

TERM AND MONTH-WISE SPLIT-UP SYLLABI OF CLASS – XII FOR THE SESSION 2023-2024

SUBJECT : ENGLISH

Text Book : 1. Flamingo
2. Vistas

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21	L-1: The Last Lesson (Flamingo)	The story depicts the pathos of the whole situation about how people feel in not learning their language and losing an asset in M. Hamel, the French teacher. It also highlights linguistic chauvinism.	Group Discussion – “Political enslavement is a curse on any nation as it deprives it of its identity.”	Write a debate either for or against on the topic – Is it right to expose students to three languages at school. (120-150 words)	Find out about the following: Linguistic human rights Constitutional guarantee given for linguistic minorities in India. ‘Words which are in English and Hindi usage taken from other languages.
		P-1- My Mother at 66 (Flamingo)	The poem captures the complex subtleties of human relationships in a texture of symbols, images and poetic devices. The poem is about childhood fear of separation and the sadness associated with the thought of losing the loved ones. (Coping with childhood fears).	Create a photo album pasting your mother’s pictures showing her different stages of life till date.	A report on Old Age Homes.	Secret of Happy Relationship.
		L-1: The Third Level (Vistas)	The story revolves around Charley, the protagonist, who claimed to find himself on the third level at the grand Central Station which the rail authorities swore doesn’t exist. The Third level refers to the world of fantasy where Charley used to visit as a temporary relief or a medium of escape from the world of harsh realities. Man achieves this by constantly moving between the past, the present and the future	Write an original story to continue where the passage/chapter ended. Be sure to use what you have learned about the character Charley as you tell what happens to him next.	Write an essay on the importance of hobbies and how certain hobbies can help man to keep the past alive.	List the insecurities and fears of the modern world that trouble man. (Covid situation can be part.)
		L-7-The Interview (Flamingo)	The interview as a communication genre. _The Interview written by Christopher Sylvester briefs the new invention- Part I– Interview in the	Group Discussion – Interviews of famous personalities	Excerpts from the interviews of famous personalities	What role did reporters/ journalists play during the outbreak of deadly corona? What all challenges did they face during the lock down?

			field of journalism. Part II -is an extract from an interview of Umberto Eco, author of the popular novel, 'Name of the Rose' by Mukund Padmanabhan from 'The Hindu.' This interview helps us know many aspects of his writing style and ideas.	watched by the students.		
May	06	L - 2 : Lost Spring (Flamingo)	The chapter is about the exploitation of children in hazardous conditions. It highlights abject poverty, thoughtless traditions, loss of innocence, importance of education, back breaking hardwork and dismal working conditions. The chapter is about the acceptance of poverty, exploitation as destiny and a dire need to provide the poverty-stricken people, especially the children, a life of dignity and opportunities to dare, dream and do.	Group Discussion- Dreams of the poor, Problems of child labour, Education is the only weapon to better the lot. Art – Bangle Making (Chemistry)	Find out the laws for children mentioned in our constitution.	Collect statistical report on child labour in India and the world. Find out about two organisation that work to combat child labour.
		Notice Writing	Notice writing is a formal means of communication and its main purpose is to bring a certain piece of information to the notice of a group of people. They are pinned in a particular spot where the concerned people can read the notice.	Collecting Government notices from the newspapers.	Notice Writing Worksheet	Reading of the best notices from Magazines and Newspapers.
June	19	P - 2 : An Elementary School (Flamingo)	The poem highlights the harsh realities of life as experienced by the slum children. It based on the theme of social injustice and class inequalities prevailing in the society, effect of social disorder, confusion, chaos and poverty.	Group Discussion : 'Importance of Education'. Video presentation on India's largest slum. Visit to slum school to make them understand the importance of education. Tyrolese valley object	Write the names and support it with pictures - The various slums in India.	Reasons of Poverty and Unemployment in India. Support it with a statistical report in relation to education

		L-3- Deep Water (Flamingo)	A real life personal account of experiencing fear and the steps to overcome it. The story is a psychological analysis of fear from a child's point of view when he was nearly drowned in a swimming pool. The experience of fear and its conquest made him live intensely. He enjoyed every moment of his living.	A clipping on water sports will be shown for understanding the lesson. A Snippet (song delivering courage of Amelia Earhart)	Different styles of swimming. Names and pictures of Indian swimming Champions.	Measurement and the requirements for swimming pools.
		P-3- Keeping Quiet (Flamingo)	The poet wants to convey that stillness is necessary for reflection and quiet introspection. We can hear the voice of our conscience and thus withdraw ourselves from undesirable actions and contribute to create a society of peace and mutual understanding.	Importance of meditation. Meditation music https://www.youtube.com/watch?v=58ZNeCS05II https://www.youtube.com/watch?v=FMrTSHAAPhM	Script Writing and Role Play on establishing Peace and Unity. (Write a script on Peace and Unity and act on it.)	Spiritual Message (Reading excerpts)
		Vistas- L-2- The Tiger King	The story is a satire on the conceit of those in power. The writer has used the literary devices of dramatic irony and humour to create this effect. The story spans from the birth of tiger king to death covering all the landmarks connected with his passion-tiger-hunt.	Short video on save tiger. Presentation on 'Treatment to Wild Life' (Power Point Presentation)	Write a paragraph on the dictum 'Live and let others live'. If you become a king would you prefer ruling your state and discussing on important issues or indulge in petty issues and feel conceited?	A comparative study between Mrs. Packletide's Tiger and the lesson.
		L – 3 – Journey to the end of the World (Vistas)	TishaniDoshi describes the journey to the coldest, driest and windiest continent in the world: Antarctica. The world's geological history is trapped in Antarctica. Geoff Green's 'Students on Ice' programme aims at taking high school students to the ends of the world. Doshi thinks that Antarctica is the place to go and understand the earth's	Video Information about Antarctic.	Speech: Biodiversity Loss	UN Sustainable Goal – Climate Action Collect facts about the Paris Agreement.

			present, past and future.			
		Invitation and Replies	<p>Invitations are extended to relatives, friends, acquaintances and clients on a number of social occasions like marriages, births, engagements, deaths or other public functions.</p> <p>Replying to invitations is essential. It is an essential courtesy to the host who has extended an invitation and also helps the host know how many guests will arrive so that he she may make arrangements accordingly.</p>	Making of Invitation Cards	Practicing telephonic act of inviting people. Learning the courtesy.	Collect the best invitation that you have received and presenting it in the class.
July	24	P-4 : A Thing of Beauty (Flamingo)	<p>A taste of classical poetry with universal appeal and eternal value. The natural bounties are all beautiful things which fill us with joy and remove the gloom in life.</p>	Painting or Photography of Landscapes	What do you think - 'Beauty dwells outside or within?'. Write a paragraph in 150 words.	Beauty of the Universe.
		L-4 : The Rattrap (Flamingo)	<p>The story has a universal theme that the essential goodness in a human being can be awakened through understanding and love. Edla's kindness and hospitality awakens his conscience and he realises that there is a way out of the trap and returns the money through Edla.</p>	<p>Are you tempted by any thing in life or have you fallen to any of the temptation which made you do even wrong?</p> <p>Should a person be given a chance to reform himself?</p>	Debate on 'The whole World is nothing but a great Rattrap.	<p>Discuss on the temptations in life.</p> <p>Twin Flame Energy</p>
		P – 5 : A Roadside Stand (Flamingo)	<p>Robert Frost presents the lives of poor deprived people with pitiless clarity and with the deepest sympathy and humanity. The poor people had constructed a roadside stand to sell their products and earn a living but the rich do not even bother to take a look at it.</p>	Group Discussion - The economic wellbeing of a country depends on a balanced development of the villages and the cities.	Have you ever stopped at the roadside stand while travelling? List your observations.	How do the Government and the other social service agencies help the poor rural people.
		L- 2 : The Enemy (Vistas)	<p>An American prisoner of war is washed ashore in a dying state and is found at the doorstep of a Japanese doctor. Dr.Sadao encounters the dilemma-to live as a private individual whose</p>	Tribute to the Doctors during the pandemic	Writing Viewpoints - Should we hate our enemy if he is in the death trap or should we save?	Japan medical industry – an analysis

			moral ethical responsibility is to save the soldier or to let the prisoner die. He risks his life, fame and social status-takes him to his house and makes efforts to save him.			
		L-3- Should Wizard Hit Mommy? (Vistas)	The story deals with a very serious theme of 'good parenting'. It is about the father who tries to teach moral values through his stories to his daughter and about the worth of originality. It is a sharp contrast about the child's viewpoint and an adult's perception of life	Are nursery rhymes and fairy tales a reflection of reality? Your favourite fairy tale.	Why are we deluded by our peer group in adolescence and childhood?	Debate on Should Parents always decide what is best for their children.
		Report Writing	Format of Report Writing. Steps to follow. Development of the report.	Creative Writing	Writing on reports on various topics.	Paper cuttings and the collection of newspaper reports.
Aug	24	P- 5- Aunt Jennifer's Tigers (Flamingo)	The poem consists of three quatrains which expose the desolating effects of patriarchy. The poem showcases a fair interplay between rebellion and repression, individual and the social and between personal and political aspects of male chauvinism and suffocation in a married life.	Comic Strip & Critical appreciation of the poem (Creative Writing Task).	Comment on 'Marriage is blissful state'. Or A stage to develop understanding g and relationship.	Details about marriage ceremony of a particular country and the traditional differences.
		L5- Indigo (Flamingo)	The lesson is based on the leadership shown by Mahatma Gandhi to secure justice for oppressed people through convincing argumentation and negotiation. It also mentions the contributions made by anonymous Indians to the freedom movement.	A video clip will be shown on the lesson.	a) List some characteristics of a leader. b) What was Gandhiji's role in freedom movement? c) What do you know about indigo plantation?	Facts about khadi movement and spinning wheel.
		Vistas-L-4-On the Face of It	- The lesson is about the pain and isolation, the physically handicapped go through. It highlights the callousness of the society towards them which affects them adversely and they become even more	Group discussion on "It's got nothing to do with my face and what I look like"	-How do you view your life? - How to motivate handicapped people?	Collect information on one famous specially abled personality famous around the globe.

