits.		Statistics and	Critical thinking

					Economics	and economical values and social values
		Business ● Social Responsibilities of business	Concept of social responsibilities Case of social responsibilities Responsibilities towards different groups Role of business in environment Business ethics concept and elements			
Oct	12	**Formation of a Company** **Sources of business finance**	● Promotion of a Company ● Functions of a promoter ● Documents required to be prepared ● Position of a promoter ● Incorporation ● Effect of certificate of incorporation ● Capital subscription ● Distinguish between MOA and AOA ● Meaning ,Features and significance of business finance ● Classification of sources of funds ● Sources of finance ● Retained Earnings: Features, merits and demerits ● Trade credit: Features, merits and demerits ● Factoring: Features, merits and demerits ● Commercial paper:Features, merits and demerits ● Equity shares: Features, merits and demerits ● Debentures: Features, merits and demerits		Statistics and Economics	Critical thinking and economical values and social values
Nov	24	**Small Business**	● Meaning of small business ● Nature of small business ● Role of small business in India ● Problems of small business ● Government assistance to small Industries and small units ● Institutional support for small business ● Marketing support to		Statistics and Economics	Critical thinking and economical values and social values

			MSME ● What can be marketed?			
Dec	24	Internal Trade	● Wholesale trade: Concept and services ● Retail trade: concept and services ● Types of retail trade ● Itinerant Retailers ● Fixed shop retailers ● Departmental shop: Features, merits and demerits ● Chain stores: Features, merits and demerits ● Mail order house: Features, merits and demerits ● Consumers co-operative store: Features, merits and demerits ● Super market: Features, merits and demerits ● Vending machine ● Role of commerce and Industry association in promotion of internal trade		Statistics and Economics	Critical thinking and economical values and social values
Jan	18	**International Business - I** **International Business -II**	● Concept ● International business versus domestic business ● Scope of international business ● Benefits of international business ● Modes of entry into international business ● Introduction ● Export procedure ● Import procedure ● Foreign Trade promotion : measures and scheme ● Organisational support ● IMF: Objectives and functions ● WTO: Objectives and functions ● World Bank: Functions		Statistics and Economics	Critical thinking and economical values and social values
Feb	13	**Project work** Revision				

SUBJECT : ACCOUNTANCY

Text Book : 1. Accountancy

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
April	23					
May	04					
June	21					
July	23	• **Introduction to Accounting** • **Basic Accounting Terms** • **Theory base of accounting**	• Accounting: concept; objectives, advantages and limitations. • Types of accounting information • Users of accounting information • Qualitative characteristics of accounting information • Role of accounting in business • Transactions; Capital; Drawings; Assets(Types of assets); Liabilities(Types of liabilities);Expenses; Expenditure(Types of expenditures); Income ; Profit ; gain; loss; purchase; sale; debtors; creditors; discount(Types); stock (Types) and other terms. • Meaning and nature of accounting principles • Features of accounting principles • Importance of accounting principles • Fundamental accounting assumptions: Business entity; Money measurement; Going concern; Accounting period; cost concept; Dual aspect; Revenue recognition; Matching; Full disclosure; consistency; conservatism; Materiality; objectivity etc. • Basis of accounting: Cash and accrual		Statistics and Economics	Critical Thinking Social values and Economical values

Month	Days	Topic	Sub-topics		Competency/Skills	Values
			• Accounting standards: Concept; Objectives ; International Financial Reporting System(IFRS) and Indian Accounting Standards(IAS)			
Aug	23	• **Accounting Equation** • **Accounting procedures** • **Journal** • **Ledger**	• Meaning • Rules for accounting equation • Process of preparing accounting equation • Numerical problems • Meaning of an account • Meaning of debit and credit • Rules of debit and credit: Modern approach and traditional approach **Vouchers** • Source documents • Meaning of voucher • Types of vouchers • Preparation of vouchers(Numerical) • Meaning of Journal • Characteristics and advantages • Limitations • Passing of journal entries(Numerical • Meaning of ledger • Features • Importance • Preparation of ledger accounts (Numerical) • Balancing of ledger accounts		Statistics and Economics	Critical Thinking Social values and Economical values
Sept	13	• **Trial Balance** • **Cash Book**	• Meaning of Trial Balance. • Objectives • Preparation pf T.B. (Numerical) • Meaning of cash book. • Classification • Objectives • Features • Types (Single column, double and triple column) • Numerical problems of cash book • Petty Cash book • Numerical problems of petty cash book • Purchase day book: Meaning and preparation		Statistics and Economics	Critical Thinking Social values and Economical values