			withdrawn. It encourages the readers to be brave enough to face, accept and deal with difficult situations in life. It is about Mr. Lamb, a physically challenged old man who has a positive outlook and attitude towards life.			
		L -6 Poets and Pancakes (Flamingo)		Group discussion on “It’s got nothing to do with my face and what I look like”	How do you view your life? - How to motivate handicapped people?	Collect information on one famous specially abled personality famous around the globe.
		Business letter – Job application	To learn to write to the point business letters in appropriate formal language, precise form and content pertaining to various situations.	Creative Writing	Discussion on Report Writing	Writing on reports on various topics.
Sept	23	Vistas - L - 5 - Evans Tries an O Level	The story depicts a class of wit between a criminal and the law enforcing authorities in which the prisoner Evans befools the jail authorities and manages to escape from the prison. The governor fails to revoke the escape plan of Evans and proves himself to be good for a guggle gullible governor.	Group discussion -The prison staff often develops a soft corner for those in custody? Do you agree?	Should criminals in prison be given the opportunity of learning and education? Can education bring any reform?	List of famous detective novels on which films have been made.
		L - 6 : Memories of Childhood (Vistas)	The story presents autobiographical episodes from the lives of two women and is an insight into humiliations suffered by the marginalised communities and their relationship with the mainstream culture.	Sharing of a vivid memory from childhood.	Discussion - - Seeds of rebellion are sown in childhood. Do you agree? Narrate an incident from the history	Trans activist – Lakshmi Narayan Tripathi and Gauri Sawant.
		Speech/Debate Writing	know the four models of persuasive writing: (i) Monre’s motivated sequence, (ii) problem/solution, (iii) comparison and (iv) using the negative to persuade	Listening : Famous speeches/debates	Drafting/Creative writing of speech and debate.	Writing the script of the latest speech/debate
Oct	20	L8- Going Places (Flamingo)	Places- The story of an incurable dreamer and an escapist who belongs to	Broken family ties: What you really lost?	Express your views ‘Dreams are extremely	Celebrity stories from rags to riches.

			a lower middle class family and indulges in fantasizing and hero worship. It also focuses on the complexities of human relationships among different members of a family.		important; you cannot achieve it unless you imagine it.'	
Nov	16	Revision and Practice Test				
Dec	22	Revision and Practice Test/ Pre Board				
Jan	17	Pre Board				
Feb	22	■				
March	21	■				

GROUP DISCUSSION TOPICS

- Gender Sensitivity is gender equality concern?
- A.I. in work: how it is going to change the future of workspace?
- Cryptocurrency/ Bitcoin
- Discuss the quote by Mark Zuckerberg “We don’t make services to make more money, we make money to make better services”.
- What do you think about ‘ageing gracefully’? How can we change the trend of people going for cosmetic surgeries?
- Is Dependence on Computers a Good Thing?
- Terrorism in India
- How effective are Indian B-schools?
- Will E-Commerce ruin the retail stores?
- Are Peace and Non-Violence Outdated Concepts?
- Effect of demonetization on common citizen vis-a-vis black money holders
- Discuss Social Media impact on teenagers.
- Are men compromising their careers for the family?
- Are nuclear families a blessing in disguise?
- Artificial Intelligence is taking over the human workforce.
- Is our Political System Reason for our Backwardness?
- #Me Too Campaign
- E-Learning: A Substitute for Classroom Learning?
- Work-Life balance and Need for spirituality.
- The decline in open spaces may lead to negative tendencies in children.

SUBJECT: PHYSICS

Month	W. D.	Chapter/Unit	Concepts/Terms/ Learning Objects	Activity	Project / Practical Work	Smart Board
April			Chapter–1: Electric Charges and Fields: Electric Charges; Conservation of charge, Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).			
May		Unit – I : Electrostatics	Chapter–2: Electrostatic Potential and Capacitance: Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor.	1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.	1. To find resistance of a given wire using metre bridge and hence determine the specific resistance of its material 2. To determine resistance per cm of a given wire by plotting a graph of potential difference versus current.	
June		Unit II: Current Electricity Unit III: Magnetic Effects of Current and Magnetism	Chapter–3: Current Electricity: Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's laws and simple applications, Wheatstone bridge.	2. To study the variation in potential drop with length of a wire for a steady current.	3. To verify the laws of combination (series/parallel) of resistance using meter bridge. 4. To compare the emf of two primary cells using potentiometer.	Smart Board to explain Kirchhoff's Rules, and Potentiometer.

			<p>Chapter–4: Moving Charges and Magnetism: Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight and toroidal solenoids (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields.</p>			
July		<p>Unit III: Magnetic Effects of Current and Magnetism (Contd.)</p> <p>Magnetization of materials and effect of temp. on magnetic properties.</p> <p>Unit IV: Electromagnetic Induction and Alternating Currents</p> <p>Unit V: Electromagnetic waves</p>	<p>Chapter–4: Moving Charges and Magnetism (Contd.) Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors- definition of ampere, torque experienced by a current loop in uniform magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.</p> <p>Chapter–5: Magnetism and Matter Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis, torque on a magnetic dipole. (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Para-, dia- and ferro - magnetic substances, with examples.</p> <p>Chapter–6: Electromagnetic Induction: Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Eddy currents. Self and mutual induction.</p> <p>Chapter–7: Alternating Current: Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, power factor, wattless current. AC generator and transformer.</p> <p>Chapter–8: Electromagnetic Waves: Basic idea of displacement current, Electromagnetic waves, their characteristics, their Transverse nature (qualitative ideas only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.</p>	<p>3. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.</p>	<p>5. To determine the internal resistance of a given primary cell using potentiometer.</p>	<p>Smart Board to explain direction of magnetic field. Smart Board used to explain direction of force on a charge and a conductor moving in a magnetic field</p> <p>Smart Board to explain direction of induced emf. Smart Board to explain the graph and</p>

						phasor diagram related to ac circuit. Smart Board to explain the spectrum.
Aug		Unit VI: Optics	Chapter–9: Ray Optics and Optical Instruments: Ray Optics: Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.	4. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.	6. To find the value of v for different value of u in case of a concave mirror and to find the focal length, 7. To find the focal length of a convex mirror, using a convex lens.	Smart Board to explain optical instrument
Sept			Revision Half Yearly Examination	5. To study the nature and size of the image formed by a (i) convex lens, (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).	8. To find focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$. 9. To find the focal length of concave lens using a convex lens.	Smart Board to explain wavefront, YDSE interference fringes.
Oct		Unit VII: Dual Nature of Radiation and Matter	Chapter–10: Wave Optics: Wave optics: Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit	6. To obtain a lens combination with the specified focal length	10. To determine angle of minimum deviation for a given prism by plotting a graph between angle of	

		<p>Unit VIII: Atoms and Nuclei</p>	<p>experiment and expression for fringe width (no derivation), coherent sources and sustained interference of light, diffraction due to a single slit, width of central maximum.</p> <p>Chapter–11: Dual Nature of Radiation and Matter: Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.</p>	<p>by using two lenses from the given set of lenses.</p>	<p>incidence and angle of deviation.</p> <p>11. To determine refractive index of a glass slab using a travelling microscope.</p>	
Nov		<p>Unit IX: Electronic Devices</p>	<p>Chapter–12: Atoms Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum.</p> <p>Chapter–13: Nuclei Composition and size of nucleus. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion.Chapter–14: Semiconductor Electronics: Materials, Devices and Simple Circuits Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Semiconductor diode - I-V characteristics in forward and reverse bias, diode as a rectifier; Special purpose p-n junction diodes: LED, photodiode, solar cell characteristics.</p>		<p>12. To find refractive index of a liquid by using (i) concave mirror (ii) convex lens and plane mirror.</p>	
Dec						
Jan						
Feb						
March						

		Carboxylic Acids	<p>preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes and uses.</p> <p>Nomenclature, acidic nature, methods of preparation, physical and chemical properties, uses.</p>	<p>solution by titrating it against a standard solution of Ferrous Ammonium Sulphate.</p> <p>Chromatography (a) Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of Rf values. (b) Separation of constituents present in an inorganic mixture containing two cations only (constituents having large difference in Rf values to be provided).</p>	and carboxylic acids.	chemical used in textile processing.
July	14	Organic compounds containing Nitrogen- Liquid Solution Electrochemistry	<p>Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines, cyanides and isocyanides.</p> <p>Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.</p> <p>Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties - relative lowering of vapour pressure, Raoult's law, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, van't Hoff factor.</p> <p>Redox reactions, standard electrode potential, EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration,</p>	<p>Test for the functional groups present in organic compounds: Unsaturation, alcoholic, phenolic, aldehyde, ketonic, carboxylic and amino (primary groups)</p> <p>Variation of cell potential in $Zn/Zn^{2+} Cu^{2+}/Cu$ with change in concentration of electrolytes ($CuSO_4$ or $Zn SO_4$) at room temperature.</p>	Clay modelling on bonding in organic compounds containing nitrogen	The importance of synthetic chemistry in pharmaceutical industry.

			Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea),			
August	22	Chemical Kinetics	<p>Continued..... dry cell, electrolytic cells and Galvanic cells, lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and emf of a cell, fuel cells, corrosion. Continued..... dry cell, electrolytic cells and Galvanic cells, lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and emf of a cell, fuel cells, corrosion.</p> <p>Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment). Activation energy, Arrhenius equation.</p>	<p>Preparation of Organic Compounds Preparation of any one of the following compounds i) Acetanilide ii) Di - benzalAcetone iii) p- Nitroacetanilide iv) Aniline yellow or 2 - Naphthol Anilinedye.</p> <p>. Chemical Kinetics (a) Effect of concentration and temperature on the rate of reaction between Sodium Thiosulphate and Hydrochloric acid. (b) Study of reaction rates of any one of the following: (i) Reaction of Iodide ion with Hydrogen Peroxide at room temperature using different concentrations of Iodide ions. (ii) Reaction between Potassium Iodate, (KIO₃) and Sodium Sulphite: (Na₂SO₃) using starch solution as an indicator (clock reaction).</p> <p>Preparation of one lyophilic and one lyophobic sol</p>	Power point presentation on chemical kinetics and its importance	To understand the role of catalyst in medicines.

				<p>Lyophilic sol - starch, egg albumin and gum</p> <p>Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenous sulphide.</p> <p>(b) Dialysis of sol-prepared in (a) above.</p> <p>(c) Study of the role of emulsifying agents in stabilizing the emulsion of different oils.</p>	Clay modelling on bonding in coordination compounds.	Coordination compounds and its important role in nature.
September	23	REVISION AND DOUBT CLEARANCE HALF YEARLY EXAM-2022				
October	18	<p>Coordination Compounds</p> <p>Lanthanoids</p> <p>Actinoids</p>	<p>Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereo isomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).</p> <p>General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends of properties of the first row transition metals - metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$.</p>	<p>QUALITATIVE ANALYSIS</p> <p>Cations- Pb^{2+}, Cu^{2+}, Al^{3+}, Fe^{3+}, Ni^{2+}, Zn^{2+}, Co^{2+}, Mn^{2+}, Ba^{2+}, Ca^{2+}, Sr^{2+}, NH_4^+</p> <p>Anions – Cl^-, Br^-, I^-, CO_3^{2-}, NO_3^{1-}, CH_3COO^-, SO_4^{2-}</p>	<p>Chromatography butterfly craft</p> <p>Chart preparation on trends in physical and chemical properties of d and f- block elements.</p> <p>Logo design for periodic table.</p>	Role of minerals found in our body.
November	13	Biomolecules	Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences.		Brochure on	

			<p>Electronic configuration, oxidation states and comparison with lanthanoids.</p> <p>Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen) importance of carbohydrates. Proteins - Elementary idea of α - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure.</p> <p>Vitamins - Classification and functions. Nucleic Acids: DNA and RNA.</p>	<p>Thermochemistry Any one of the following experiments (a) Enthalpy of dissolution of Copper Sulphate or Potassium Nitrate. (b) Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH). (c) Determination of enthalpy change during interaction (Hydrogen bond formation) between Acetone and Chloroform.</p>	<p>elementary idea of biomolecules found in human body.</p> <p>Synthetic polymer paint on wood.</p>	<p>Role of amino acids in human body.</p> <p>Scope of synthetic organic chemistry.</p>
Dec	20	Revision and sample paper discussion Pre-Board -1				
Jan	20	Discussion & Pre-board, Sample Question papers and CBSE model question paper discussion.				

INVESTIGATORY PROJECT Scientific investigations involving laboratory testing and collecting information from other sources.

A few suggested Projects.

- Study of the presence of oxalate ions in guava fruit at different stages of ripening. • Study the quantity of casein present in different samples of milk.
- Preparation of soybean milk and its comparison with natural milk with respect to curd formation, the effect of temperature, etc.
- Study of the effect of Potassium Bisulphate as a food preservative under various conditions (temperature, concentration, time, etc.)
- Study of digestion of starch by salivary amylase and effect of pH and temperature on it. • Comparative study of the rate of fermentation of the following materials: wheat flour, gram flour, potato juice, carrot juice, etc.
- Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom).
- Study of common food adulterants in fat, oil, butter, sugar, turmeric power, chilli powder and pepper. .

SUBJECT: BIOLOGY**Text Book :** 1. **Prescribed Text Book:**Biology for ClassXII by NCERT**Reference Book:** 1.Elementary Biology for Class XII (Trueman's Pub.)

Month	W.D	Chapter/ Unit	Concepts / Terms/ Learning Objects	Project / Practical Work	Art Integration Topics/ Inclusive Teaching	Research Work / Blended Learning
April	22	UNIT- VI- Reprod uction:	<u>Chapter-2: Sexual reproduction in flowering plants:</u> Flower structure, development of male and female gametophytes, pollination – types, agencies and examples, out breeding devices, pollen-pistil interaction, double fertilization, post fertilization events- development of endosperm and embryo, development of seed and formation of fruit, special modes–apomixis, polyembryony. Significance of seed dispersal and fruit formation.	1.To prepare a temporary mount to observe pollen germination. 2.Study of flowers adapted to pollination by different agencies (wind, insect, bird) 3.To prepare a temporary mount of onion root tip to study mitosis. 4. Identification of stages of gamete development i.e. T.S. of testes & T.S.of ovary through permanent slide. 5.To study meiosis in onion Bud cell through permanent slides. 6.Identification of T.S.of blastula through permanent slides	Preparation of natural dyes. Group work: Take interview of 5 renowned gynaecologi st of your locality and make a documentar y on it.	
May	07		<u>Chapter – 3 :</u> <u>Human Reproduction :</u> Male and female reproductive system, microscopic anatomy of testes and ovary, gametogenesis – spermatogenesis and oogenesis, menstrual cycle fertilization, embryo development upto blastocyst formation, implantation, pregnancy and			

			placenta formation (elementary idea) parturition (elementary idea) and lactation (elementary idea).			
June	14		<u>Chapter– 4:Reproductive Health:</u> Need for reproductive health and prevention of STD birth control— need and methods of contraception. Medical termination of pregnancy, amniocentesis; infertility. ART- IVF, ZIFT, GIFT (elementary idea for general awareness)		Catchy slogan Writing on Promotion of Family Planning.	
		UNIT VII– Genetics and Evolution:	<u>Chapter – 5 : Principles of Inheritance and Variation:</u> Mendelian laws of inheritance, deviation from Mendelism, incomplete dominance, codominance, multiple alleles and inheritance of blood groups, pleiotropy, elementary idea of polygenic inheritance, chromosome theory of inheritance; chromosomes and genes; sex determination, linkage and crossing over; sexlinked inheritance;	1.Prepare pedigree charts of anyone of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and color blindness 2. Study of Mendelian inheritance using seeds of different colour/size of any plant.	1. Represent the dihybrid cross in punnet square by pasting colourful balls/ marbles on a hard board .	Make a detailed paper presentation on any one Genetic disorders

			genetic drift; Hardy - Weinberg's principle; adaptive radiation; human evolution.			
Aug	23	UNIT – VIII : Biology in Human Welfare	<p><u>Chapter -8 : Human Health and Disease</u> Pathogens, parasites causing human diseases(malaria, dengue, chicken gunia, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ringworm)and their control. Basic concepts of immunology- vaccines, cancer, HIV and AIDS, adolescence, drug and alcohol abuse.</p> <p><u>Chapter –10 :Microbes in Human Welfare:</u> Role of microbes in household food processing, industrial production, sewage treatment, energy generation and as bio-control agents and bio-fertilizers. Antibiotics production and judicious use.</p>	1.Study of disease causing organisms like Ascaris, Entamoeba, Plasmodium & Roundworm through permanent Slides or specimen. Comment on symptoms of disease that they cause.	Make informative posters on Awareness on AIDS. Make it informative by adding logos of Government initiative in this regard.	To make a ppt on various awareness program on malaria
Sept	25		<p>Revision Half-Yearly Examination Chapter-11: Biotechnology - Principles and Processes</p> <p>Genetic Engineering (Recombinant DNA Technology).</p>			

Oct	18	<p>Unit-IX Biotechnology and its Applications</p> <p>Unit-X : Ecology and Environment</p>	<p>Chapter-12: Biotechnology and its Application</p> <p>Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.</p> <p>Chapter-13: Organisms and Populations</p> <p>Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.</p>	<p>Isolation of DNA from available plant material such as spinach, green pea seeds, papaya etc.</p> <p>Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organisms.</p>		
Nov	13		<p>Chapter-14: Ecosystem</p> <p>Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy; nutrient cycles</p>	<p>2. Collect and study soil from atleast two different sites and study them for texture, moisture content, pH and water holding capacity. Correlate with the kinds of plants found in them.</p> <p>3. To study two</p>		

		<p>(carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).</p> <p>Chapter-15: Biodiversity and its Conservation</p> <p>Biodiversity - Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.</p>	<p>plants and two animals found in xeric conditions. Comment upon their morphological adaptations.</p> <p>4. To study two plants and two animals found in aquatic conditions. Comment upon their morphological adaptations.</p>		
Dec	20	<p>Revision of complete syllabus</p> <p>Pre-Board Examination</p>			
Jan	20	<p>Discussion & Pre-board, Sample Question papers and CBSE model question paper discussion.</p>			

SUBJECT: MATHEMATICS**TEXT BOOKS**

: Mathematics Part I and Part II-Text Book for class XII (NCERT)
Laboratory Manual Mathematics – XII (Arihant Prakashan)

REFERENCE BOOKS

: 1. Exemplar (Maths) Problems Class XII (NCERT)
 2. Mathematics R.D Sharma Part I & II, Class XII

MONTH	W.D.	CHAPTER	Concepts/Terms/ Learning Objects	Activity	Project / Practical Work	Smart Board
APRIL	23	Unit I: Relations and Functions	1.Relations and Functions Types of relations: reflexive, symmetric, transitive and equivalence relations. Composition of function and invertible function. One to one and onto functions. Binary operation 2.Inverse Trigonometric Functions Definition, range, domain, principal value branch. Properties of inverse trigonometric function.	1. To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \parallel m\}$ is an equivalence relation. 2. To draw the graph of $\sin^{-1}x$, using the graph of $\sin x$ and demonstrate the concept of mirror reflection (about the line $y = x$). 3. To demonstrate a function which is not one-one but is onto.		Video content, Worksheet, quiz
		Unit II: Algebra	1. Matrices Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non commutativity of multiplication of matrices. Invertible matrices.			
MAY	04	Unit II: Algebra	2. Determinants Determinant of a square matrix (up to 3×3 matrices), Minors, co-factors.. Applications of determinants in finding the area of a triangle.	1. To sketch the graphs of a^x and $\log_a x$, $a > 0$, $a \neq 1$ and to examine that they are mirror images of each other. 2. To establish a relationship between common logarithm (to the base 10)	To minimize the cost of the food, meeting the dietary requirements of the	Video content, Worksheet, quiz

				and natural logarithm (to the base e) of the number x.	staple food of the adolescent students of your school.	
JUNE	21	Unit II: Algebra	Determinants contd: Adjoint and inverse of a square matrix solutions, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.	<ol style="list-style-type: none"> To verify Rolle's Theorem. To verify Lagrange's Mean Value Theorem. To find analytically the limit of a function $f(x)$ at $x = c$ and also to check the continuity of the function at that point. 		Video content, Worksheet, quiz
		Unit III: Calculus	1. Continuity and Differentiability Continuity and differentiability, derivative of composite functions, chain rule, derivatives of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Mean value theorem.			
JULY	23	Unit III: Calculus	2. Applications of Derivatives Applications of derivatives: Increasing/decreasing functions, tangents and normals, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Tangents and normal. Approximation. Simple problems (that illustrate basic principles	<ol style="list-style-type: none"> To understand the concepts of decreasing and increasing functions. To understand the concepts of absolute maximum and minimum values of a function in a given closed interval through its graph. 	Estimation of the population of a particular region/country under the assumptions	Video content, Worksheet, quiz