		• **Day books**	of purchase book • Sales day book : Meaning and preparation of sales book • Return Inward book: Meaning and preparation. • Return outward book : Meaning and preparation. • Journal proper: Meaning and preparation.			
Oct	12	• **Bank Reconciliation Statement**	• Meaning • Objectives • Methods of preparing BRS • Preparation of BRS (Numerical) • Preparation of adjusted cash book BRS.(Numerical)		Statistics and Economics	Critical Thinking Social values and Economical values
Nov	24	• **Depreciation** • **Provision and Reserves** • **Accounting for Bills of exchange**	• Meaning • Causes of depreciation • Objectives of depreciation • Depreciation, amortization and depletion concept • Methods of depreciation: Straight line and Reducing balance • Numerical problems • Concept of provision • Importance of provision • Concept of reserve • Types of reserves: Revenue reserve, capital reserve and secret reserve • Difference of provision and reserve • Meaning • Features • Parties to Bills of Exchange • Types of bills • Journal entries for Bill of exchange(Numerical)in different situation. • Meaning of promissory note • Difference between promissory note and bills of exchange		Statistics and Economics	Critical Thinking Social values and Economical values
Dec	24	• **Financial**	• Meaning		Statistics and	Critical

Month	W. D.	Chapter/Unit		Concepts/Terms/Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
		statements of sole proprietorship	• Objectives • Preparation of Trading Account • Preparation of Profit and loss account • Preparation of Balance sheet • Preparation of final account without adjustment • Preparation of final account with adjustment • Marshalling of assets and liabilities.			Economics	Thinking Social values and Economical values
Jan	18	• **Rectification of errors** And **Revision**	• Classification of errors • Errors do not affect the Trial Balance • Passing he journal entries before preparation of T. B and after preparation of T.B. Concept of suspense and preparation of suspense account.			Statistics and Economics	Critical Thinking Social values and Economical values
Feb	13						

Subject: Physical Education

Textbook: 1. 'Essentials of Physical Education' of Sultan Chand. Std.-XI

Month	W. D.	Chapter/Unit	Concepts/Terms/Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
April	23					
May	04					
June	21					
July	23	**Unit I Changing Trends & Career in Physical Education** · -Concept, Aims & Objectives of Physical Education · -Changing Trends in Sports-playing surface, wearable gears and sports equipment, technology advancements -Career Options in Physical education - Khelo-India and Fit-India Program ·	Students will understand about career opportunities and real value of games and sports.	Make a chart of career opportunities in physical education.		Write an article about career options.
		Unit II Olympism	Value of	Make a		

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		- Ancient and Modern Olympics - Olympism Concept and Olympics Values (Excellence, Freindship & Respect) - Olympics- sumbols, Motto, Flag, Oath and anthem - Olympic Movement Structure - IOC, NOC, IFS, Other memebers	Olympism	picture chart of olympic moveme nt as a project.		
August	23	**Unit III Yoga** - Meaning & Importance of Yoga - Introduction to Ashtanga Yoga - Introduction to Yogic Kriyas (shat karma)	Healthy lifestyle			
		Unit IV Physical Education & Sports for CWSN (Children With Special Needs- Divyang) - Concept of disability & disorder - Types of disability, its causes & nature (Intellectual disability, physical disability) -Aims & objectives of Adaptive physical education. · - Role of various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & special Educator)	Adaption through physical education			
Sep	13	**Unit V PHYSICAL FITNESS, HEALTH, AND WELLNESS** - Meaning & Importance of Wellness, health, and physical fitness. - Components/Dimensions of wellness, health and physical fitness - Traditional sports & regional games for promoting wellness.	Wholsome developm ent of an individual through YOGA			
Oct	12	**Unit VI Test, Measurement & Evaluation** - Concept of Test, Measurement & Evaluation in Physical Education & Sports - Classification of Test in Physical Education and sports. - Test administration guidelines in physical education and sports	Leadershi p quality through physical education			
Nov	24	**Unit VII Fundamentals of Anatomy, Physiology in sports** - Definitions and importance of Anatomy and Physiology in exercise and sports. - Functions of skeletal system, classification of bone and types of joints - Functions and structure of circulatory	Observati on through measurem ent and evaluation			

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
		Unit VIII Fundamentals of Kinesiology and biomechanics in Sports · Definition and Importance of Anatomy, Physiology & Kinesiology · Function of Skeleton System, Classification of Bones & Types of Joints · Properties and Functions of Muscles · Function & Structure of Respiratory System and Circulatory System · Equilibrium – Dynamic & Static And Centre of Gravity and its application in sports	Knowledge of our body			
Dec	24	Unit IX Psychology & Sports · Definition & Importance of Psychology in Phy. Edu. & Sports · Adolescent Problems & Their Management -Team cohesion and sports	Study of human mind			
		Unit X Training and Doping in Sports · Concept and Principles of Sports Training -Training load: Overload, adaptation and recovery · Concept of Doping and its disadvantages	Sports training & information about prohibited substances.			
Jan	18	REVISONS OF CHAPTERS, Practice of Practical				
Feb	13	REVISONS OF CHAPTERS				