			and understanding of the subject as well as real- life situations).		that there is no migration in or out of the existing population in a particular year
AUGUST	23	Unit III: Calculus	<p>Integrals : 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.</p> $\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}}$ $\int \frac{px + q}{ax^2 + bx + c} dx, \int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx, \int \frac{dx}{\sqrt{a^2 \pm x^2}}, \int \frac{dx}{\sqrt{x^2 - a^2}}$ <p>Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.</p> <p><u>3.Applications of the Integrals</u> Applications in finding the area under simple curves, especially lines, circles/parabolas/ellipses (in standard form only).</p>	<p>1. To find the time when the area of a rectangle of given dimensions become maximum, if the length is decreasing and the breadth is increasing at given rates.</p> <p>2. To evaluate the definite integral $\int_a^b \sqrt{1-x^2} dx$ as the limit of a sum and verify it by actual integration.</p>	Video content, Worksheet, quiz
SEPTEMBER	13	Unit III: Calculus	Differential equation continued		
			Revision for Half Yearly Examination. Half Yearly Examination. Discussion of Half Yearly question papers		Video content, Worksheet, quiz
		Unit IV: Vectors	4.Differential Equations Definition, order and degree,	<u>1.</u>	

		and Three-Dimensional Geometry	<p>general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree $\frac{dy}{dx} = f\left(\frac{y}{x}\right)$ type. Solutions of linear differential equation of the type: $\frac{dy}{dx} + py = q$, where p and q are functions of x or constants.</p>	<p>To verify geometrically that $\vec{c} \times (\vec{a} + \vec{b}) = \vec{c} \times \vec{a} + \vec{c} \times \vec{b}$</p> <p>2.To verify that angle in a semi-circle is a right angle, using vector method.</p>	
OCTOBER	12	Unit IV: Vectors and Three-Dimensional Geometry	<p>1.Vectors Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors) Position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.</p> <p>1.Three - dimensional Geometry Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Distance of a point from a</p>	<p>1. To demonstrate the equation of a plane in normal form.</p> <p>2. To measure the shortest distance between two skew lines and verify it analytically</p>	<p>Finding the coordinates of different points identified in your classroom using the concepts of three dimensional geometry and also find the distances between the identified points</p> <p>Video content, Worksheet, quiz</p>

			plane. Angle between two lines and two planes and a line and a plane.			
NOVEMBER	24	<p>Unit V: Linear Programming</p> <p>Unit VI: Probability</p>	<p>1. Linear Programming Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems. graphical method of solution for problems in two variables, feasible and infeasible regions (bounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).</p> <p>1. Probability Conditional probability, multiplication theorem on probability, independent events, total probability, Baye's theorem, Random variable and its probability distribution. Bernoulli trials and binomial distribution.</p>	<ol style="list-style-type: none"> To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice. To find the distance of given point (in space) from a plane (passing through three non-collinear points) by actual measurement and also analytically. 	<p>Formation of differential equation to explain the process of cooling of boiled water to a given room temperature.</p>	<p>Video content, Worksheet, quiz</p>
DECEMBER	24		<ul style="list-style-type: none"> Revision for Pre-Board Examination. Pre-Board Examination 2022-2023 Discussion of Pre-Board Question-papers Discussion of CBSE Sample Papers 			<p>Video content, Worksheet, quiz</p>

SUBJECT: COMPUTER SCIENCE**Text Book:** 1. NCERT

2. Computer Science with Python (Author Name: Preeti Arora, Publication: Sultan Chand)

Month	W. D.	Chapter/Unit/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical Work	Research Work Blended Learning
	NOP					
April	21	<p>Unit 3: Database Management</p> <p>Database concepts: introduction to database concepts and its need</p> <p>Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key)</p> <p>Structured Query Language: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical)</p>	<p>DBMS,RDBMS,Primary Key,Foreign Key,alternate key,candidate key, Degree,cardinality, DDL,DML, DCL</p>	<p>1. Making a PPT on the topic Sikkim - paradise on earth integrated with computer Science .How is Art,nature and computer Science related to Sikkim.</p> <p>2. Make a chart paper to show the relationship of the table. Take one example and show the process of creating table.</p>	<p>Students will do the practical of writing queries to create table, insert data and delete data of a table in SQL interface.</p>	<p>By using database connectivity with mysql and python. To connect database with python project.</p>
May	06	<p>Database Management (continued): aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join</p> <p>Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity applications .</p>	<p>Like, update, Delete commands</p> <p>Join, equi-join and natural join</p>		<p>Students will do the practical of SQL queries as well as Python programs to merge programming file with database.</p> <p>Project: Write a program in Python where students will enter their choice of Foreign language and store this choice in database using following fields: Name of the students Admission number Class Section Choice of Foreign language</p>	<p>* By using Sql queris of having clause, joins: cartesian product on two tables, equi-join and natural join Students learns many more about Sql Queries.</p>
June	15	<p>Unit 1: Computational Thinking and Programming – 2</p> <p>Revision of Python topics covered in Class XI.</p> <p>Functions: types of function (built-in functions, functions defined in module, user defined functions)</p> <p>creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)</p>	<p>Built in Function and User Define Function, Local and Global Variable</p>	NO	<p>Students will do the practical of writing program in Python interface.</p>	<p>- HOTs / Long Answers Questions</p>
July	24	<p>Unit 1: Computational Thinking and Programming – 2 (continued): Exception Handling: Introduction, handling exceptions using try-except-finally blocks.</p> <p>Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths</p>	<p>File opening modes</p>	No	<p>Students will do the practical of writing programs in Python exception handling and interface using file features. Python Programming on the</p>	<p>- HOTs / Long Answers Questions</p>

		<p>Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause</p> <p>writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file</p> <p>Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file</p>			basic operations on text file and binary file(read,write and append)	
Aug	24	<p>Unit 1: Computational Thinking and Programming – 2 (continued):</p> <p>CSV file: import csv module, open / close csv file, write into a csv file using csv.writerow() and read from a csv file using csv.reader()</p> <p>Python libraries: creating python libraries</p> <p>Data Structure: Stack, operations on stack (push & pop), Implementation of stack using list.</p> <p>Introduction to queue, operations on queue (enqueue, dequeue, is empty, peek, is full), implementation of queue using list.</p>	<p>CSV file ,Stack, Queue, PUSH ,POP, Overflow and Underflow</p>		<p>Students will do the practical of writing programs in Python interface using import statement and stack operations.</p>	- HOTs / Long Answers Questions
Sept	23	<p>Revision Class for Interface of python with an SQL database: connecting SQL with Python.</p> <p>Project work Assigned only.</p> <p>REVISION FOR THE TERM-I EXAMINATION</p>	<ol style="list-style-type: none"> 1. Making Abstract on project 2. Introduction 3. Table of contents 4. Certificate 	<p>Making PPT on cyber Security.How it is most important in our financial life.</p>	<p>Suggested Practical Question:</p> <ol style="list-style-type: none"> 1. Write a Program to connect with database and store record of employee and display records. 2. Write a Program to connect with database and search employee number in table employee and display record, if empno not found display appropriate message. 3. Write a Program to connect with database and update the employee record of entered empno. 	
Oct	21	<p>Unit 2: Computer Networks:</p> <p>Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)</p> <p>Data communication terminologies: concept of communication, components of data communication (sender, receiver, message, communication media, protocols), measuring capacity.</p> <p>of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching).</p> <p>Unit 2: Computer Networks (continued):</p> <p>Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Microwaves, Infrared waves)</p> <p>Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI</p>	<p>ARPANET, IP address, Switching Techniques.</p>	<p>Make a model of data communication using cartoons and other materials. Use ball to show the transfer of data from one place to another place.</p>	<p>Internal Practical Exam to be conducted. for practice</p>	

		card) Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)				
Nov	16	Unit 2: Computer Networks (continued): Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP, wireless/mobile communication protocol such as GSM, GPRS and WLL Mobile telecommunication technologies: 1G, 2G, 3G, 4G and 5G Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting REVISION STARTS FROM 2nd WEEK OF NOV		Make a video on Network Protocol. Explain about Network Protocol using some example. You can use any model also.		
Dec	22	PRE-BOARD I TAKES PLACE 1st Pre-Board Examination & Revision. Remedial classes & Revision work			-	
Jan	17	2nd Pre-Board Examination & Revision. Remedial classes & Revision work Teaching - Test & Re-Teaching - Re-Test on the areas in which students done mistakes frequently as well as MLL. Discussion on the Past years CBSE question papers and making of model answer of the same question in the class room.				
Feb	22	REVISION USING SAMPLE PAPERS				
March	17					

SUBJECT : ECONOMICS

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

Reference book:- 1, Macroeconomics by T, R, Jain (by V, K, Global Publication) 2, Economic Development and Indian Economy by T, R, Jain (by V, K, Global Publication) 3,