(Note: the first row above continues "system and heart. / – Functions and structure of respiratory system")

SUBJECT: ART EDUCATION (FINE ARTS)

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
April	23	Pencil shading Still life Soharai Art	Learning traditional Folk Art of Jharkhand	Make a project fine on Soharai	Art and cultural life of tribal in India	Find the origin place of this art form
May	4	Pencil shading Still life Soharai Art	Learning traditional Folk Art of Jharkhand	Make a project fine on Soharai	Art and cultural life of tribal in India	do
June	21	Object drawing and painting in water colour Making Poster on	To grow Awareness mof clean Environment		Environmental studies	Who is called milk man of India . find

Month						
		World milk day				
July	23	Flower draw and paint in water colour Poster making on Guru Purnima	To grow sence of respect towards Teachers		Study of flowering plant (Bio)	In whose name Guru Purnima celebrated
Aug	23	Landscape in water colour Make poster on any one topic. International Youth Day Raksha Bandhan	Awareness of youth	Poster on youth day	Chapter on Raksha Bandhan in Language	
Sept	13	Worli Art Making greeting card for you teacher	Learning folk art of Maharashtra. To grow sense of respect towards Teachers	Make a painting of village life in Worli form	Maths various shapes	To know the origin state of Worli Art
Oct	12	City scape painting Make poster on any one of following Topic International day of Nonviolence World Student Day United Nation Day National Unity Day	Make a poster on world Student day		Maths Trigonometry Social Science	On whose birthday World student day celebrated and to give respect to Iron man of india
Nov	24	Madhu Bani Painting Poster making on National Education day	Learning to do Folk art of Bihar	Make poster on topic	Civic topic	Poster making on National Education day
Dec	24	Making Christmas & New Year card Poster making on Energy Conservation Day	Learning to make Christmas Decoration	Make poster on topic	Commerce - demand and price	Poster making on Energy Conservation Day
Jan	18	Abstract art composition Poster on Topic. National Girl Child Day	To be updated with current Art Style	Poster on Topic. National Girl Child Day	Cubism. graphs	CIVIC – human rights
Feb	13	REVISION & ASSESSMENT				
March	24					

SUBJECT: FINE ARTS (PAINTING) 6TH SUBJECT

Text Book : 1. AN INTRODUCTION TO INDIAN ART   part- II

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Project / Practical Work	Art Integration Topics / Inclusive Teaching	Research Work Blended Learning
April	23	Theory; Chapter - 1 The Manuscript Painting Traditions Practical- Landscape in pencil shading	Learning about Manuscript Painting done in our Upanishad and Purana	Draw 2 pencil shading landscape	History- our ancient books	To find out no. of scripts used in India
May	4	Theory; Chapter -2 The Rajasthani School of Painting Practical - Landscape painting in water colour	Learning about Rajasthani Miniature	Make a file on Mughal miniature	Using shapes and lines to compose a drawing	To know our rich culture heritage
June	21	Theory; Chapter -2 The Rajasthani School of Painting Practical- Still life/Object drawing and pencil shading		Minimum 2 still life or Object has to be done	In maths in various topics as trigonometry, mensuration	To learn our cultural heritage
July	23	Theory; Chapter -3 The Mughal School of Miniature Painting Practical- Draw and paint object drawing with water colour	Learning about Mughal miniature	**Minimum 2 still life or Object has to be done in coloured with water colour**	**Shapes and mensuration maths**	To learn our cultural heritage
Aug	23	Theory; Chapter- 4 The Decani Schools of Paintings Practical- Draw and shade any flower in pencil or charcoal	Learning about art work done in southern part of India, Bijapur ,Golkunda etc	Minimum 2 flower has to be done in pencil shading or Charcoal	**Shapes and mensuration maths**	To learn our cultural heritage
Sept	13	Theory; Chapter-5 The Pahari Schools of Paintings ASSESMENT -1	To learn art work of Kangra ,Kulu, Chamba , Jammu in Himalayan regin	Make a project file on Pahari school of art		To learn our cultural heritage
Oct	12	Theory; Chapter -6 The Bengal School and Cultural Nationalism Practical- Composition of flower in water colour	To learn about Art and Famous Artist of Bengal area.	Minimum 2 flower has to be done in water colour	**Shapes and mensuration maths**	To learn our cultural heritage

Nov	24	Theory; Chapter- 7 The Modern Indian Art Chapter-8 The living Art Traditions of India Practical-Draw 2 figurative Landscape of village composition, 2 Figurative Cityscape	Here we will learn about modern Artist like Yamini Roy , Ram Kinkar, This chapter will deal with folk art of Indian traditions . god, goddess, etc	Make a project file on Mughal miniature art Minimum 4 compositions will be done in colour in any medium	**Shapes and mensuration maths**	To learn our cultural heritage
Dec	24	REVISION PRE - BOARD EXAM				
Jan	18					
Feb	13					
March	24					

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