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21/08	<p>Unit 1: National Income and Related Aggregates</p> <p>National Income and Related Aggregates : What is Macroeconomics? Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation, Circular flow of income (two sector model); and Welfare Methods of calculating National Income – Value Added or Product method, Expenditure method, Income method, Aggregates related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost Real and Nominal GDP, GDP</p>	<p>Gross Domestic Product (GDP) –</p> <p>Gross National Product (GNP) –</p> <p>Net National Product (NNP)</p> <p>National Income (NI),</p> <p>Personal Income (PI) –</p> <p>Disposable Income (DI)</p> <p>Consumption Expenditure –</p> <p>Investment Expenditure</p> <p>Government Expenditure</p> <p>Net Exports (X-M)</p>	<p>Documentary filmmaking: National income and related aggregates can be explored through documentary filmmaking, Students can create short documentaries that explore the impact of globalization on different communities or examine the role of government policies in shaping the economy</p>	<p>Collect data on the economic performance of your chosen country, You can use data from government sources, international organizations such as the World Bank or the International Monetary Fund, or other reliable sources, Make sure you use data from a recent year or years to ensure the relevance of your analysis,</p>	<p>Blended learning can help to improve the overall effectiveness and efficiency of teaching and learning national income and related aggregates by combining the benefits of traditional classroom instruction with online learning, blended learning can provide a more flexible and adaptive learning experience that meets the diverse needs of students,</p>
May	06	<p>Unit 2: Money and Banking Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt, Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement</p>	<p>Money Supply Currency:, Central Bank Reserve Requirements Fractional Reserve Banking Monetary Policy: Interest Rates, Inflation: Deflation Commercial Banks Credit Creation</p>	<p>Create art projects that explore the history of money: Students can create artwork that explores the history of money, such as creating paintings or sculptures that depict the evolution of coins and currency,</p>	<p>The role of banking in economic development: Banks play a critical role in providing access to credit and capital for businesses and individuals, which can spur economic</p>	<p>The impact of central bank policies on the economy: This could involve researching how central banks use interest rates, quantitative easing, and other policies to control the money supply and stabilize the economy,</p>

					growth and development, You could examine how banking systems differ across countries and regions, and how these differences impact economic growth and development,	Students could explore the historical context of central bank policies, as well as analyze recent examples like the Federal Reserve's response to the COVID-19 pandemic,
June	19	<p>UNIT: 3 Determination of Income and Employment</p> <p>Aggregate demand and its components, Propensity to consume and propensity to save (average and marginal), Short-run equilibrium output; investment multiplier and its mechanism , Meaning of full employment and involuntary unemployment, Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply</p>	<p>Disposable Income -, Consumption, Investment -, Government Spending -</p> <p>Aggregate Demand</p> <p>Aggregate Supply, Inflation, Unemployment -, Multiplier Effect</p> <p>Fiscal Policy</p> <p>Monetary Policy -</p> <p>Business Cycle</p>	<p>Visual Storytelling: Students can create visual stories using different art forms such as drawing, painting, or photography, that demonstrate the various ways income and employment affect people's lives, This will not only help them understand these concepts but also develop their storytelling skills,</p>	<p>Define the circular flow of income and explain its components (households, firms, government, and the rest of the world)</p> <p>Explain how income and employment are generated in this model</p>	<p>The relationship between government policies and income inequality: Analyze how different government policies (e.g, taxation, welfare programs) affect income inequality, You can compare different countries or time periods to see how changes in policy have affected income inequality over time,</p>
July	24	<p>Part B: Indian Economic Development Unit 1: Development Experience (1947-90) and Economic Reforms since 1991: A brief introduction of the state of Indian economy on the eve of independence, Indian economic system and common goals of Five Year Plans, Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), Industry (IPR 1956; SSI – role & importance) and foreign trade, Economic Reforms since 1991: Features and appraisals of liberalisation, globalisation</p>	<p>Nehruvian socialism</p> <p>Five-Year Plans:, License Raj:, Green Revolution:, Import substitution</p> <p>industrialization</p> <p>Liberalization:, Privatization, Globalization:, Foreign Direct Investment (FDI):</p>	<p>Art and globalization: The period of economic reforms since 1991 saw India opening up to the world and becoming more integrated into the global economy, This can be a topic of study for art education as well, by exploring how Indian art and artists have responded to this process of globalization, For example, you could analyze the work of contemporary Indian artists who are working in a</p>	<p>Describe the economic policies implemented by India during this period, including the Five-Year Plans and the Green Revolution</p> <p>Discuss the successes and failures of these policies, and their impact on India's economy</p> <p>Analyse the</p>	<p>Analysis of the Green Revolution in India: The Green Revolution was a period of agricultural growth in India that started in the 1960s, This research topic can explore the factors that led to the success of the Green Revolution, its impact on the Indian economy, and the challenges it faced,</p>

		and privatisation (LPG policy); Concepts of demonetization and GST		global context, or those who are exploring themes of cultural identity and globalization in their work,	role of the public sector and the private sector in India's economic development during this period	
Aug	24	Unit 2: Current challenges facing Indian Economy Human Capital Formation: How people become resource; Role of human capital in economic development; Growth of Education Sector in India Rural development: Key issues - credit and marketing - role of cooperatives; agricultural diversification; alternative farming - organic farming Employment: Growth and changes in work force participation rate in formal and informal sectors; problems and policies Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming	Inflation:, Unemployment, Income inequality: Slow economic growth:, Agricultural distress: Fiscal deficit:, Banking sector crisis: Digital divide Environmental degradation: Geopolitical tensions	Infographic design: Ask students to create an infographic that visually represents the current challenges facing the Indian economy, This can include graphs, charts, and other visual representations of data, The use of color, images, and other design elements can help students convey complex information in an engaging and accessible way,	Unemployment: Unemployment is a major challenge facing the Indian economy, With a growing population and limited job opportunities, the unemployment rate in India is very high, The COVID-19 pandemic has worsened this situation, with many people losing their jobs and businesses shutting down,	COVID-19 Pandemic: The outbreak of the COVID-19 pandemic has had a severe impact on the Indian economy, You could explore the various challenges faced by different sectors, such as the impact on small businesses, job losses, supply chain disruptions, and the overall economic slowdown,
Sept	23	REVISION FOR THE TERM-I EXAMINATION				
Oct	20	Unit 4: Government Budget and the Economy Government budget - meaning, objectives and components, Classification of receipts - revenue receipts and capital receipts; Classification of expenditure – revenue expenditure and capital expenditure, Balanced, Surplus and Deficit Budget – measures of government deficit,	Government Budget Fiscal Policy: Monetary Policy:, Deficit: Debt:, Inflation: Gross Domestic Product (GDP, Taxation, Public Goods: Crowding Out: Multiplier Effect:, Automatic Stabilizers	Infographics: Creating infographics that visually represent data related to government budgets and the economy is a great way to incorporate art into this topic, Students can create posters or digital graphics that illustrate the impact of government spending on the economy,	PPT on budget of our country for FY-2023-24	The role of government spending in stimulating economic growth: Analyze the historical data to investigate how government spending affects economic growth, Are there any specific areas of government spending that have a more significant impact on the economy

						than others?
Nov	16	<p>UNIT 5 Balance of Payments Balance of payments account - meaning and components; Balance of payments – Surplus and Deficit Foreign exchange rate - meaning of fixed and flexible rates and managed floating, Determination of exchange rate in a free market, Merits and demerits of flexible and fixed exchange rate, Managed Floating exchange rate system</p> <p>Unit 8: Development Experience of India: A comparison with neighbours India and Pakistan India and China Issues: economic growth, population, sectoral development and other Human Development Indicators</p>	<p>Current Account: Capital Account: Financial Account: direct investment, portfolio investment, and other investments, Trade Balance: Current Account Balance: Capital Account Balance: Financial Account Balance: Balance of Payments Surplus/Deficit:</p> <p>Demographic profile liberalization, and globalization Human Development Indicators GLF proletarian Cultural campaign</p>	<p>Infographics: Creating infographics that visually represent data related to Balance of payments</p> <p>Infographics: Creating infographics that visually represent data related to India China and Pakistan economic conditions and development</p>	<p>Make a project on balance of payments between India and rest of the world</p> <p>Examining the social development of India, Pakistan, and China and comparing the quality of life indicators such as literacy rates, healthcare access, and education levels, This could involve conducting surveys, analyzing existing data sets, and interviewing experts in the field,</p>	<p>N,A,</p> <p>Evaluate the political developments in India, Pakistan, and China, including the role of democracy</p>
Dec	22					
Jan	17					
Feb	24					

SUBJECT : BUSINESS STUDIES

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

2. V.K Publication

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21	<p>NATURE AND SIGNIFICANCE OF MANAGEMENT</p> <ul style="list-style-type: none"> • Modern Concept of management • Meaning of management • Characteristics • Objectives of management • Importance of management • Nature of management • Levels of management • Functions of management • Coordination <p>PRINCIPLES OF MANAGEMENT</p> <ul style="list-style-type: none"> • Meaning of principles of management • Features • Importance of • Management principles • Fayol’s principles of management • Scientific management developed by F.W. Taylor • Comparison between Fayol and Taylor 	<p>Effectiveness & Efficiency.</p> <p>management as a science, art, and profession.</p> <p>Levels of management.</p> <p>Coordination.</p> <p>Techniques of scientific management.</p> <p>Principles of management.</p>	<p>PPT on the topic of Principle of Management.</p>	<p>Project on evaluation of management principle</p> <p>Project on work of F. W. Taylor.</p>	<p>Draw the chart of level of management of any public limited company.</p>
May	06	<p>BUSINESS ENVIRONMENT</p> <ul style="list-style-type: none"> • Meaning of Business environment • Features / Nature of business environment • Importance of business environment • Dimensions of business environment • The features of new economic policy 	<p>Business Environment</p> <p>Demonetization</p> <p>Liberalization, Privatization & globalization.</p>	<ul style="list-style-type: none"> • Preparation of Collage on Dimensions of business environment 	<p>Project on parameters of business environment.</p>	<p>Find out the Environment and its factors which effects the business.</p>
June	19	<p>PLANNING</p> <ul style="list-style-type: none"> • Meaning of planning • Features of planning • Importance of planning • Limitations of planning 	<p>Single and standing plans.</p> <p>Budget & programme.</p>	<p>PPT on the annual Budget of the session 2023-24</p>	<p>Project on planning commission of India.</p>	<p>Find out the organizational structure and the list of the</p>

		<ul style="list-style-type: none"> • Planning process • Plan • Types of plans ORGANIZING <ul style="list-style-type: none"> • Concept of organizing • Features of organizing • Organizing process • Significance/ importance of organizing. 	Organizing structure Functional & divisional structure. Formal & informal organization. Delegation & Decentralization.			directors / managers and their working style.
July	24	ORGANIZING <ul style="list-style-type: none"> • Organizational structure • Formal and informal organization • Delegation of authority • Centralization and decentralization STAFFING <ul style="list-style-type: none"> • Concept • Importance of staffing • Staffing and human resource management • Staffing process • Components/ Elements/ • Aspects of staffing • Methods of training: on the job and off the job 	Specialized duties of management. Recruitment and its sources. External and internal sources of recruitment. On the job and off the job training. Induction training, vestibule training, apprenticeship training and internship training.	Poster Making of organizational chart of TISCO	Project on Staffing process of Infosys	
Aug	24	DIRECTING <ul style="list-style-type: none"> • Meaning and • Introduction • Features of Directing • Importance of directing • Elements of directing • Supervision • Motivation • Leadership • Communication CONTROLLING <ul style="list-style-type: none"> • Concept • Nature of controlling • Importance of • controlling • Relationship between • planning and controlling • Controlling process 	Motivation Maslow's Hierarchy of need. Financial & nonfinancial incentives. Leadership and its various styles. Formal & informal communication. Barriers of communication. Controlling and its process.	Tabular chart on Maslow's Hierarchy of need.	Project on the leadership style of the existing Prime Minister of India.	Collection of data regarding supervision, monitoring, and motivation of employee of any private Organisation.
Sept	23	PART- B FINANCIAL MANAGEMENT <ul style="list-style-type: none"> • Meaning and characteristics of financial management 	Financial management. Investment, financing, and dividend decision. Capital structure. Fixed & working capital. Financial market.	Poster Making on different types of shares/debentures and their relative significance.	Project on the Functioning of Stock Exchange of India.	Collection of listed and unlisted co.in the stock exchange of India and their

		<ul style="list-style-type: none"> • Objectives of financial management • Financial decisions • Financial planning • Capital structure. • Fixed and working capital. • Working capital (Short term investment decision) FINANCIAL MARKET <ul style="list-style-type: none"> • Meaning of Financial market • Features of financial market • Money Market • Tools of money market • Capital market. • Tools of capital market • Stock Exchange 	<p>Capital market & money market. Call money, treasury bill, trade bill. Primary market and secondary market. Stock exchange. SEBI</p>			implications.
Oct	20	MARKETING MANAGEMENT <ul style="list-style-type: none"> • Meaning of marketing management • Marketing • What can be marketed? • Marketing and selling • Marketing management philosophy • Functions of marketing 	<p>Marketing philosophy. Marketing mix. Branding, labeling, and packaging. Physical distribution and its channels. Promotion mix. Advertising. Sales promotion Public relations.</p>	Poster Making on Marketing Mix and their relative significance.	Project on marketing of any product.	Find out the major products of any Co. and Their marketing strategy.
Nov	16	CONSUMER PROTECTION <ul style="list-style-type: none"> • Importance of consumer protection • Legal protection to consumer • Consumer rights • Consumers responsibilities • Redressal agencies under the consumer • Protection Act 1986 and their jurisdiction. • Role of consumer organization and NGOs 	<p>Consumer protection. Consumer Protection Act. Redressal machinery Remedies. NGOs</p>	Poster Making on consumer Rights & Liabilities given in the Consumer Protection Act.	Project on Roles of different NGOs for the protection of consumer rights.	Find out the detail information for different act which are related to the protection of consumers
Dec	22	Revision				
Jan	17	Revision				
Feb	22					

SUBJECT : ACCOUNTANCY

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

2. DOUBLE ENTRY BOOK KEEPING

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21	ACCOUNTING FOR PARTNERSHIP FIRMS ---- FUNDAMENTALS <ul style="list-style-type: none"> Preparation of profit and loss appropriation account Partners capital accounts under fixed and fluctuating method Adjustment regarding interest on partner's loan Interest on partners drawings Interest on partners capital Partners salaries and commission Past Adjustment Guarantee of prof 	Partnership deed Provisions of partnership Act 1932 Appropriation of Profit Charge against profit Fixed capital method Fluctuating capital method	Preparation of Flow chart to represent partnership, partners etc.	Project on the partnership of Go pro and Red bull	Collect all the information about the two companies and their products and terms and conditions of partnership etc.
May	06	GOODWILL: NATURE AND VALUATION MEANING OF GOODWILL <ul style="list-style-type: none"> Factors affecting for valuing goodwill Need for valuing Goodwill Classification of goodwill Methods for valuing goodwill: Average profit method: Simple and weighted Super profit method Capitalization method: Capitalization of average profit and capitalization of super profit.	Favorable location Efficiency of management. Purchased Goodwill. Self-Generated Goodwill. Inherent Goodwill.	PPT on the topic- Valuation of Goodwill	Project on valuation on goodwill	Find out the various methods of valuation of Goodwill and the formulas to calculate.
June	19	CHANGE IN PROFIT SHARING RATIO AMONG THE EXISTING PARTNERS <ul style="list-style-type: none"> Concept of reconstitution of partnership Sacrificing ratio and gaining ratio Accounting treatment of goodwill, Reserves, Accumulated profit, Revaluation of assets and liabilities Preparation of balance sheet of the reconstituted firm 	Sacrificing ratio. Gaining ratio. Accumulated profit & reserves. Revaluation & reassessment. Accounting standard 26	<ul style="list-style-type: none"> Tabular /Graphical presentation on Profit Distribution. 	Project on the effect of change in profit sharing ratio of an imaginary partner	Make a imaginary partnership firm with some accounting information regarding reserves. Accumulated profits, revaluation of assets and liabilities etc and change the profit-sharing ratio and prepare the

		<p>ADMISSION OF A PARTNER Calculation of new and sacrificing ratio</p> <ul style="list-style-type: none"> ● Accounting treatment of Goodwill in case of admission of a partner as per AS – 26 ● Preparation of Revaluation account, Partner’s capital account and Balance sheet ● Adjustment of Capital: When total capital is known; when total capital in unknown and hidden goodwill 	<p>Adjustment of capital.</p> <p>Sacrificing ratio.</p> <p>Calculation of new ratio.</p>		<p>ship firm.</p> <p>Project on effect of admission of a partner in case of imaginary partnership firm.</p>	<p>accounting treatment for that.</p> <p>Make a imaginary partnership firm with some accounting information regarding reserves. Accumulated profits, revaluation of assets and liabilities etc. then admit a new partner with different terms and condition and prepare all the necessary accounting treatment for that.</p>
July	24	<p>RETIREMENT OF A PARTNER</p> <ul style="list-style-type: none"> ● Calculation of new and gaining ratio ● Accounting treatment of goodwill in case of retirement of a partner. ● Preparation of Revaluation account, Partner’s capital account and Balance sheet ● Adjustment of Capital : (i) When total capital is of the new firm is known; (ii) when total capital of the remaining partners is to be in new profit sharing ratio; (iii) When total capital is of the new firm is equal to total capital before retirement; (iv) When retiring partner is to be paid through amount brought by he remaining partners in a manner to make their capital proportionate to their new profit sharing ratio and also leave a desired cash balance. <p>DEATH OF A PARTNER</p> <ul style="list-style-type: none"> ● Computation of amount due to a deceased partner ● Calculation of profit on he basis of time and sales ● Preparation of deceased partner’s capital account. ● Preparation of executor’s account 	<p>Gaining ratio.</p> <p>Treatment of goodwill in case of retirement of a partner.</p> <p>Treatment of reserve & accumulated profit & loss.</p> <p>Partners loan account.</p> <p>Settlement of loan of retiring partner.</p> <p>Executors account</p> <p>Methods of calculation of shares of profit/loss of deceased partner.</p>	<p>Data infographic presentation of a firm</p>	<p>Project on effect of retirement of a partner in case of imaginary partnership firm.</p>	<p>Make a imaginary partnership firm with some accounting information regarding reserves. Accumulated profits, revaluation of assets and liabilities etc. then one partner will retire with different terms and condition and prepare all the necessary accounting treatment for that.</p>
Aug	24	<p>DISSOLUTION OF A PARTNERSHIP FIRM</p> <ul style="list-style-type: none"> ● Accounting entries for 	<p>Realization account.</p> <p>Dissolution of</p>	<ul style="list-style-type: none"> ● Flow chart on Types of Shares 	<p>Project on the acts</p>	<p>Find out all the information for the necessary acts</p>

		<p>dissolution of firm</p> <ul style="list-style-type: none"> ● Preparation of dissolution or realization account, partners capital account and bank account. <p>PART- B COMPANY ACCOUNTS ACCOUNTING FOR SHARE CAPITAL</p> <ul style="list-style-type: none"> ● Accounting treatment of issue of share at par and premium ● Under subscription of shares ● Over subscription of shares ● Issue of shares for consideration other than cash ● Forfeiture and re-issue of shares 	<p>partnership and partnership form. Dissolution by court. Firm's debt and private debt. One person company Private Company Public Company Equity shares Preference shares Consideration other than cash Over-subscription Under-subscription Calls in arrears. Calls in advance. Pro-rata allotment. Forfeiture and reissue of shares</p>		<p>regarding the dissolution of partnership firm. Project on a Public Ltd. Co. regarding their final account.</p>	<p>regarding dissolution of partnership firm and make the project. Find out all the information regarding the financial transaction of the year 2022-23 of any limited company and prepare the financial statements.</p>
Sept	23	<p>ISSUE OF DEBENTURES</p> <ul style="list-style-type: none"> ● Issue of debentures for cash at par, premium and discount from the point of view of redemption ● Issue of debentures for consideration other than cash ● Issue of debentures as collateral security ● Accounting treatment of interest on debentures ● Writing off discount or loss on issue of debentures <p>REDEMPTION OF DEBENTURES</p> <ul style="list-style-type: none"> ● Accounting treatment of redemption of debentures: Journal entries ● Methods of redemption of debenture. ● Lump-sum method. ● Conversion method. 	<p>Debenture Redeemable debenture Convertible debenture Consideration other than cash Collateral securities Debenture redemption reserve Debenture redemption investment Lump-sum method Conversion method</p>	<ul style="list-style-type: none"> ● Flow chart on Types of Debentures 	<p>Project on the Indian Public Ltd. Co. that can issue debentures</p>	<p>Make a list of the companies who are issuing debentures in the Indian market. List the types of debentures and process of issue and redemption of debentures of any one company.</p>
Oct	20	<p>PART - C ANALYSIS OF FINANCIAL STATEMENTS</p> <p>Format of balance sheet. Heads and contents of balance sheet Preparation of comparative and common size income statement. Preparation of comparative and common size balance sheet</p>	<p>Vertical analysis Horizontal analysis Liquidity ratio Solvency ratio Profitability ratio Working capital</p>	<p>PPT on a financial statement analysis of a company</p>	<p>Project on the comparative income statement and balance sheet of any public</p>	<p>Find out the information of income statement and balance sheet of any public ltd. And prepare a comparative and common size Income statement and comparative balance sheet.</p>

		ACCOUNTING RATIOS Liquidity Ratios: Current ratio; Liquid ratio ● Solvency ratios: Debt - equity ratio; Total assets to debt ratio; Proprietary ratio; Interest coverage ratio ● Activity ratios: Inventory turnover ratio; Trade receivable ratio; Trade payable ratio; working capital turnover ratio ● Profitability ratios: Gross profit ratio; Net profit ratio; Operating ratio; operating profit ratio; return on investment.	Capital employed. Turnover ratio Average inventory EBIT EBT Trade Receivable Trade Payable		ltd. Co. Project on the ratio analysis for any sole proprietorship business from your locality.	Find out the information regarding the transaction of operating activities, investing activities and Financing activities and prepare a cash flow from that.
Nov	16	CASH FLOW STATEMENT ● Computation of cash flow from different activates: ● Cash flow from operating activities ● Cash flow from investing activities ● Cash flow from financing activities ● Preparation of cash flow statement.	Direct method Indirect method Operating activities Non-operating activities Investing activities Financing activities. Accounting standard -3 revised.	PPT on a financial investment and return.	Project on Cash flow of any public Ltd. Comprehensive and specific projects	Make an imaginary sole proprietorship business and list out the financial transactions and prepare the final accounts and then find out the different ratio based on the financial information.
Dec	22	Revision				
Jan	17	Revision				
Feb	22					

SUBJECT: PHYSICAL EDUCATION

Text Book: ESSENTIALS OF PHYSICAL EDUCATION **By** Dr. Loveleena Nadir and Dr. Anil Nadir

PUBLICATION: SULTAN CHAND

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	20	<p><u>CH - 1 = MANAGEMENT OF SPORTING EVENTS</u> Functions of sports events Management (Planning, Organising, Staffing, Directing & Controlling)</p> <p>Various Committees & their responsibilities (Pre, during & post)</p> <p>- Fixtures and its procedures – Knock-out (Bye & Seeding) & League (Staircase & Cyclic)</p> <p>- Intramural and Extramural – Meaning, Objectives and its Significance.</p> <p>Community Sports – Purpose and benefits.</p> <p><u>CH - 2 = Children & women in Sports</u></p> <p>- Exercise guidelines of WHO for different age groups</p> <p>- Common postural deformities-knock knees, flat foot, round shoulders,</p> <p>- Lordosis, Kyphosis, Scoliosis and bowlegs and their respective corrective measures.</p> <p>- Women participation in Sports – Physical, Psychological and Social benefits</p> <p>- Special consideration (menarche and menstrual dysfunction)</p> <p>- Female athlete triad (osteoporosis, amenorrhea, eating disorders)</p>	<ul style="list-style-type: none"> • Planning, Organising, Staffing, Directing & Controlling. 	Poster Making of various committees and fixtures.	Diagram making of Planning and fixtures.	NA
May	06	<p><u>CH - 3 = Yoga as Preventive measure for lifestyle Disease</u></p> <p>- Procedure, Benefits & Contraindication: Obesity Diabetes Asthma</p>	Procedure, Benefits & contraindication of Obesity, diabetes, Asthma and Hypertension.	Yoga chart making by students	Practical file making.	NA

		Hypertension Back Pain and Arthritis				
June	19	<p><u>CH - 4 =</u> <u>Physical Education & Sports for CWSN (children with special Needs – Divyang)</u></p> <ul style="list-style-type: none"> - Organizations promoting Disability Sports (Special Olympics; Paralympics. Deaflympics). - Concept of Classification and Divisioning in Sports. - Concept of Inclusion in sports, its need, and Implementation. - Advantages of Physical Activities for children with special needs. - Strategies to make Physical Activities assessable for children with special. Needs 	Special Olympics, Paralympics, Deaflympics	Chart making of all Olympics.	Practical file making.	NA
July	23	<p><u>CH - 5 =</u> <u>SPORTS & NUTRITION</u></p> <ul style="list-style-type: none"> - Concept of Balanced Diet and Nutrition - Macro and Micronutrients: Food sources and functions - Nutritive and Non- Nutritive Components of Diet - Eating for Weight control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance and Food Myths - Importance of Diet in Sports-Pre, During and Post competition Requirements <p><u>CH - 6 =</u> <u>Test & Measurement in Sports</u></p> <ul style="list-style-type: none"> - Fitness Test – SAI Khelo India Fitness Test in school [Age group 5-8 yrs./ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test; Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit & Reach flexibility. test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls)]. - Measurement of Cardio-Vascular Fitness – Harvard Step Test – Duration of the Exercise in Seconds x100/5.5 X Pulse count of 1-1.5 Min after Exercise; - Computing Basal Metabolic Rate (BMR). - Rikli & Jones - Senior Citizen Fitness Test - Chair Stand Test for lower body 	<p>Concept of balanced diet,</p> <p>Macro and Micro nutrients</p> <p>Nutritive and Non-Nutritive components.</p> <p>Fitness test – SAI KHELO INDIA</p> <p>BMR</p> <p>SENIOR CITIZEN FITNESS TEST</p>	Making of diet chart of different age group.	Practical file making.	NA

		<p>strength, Arm Curl Test for upper body strength, Chair Sit & Reach Test for lower body flexibility, Back Scratch Test for upper body flexibility, Eight Foot Up & Go Test for agility, Six Minute Walk Test for Aerobic Endurance.</p> <ul style="list-style-type: none"> - Johnsen – Methney Test of Motor Educability (Front Roll, Roll, Jumping Half-Turn, Jumping full turn) 				
Aug	24	<p><u>CH - 7 =</u> <u>Physiology & Injuries in Sports</u></p> <ul style="list-style-type: none"> - Physiological factors determining components of Physical Fitness - Effect of exercise on Muscular System - Effect of exercise on Cardio-Respiratory System - Physiological changes due to ageing - Sports injuries: Classification (Soft Tissue Injuries – Abrasion, Contusion, Laceration, Incision, Sprain & Strain; Bone & Joint Injuries - Dislocation, Fractures - Green Stick, Comminuted, Transverse, Oblique & Impacted) 	<p>Components of physical fitness,</p> <p>Effect of exercise on MUSCULAR SYSTEM, CARDIO-RESPIRATORY SYSTEM</p> <p>SPORTS INJURIES</p>	Making of sports injuries Chart.	Practical file making.	NA
Sept	21	<p><u>CH - 8 =</u> <u>Biomechanics & Sports</u></p> <ul style="list-style-type: none"> - Newton’s Law of Motion & its application in sports. - Types of Levers and their application in Sports. - Equilibrium – Dynamic and Static and Centre of Gravity and its application in sports - Friction and Sports - Projectile in Sports <p><u>CH - 9 =</u> <u>Psychology & sports</u></p> <ul style="list-style-type: none"> - Personality; its definition & types (Jung Classification & Big Five Theory). - Motivation, its type & techniques. - Exercise Adherence: Reasons, Benefits & Strategies for Enhancing it. - Meaning, Concept & Types of Aggressions in Sports. - Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting. 	<p>-Newton`s law and its application in sports.</p> <p>-Equilibrium</p> <p>-Centre of gravity</p> <p>-Friction</p> <p>-Projectile</p> <p>Personality`s – Definition and types</p> <p>Jung classification, Big five theory.</p> <p>Aggression,</p> <p>Psychological attributes, Self-esteem,</p>	Picture chart making of jung classification and big five theory.	Practical file making.	NA

			Mental imagery, Self-talk, Goal setting.			
Oct	19	<p><u>CH - 10=</u> <u>Training in Sports</u></p> <ul style="list-style-type: none"> . Concept of Talent Identification and Talent Development in Sports . Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle. . Types & Methods to Develop – Strength, Endurance, and Speed . Types & Methods to Develop – Flexibility and Coordinative Ability 	<p>Talent identification, Talent development,</p> <p>Sports training cycle – Micro, Meso and Macro,</p> <p>Types and method to develop – STRENGTH, ENDURANCE, SPEED, FLEXIBILITY, COORDINATIVE ABILITY.</p>	Pictorial chart making of sports training cycle.	Practical file making.	NA
Nov	16	REVISIONS & CHAPTERWISE TEST				
Dec	22	REVISIONS & CHAPTERWISE TEST				
Jan	16	REVISIONS & CHAPTERWISE TEST				
Feb	22	REVISIONS & CHAPTERWISE TEST				

SUBJECT: ART EDUCATION

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21	Pencil shading Still life Soharai Art	Learning traditional Folk Art of Jharkhand	Art and cultural life of tribal in India	Make a project fine on Soharai	Find the origin place of this art form
May	26	Pencil shading Still life Soharai Art	Learning traditional Folk Art of Jharkhand	Art and cultural life of tribal in India	Make a project fine on Soharai	
June	19	Object drawing and painting in water colour Making Poster on World milk day	To grow Awareness of clean Environment	Environmental studies		Who is called milk man of India . find
July	24	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	24	Landscape in water colour Make poster on any one topic. International Youth Day Raksha Bandhan	Awareness of youth	Chapter on Raksha Bandhan in Language	Poster on youth day	
Sept	23	Worli Art Making greeting card for you teacher	Learning folk art of Maharashtra. To grow sense of respect towards Teachers	Maths various shapes	Make a painting of village life in Worli form	To know the origin state of Worli Art
Oct	20	City scape painting Make poster on any one of following Topic International day of Nonviolence World Student Day United Nation Day	<u>Make a poster on world Student day</u>	Maths Trigonometry Social Science		On whose birthday World student day celebrated and to give respect

		National Unity Day				to Iron man of india
Nov	16	Madhu Bani Painting Poster making on National Education day	Learning to do Folk art of Bihar	Civic topic	<u>Make poster on topic</u>	Poster making on National Education day
Dec	22	Making Christmas & New Year card Poster making on Energy Conservation Day	Learning to make Christmas Decoration	Commerce - demand and price	<u>Make poster on topic</u>	Poster making on Energy Conservation Day
Jan		Abstract art composition Poster on Topic. National Girl Child Day	To be updated with current Art Style		Poster on Topic. National Girl Child Day	CIVIC – human rights
Feb		REVISION & ASSESSMENT				

SUBJECT: GRAPHICS (6TH SUBJECT)

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21	Theory; Chapter - 1 The Manuscript Painting Traditions Practical- Introduction of linocut sheet., cutting tools and printing inks	Elements of art Knowledge of manuscript	History- our ancient books	3 graphics design in double color	To find out no. of scripts used in India
May	26	Theory; Chapter -2 The Rajasthani School of Painting Practical- Introduction of linocut sheet., cutting tools and printing inks	Origin and development of Rajasthani art and its sub school	Using shapes and lines to compose a drawing	3 graphics design in double color	To know our rich culture heritage
June	19	Theory; Chapter -2 The Rajasthani School of Painting Practical – making graphics design using linocut sheet	Origin and development of Rajasthani art and its sub school	In maths in various topics as trigonometry, mensuration	<u>Minimum 2</u> graphics design using linocut sheet	To learn our cultural heritage
July	24	Theory chapter -3 The Mughal School of Miniature Painting Practical – making graphics design using linocut sheet	Origin and development of Mughal art and its sub school	Shapes and mensuration maths	<u>Minimum 2</u> graphics design using linocut sheet	To learn our cultural heritage
Aug	24	Theory; Chapter- 4 The Deccan Schools of Paintings Practical – making graphics design using linocut sheet	Origin and development of Deccan art and its sub school	Shapes and mensuration maths	<u>Minimum 2</u> graphics design using linocut sheet	To learn our cultural heritage
Sept	23	Revision of theory for term 1				
Oct	20	Theory; Chapter -6 The Bengal School and Cultural Nationalism Practical – making graphics design using linocut sheet	Origin and development of Bengal art and its sub school	Shapes and mensuration maths	<u>Minimum 2</u> graphics design using linocut sheet	To learn our cultural heritage
Nov	16	Theory; Chapter- 7 The Modern Indian Art Chapter-8 The living Art Traditions of India Practical – making graphics design using linocut sheet	Origin and development of The Modern Indian Art art and its sub school	Shapes and mensuration maths	<u>Minimum 2</u> graphics design using linocut sheet	To learn our cultural heritage
Dec						
Jan						
Feb						

SUBJECT: PAINTING (6TH SUBJECT)

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21	Theory; Chapter - 1 The Manuscript Painting Traditions Practical- Landscape in pencil shading	Elements of art Knowledge of manuscript	History- our ancient books	Draw 2 pencil shading landscape	To find out no. of scripts used in India
May	26	Theory; Chapter -2 The Rajasthani School of Painting Practical - Landscape painting in water colour	Origin and development of Rajasthani art and its sub school	Using shapes and lines to compose a drawing	Make a file on Mughal miniature	To know our rich culture heritage
June	19	Theory; Chapter -2 The Rajasthani School of Painting Practical- Still life/Object drawing and pencil shading	Origin and development of Rajasthani art and its sub school	In maths in various topics as trigonometry, mensuration	<u>Minimum 2 still life or Object has to be done</u>	To learn our cultural heritage
July	24	Theory chapter -3 The Mughal School of Miniature Painting Practical- Draw and paint object drawing with water colour	Origin and development of Mughal art and its sub school	Shapes and mensuration maths	<u>Minimum 2 still life or Object has to be done in coloured with water colour</u>	To learn our cultural heritage
Aug	24	Theory; Chapter- 4 The Decani Schools of Paintings Practical- Draw and shade any flower in pencil or charcoal	Origin and development of Deccan art and its sub school	Shapes and mensuration maths	Minimum 2 flower has to be done in pencil shading or Charcoal	To learn our cultural heritage

Sept	23	Theory; Chapter-5 The Pahari Schools of Paintings ASSESSMENT -1	Origin and development of Pahari art and its sub school		Make a project file on Pahari school of art	To learn our cultural heritage
Oct	20	Theory; Chapter -6 The Bengal School and Cultural Nationalism Practical- Composition of flower in water colour	Origin and development of Bengal art and its sub school	Shapes and mensuratio n maths	Minimum 2 flower has to be done in water colour	To learn our cultural heritage
Nov	16	Theory; Chapter- 7 The Modern Indian Art Chapter-8 The living Art Traditions of India Practical- Draw 2 figurative Landscape of	Origin and development of The Modern Indian Art art and its sub school	Shapes and mensuratio n maths	Make a project file on Mughal miniature art Minimum 4 compositi	To learn our cultural heritage
Dec	22					
Jan						
Feb						

SUBJECT: HINDUSTANI MUSIC (VOCAL) (034)

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOF					
April	21	Brief study of the following :- Alankar, Kan, Meend, Khatka, Murki, Gamak	Key Terms			
May	06	Taal - “Rupak Dhamar and Jhaptaal” Parichay with Tala Notation and hand Demonstration with Thah, Dugun, Tigun and Chaugun Laykari.	<ul style="list-style-type: none"> ➤ Taali ➤ Matra ➤ Bibhag ➤ Swar ➤ Khali ➤ Theka ➤ Alankar ➤ Ekgun 	Integration with Songs in this Particular taals	Making Project file regarding this Taals and different Variations of it	Finding About other Taal which contains same no of mastras
June	19	Brief study of the following Gram, Murchhana, Alap, Tana.	Key Terms			
July	24	Raag - Bhairav & Bageshri (Parichay and One Drut Khayal with simple elaborations and few tanas along with Tarana and Dhamar)	<ul style="list-style-type: none"> ➤ Jaati ➤ Thaata ➤ Vadi ➤ Samwadi ➤ Aaroh ➤ Avroh ➤ Pakad 	Integration with Songs in this Particular Raag	Making projects regarding this raag Tarana and Dhamar for this	NO
Aug	24	Detail study of the following <ul style="list-style-type: none"> ➤ Sangeet Ratnakar ➤ Sangeet Parijat Life sketch and Contribution <ul style="list-style-type: none"> ➤ Faiyaz Khan, ➤ Bade Ghulam Ali Khan, 	Key Terms <ul style="list-style-type: none"> ➤ Origin ➤ Writer ➤ Concepts ➤ Valuable works ➤ Musical background of the Artists ➤ Gharana 	Integration with real life events of them and interveiws	Writing about them in Describe manner in project file	NO
Sept	23					
Oct	20	Raag - Malkoush and Suddh Sarang (Parichay and One Drut Khayal with simple elaborations and few tanas along with Tarana and Dhamar)	Key Terms			
Nov	16	Life sketch and Contribution <ul style="list-style-type: none"> ➤ Krishna Rao Shankar Pandit 	<ul style="list-style-type: none"> ➤ Jaati ➤ Thaata ➤ Vadi ➤ Samwadi ➤ Aaroh ➤ Avroh ➤ Pakad 	Integration with Songs in this Particular Raag	Writing the notation of Bandish along with tha taal script	NO
Dec	22	<ul style="list-style-type: none"> ➤ Tuning of Tanpura ➤ Historical development of Time Theory of Ragas 	Key Terms <ul style="list-style-type: none"> ➤ 4 Taar ➤ Aati ➤ Khunti ➤ Tumba ➤ Tabli ➤ Sandhiprakash ➤ Purvang ➤ Uttarang 	Integration with the raag timings and swar	Project Regarding the Time theory And Concept of Poorvang and Utraang Swar Raag	NO
Jan	17					
Feb	22					

SUBJECT : GENERAL STUDIES

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

Month	WD	Chapter/Sub-Topics	Key Terms and Concept	Art Integration	Project / Practical	Research Work Blended Learning
	NOP					
April	21/08	Science and Society	The Nature of Science Different aspects of Science, viz. the content, process and attitude The language of Science- facts, hypothesis, theories and laws II. Science as a social enterprise The manner in which modern Science and technology shape modern culture, values, and institutions on one hand and how modern values shape Science and technology on the other The progress of Science- major landmarks in the history of Science in India III. The Scientific spirit Scientific attitude Dispelling superstitions and myths. Assistive technology for the differently abled	do a small project, where they identify a problem, frame hypothesis, gather data and analyze it to test the hypothesis.	organize a debate for the whole class on 'Science - a boon or bane'.	enumerate ways in which Science and technology have changed lives particularly in the context of differently abled children.
May	06	Contemporary Problems of Indian Society	I. Poverty Meaning, genesis and broad measures to alleviate it Nature of poverty in rural and urban India II. Illiteracy Causes and consequences Measures to eradicate illiteracy III. Unemployment Nature and extent of unemployment Ameliorative measures to reduce unemployment - Vocational education, skill based education IV. Social Inequalities Kinds Implications V. Population and health declining sex ratio infant mortality malnutrition obesity and other lifestyle diseases The way forward	make group presentations (collage, charts, posters) on the contemporary problems of Indian society by using only newspaper clippings as a resource.	contribute towards solving social problems such as illiteracy. Students may volunteer to teach one illiterate person in their locality.	conduct a small survey on status of literacy/employment/income in their locality.
June	19	Cultural Heritage of India	I. The historical framework of India's heritage and culture II. Evolution of Indian culture Historical background- from the Indus Valley civilization to the British period and Indian renaissance Shaping of Indian ethos and syncretism III. The cultural heritage of India Performing arts- dance, music, theatre etc. Language and literature Crafts Paintings Architecture Cuisines Textiles	practice meditation, 'pranayama' and 'yogasana' for health benefits and better understanding of Indian culture.	effectively use paintings, short films and other material developed by the Centre for Cultural Resources and Training (CCRT) to appreciate	develop resource files on Sufi saints of Kashmir/Delhi/Rajasthan etc. Poets/saints of the Bhakti period. Mughal influence on Indian architecture. Relevance of the teachings of Kabir/Thiruvalluvar in

					the arts, crafts and architecture of India.	today's Indian society.
July	24	India's Freedom Struggle	The first war of independence-1957 II. Indian freedom struggle a) the moderates b) the radicals c) the revolutionaries III. The contribution of leaders IV. Nurturing freedom and democracy	watch a movie based on India's freedom struggle and submit a review	read about the history of India's freedom struggle and submit an article about events or personalities that impress them.	present the life history of Indian freedom fighters through a short role play/skit
Aug	24	Constitutional Values	Preamble to the Indian Constitution (understanding the spirit of the Constitution): Justice: Social, economic and political Liberty of thought, expression, belief, faith and worship Equality of status and of opportunity Fraternity, the dignity of individual and the unity and integrity of the Nation Secularism II Key features of the Constitution of India Fundamental Rights, Directive Principles of State Policy and Fundamental Duties Citizenship Organs of Government Federalism III Some legal provisions (relevant to children)	develop a code of conduct which may relate to one of the Fundamental Duties.	prepare biographies of the makers of the Constitution .	read the Preamble to the Constitution of India and highlight the values reflected in it. They may then present a play to showcase these values.
Sep	23	Human Rights	Human rights: Historical perspective The philosophical foundations of human rights The United Nation's declaration of human rights Civil and political rights Economic, social and cultural rights Human rights of vulnerable groups Human rights: Violation and remedies Gender equality	read articles related to human rights, for example, United Nation's Universal Declaration of Human Rights and discuss	observe their surroundings for any human rights violation.	prepare short investigatory projects based on current events as reported in the press and identify: Who is the victim? Who has violated his/her human rights? Which right has been violated? What is the abuse committed? How was the victim protected?

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