



Class – XII-A

Subject – English Core

Month	No. of working days	Name of the chapter	Topic / Sub topic	No of periods	TL resources	Mode of assessment
April	17	1-the last lesson [prose] 1.my mother at sixtysix [poem] 1.the third level [prose] Comprehension passage Debate writing	Comprehension passage Debate writing	7 7 3	Flamingo Vistas [ncert books] Online resources,laptop and references	<u>Pre mid term</u> 1-the last lesson 1.my mother at sixtysix 1.the third level 2- the tiger king Comprehension passage Debate writing
May	10	2-the tiger king [prose] Article and speech writing	Article and speech writing Invitation and reply	7 3	Flamingo Vistas [ncert books] Online resources,laptop and references	
June	12	2- lost spring [prose] 2.an elementary school classroom in a slum [poem] Comprehension passage Note making	Poetic devices Theme & summary Note making	7 3 2	Flamingo Vistas [ncert books] Online resources,laptop and references	
July	25	3-Deep Water	Message &	7	Flamingo	Mid Term Exam



		3.Keeping Quiet 4- The Rattrap 4-A THING OF BEAU Y ADVERTISEMENT & POSTER	General Idea Placing an Order [LETTER WRITING] COMPREHENSION PASSAGE	3 6 4 4	Vistas [ncert books] Online resources,laptop and references	Portion Covered till First Week of September
August	23	3-journey to the end of the earth 5-indigo 5-a roadside stand 4. The enemy Report and advertisement	Poetic devices Poster drafting and notice Reference to context Speech writing	5 6 3 5 4	Flamingo Vistas [ncert books] Online resources,laptop and references	
September	24	6-poets and pancakes[prose] 6-aunt jennifer's tiger's [poem] Mid term exam	Complaint letter Poetic devices Reference to context Report writing	5 6 ---	Flamingo Vistas [ncert books] Online resources,laptop and references	
October	19	7-the interview [prose] 5. Should wizard hit mommy? [prose] 6- on the face of it [prose]	Invitation and reply Letter to editor Unseen passage	7 5 5	Flamingo Vistas [ncert books] Online resources,laptop and references	
November	20	8-going places [prose] 7- evans tries an o level [prose] Comprehension passage and letter writing	Theme and characterisation Comprehension passage and letter writing	7 7 6	Flamingo Vistas [ncert books] Online resources,laptop and references	



December	19	8-memories of childhood [prose] Letter & debate writing Revision	Debate writing Poster and notice	8 6 5	Flamingo Vistas [ncert books] Online resources,laptop and references	Pre board-i Entire syllabus
January	23	Revision	-----	-----	-----	Pre-board-II
February	23	Revision	-----	-----	-----	Practical Exam
March	23	Revision	-----	-----	-----	Board Exam

Subject-Physics

April	17	Chapter-1.Electric charges and fields Chapter-2.Electrostatic potential and capacitance	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). 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.	12 05	NCERT Book, S.L.Arora Book,PPT NCERT Book, S.L.Arora Book,PPT	Weekly Physics quiz, Assignment. Weekly Physics quiz, Assignment.
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May	09	Chapter-2. Electrostatic potential and capacitance	Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, 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.	06	NCERT Book, S.L.Arora Book, PPT	Weekly Physics quiz, Assignment.
June	12	Chapter-3.	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, metre bridge. Potentiometer - principle and its applications to measure potential difference and for comparing EMF of two cells; measurement of internal resistance of a cell.	11	NCERT Book, S.L.Arora Book, PPT	Weekly Physics quiz, Assignment.
July	25	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, Cyclotron. Force on a	15	NCERT Book, S.L.Arora Book, PPT	Weekly Physics quiz Pre-Mid Term Examination



		Chapter-5: Magnetism and Matter	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.	05		
		Chapter-6: Electromagnetic Induction	Current loop as a magnetic dipole and its magnetic dipole moment, magnetic dipole moment of a revolving electron, 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; earth's magnetic field and magnetic elements. Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths, permanent magnets. Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Eddy currents. Self and mutual induction.	05		
August	23	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.	10	NCERT Book, S.L.Arora Book,PPT	Weekly Physics quiz, Assignment.



		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.	04		
		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. Scattering of light - blue colour of sky and reddish appearance of the sun at sunrise and sunset.	08		
September	23	Chapter–9: Ray Optics and Optical Instruments	Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.	03	NCERT Book, S.L.Arora Book,PPT	Weekly Physics quiz, Assignment. Mid Term Examination
		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 experiment and expression for fringe width, coherent sources and sustained interference of light, diffraction due to a	10		



		Mid-Term Examination	single slit, width of central maximum, resolving power of microscope and astronomical telescope, polarisation, plane polarised light, Brewster's law, uses of plane polarised light and Polaroids.			
October	17	Chapter-11: Dual Nature of Radiation and Matter Chapter-12: Atoms Chapter-13: Nuclei	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, Davisson-Germer experiment (experimental details should be omitted; only conclusion should be explained). Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum. Composition and size of nucleus, Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law, half life and mean life.	08 05 04	NCERT Book, S.L.Arora Book,PPT	Weekly Physics quiz, Assignment.
November	20	Chapter-13: Nuclei Chapter-14: Semiconductor Electronics: Materials, Devices and Simple Circuits	Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Semiconductor diode - I-V characteristics in forward and reverse	05 10	NCERT Book, S.L.Arora Book,PPT	Weekly Physics quiz, Assignment.



		Revision	bias, diode as a rectifier; Special purpose p-n junction diodes: LED, photodiode, solar cell and Zener diode and their characteristics, zener diode as a voltage regulator.	05		
December	19	Revision	-----	-----	Paper of Previous years	Pre-Board-I
January	25	Revision and Pre-Board-II	-----	-----	Paper of Previous years	Pre-Board-II

Subject- Chemistry

Month	No. of working days	Name of the chapter	Topic / Sub topic	No of periods	TL resources	Mode of assessment
April	17	Unit-1: Solid State Unit-2: Solutions	Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties. Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing	7 9	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions , Short & long Questions, Weekly Quiz Paper



			point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor.			
May	10	Uni-3: Electrochemistry	. Redox reactions, 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, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion.	08	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions, Short & long Questions, Weekly Quiz Paper
June	11	Unit -4: Chemical Kinetics	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.	06	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions, Short & long Questions, Weekly Quiz Paper
		Unit-5 Surface Chemistry	Adsorption - physisorption and chemisorption, factors affecting adsorption of gases on solids, catalysis: homogenous and heterogenous, activity and selectivity of solid catalysts; enzyme catalysis, colloidal state: distinction between true solutions, colloids and suspension; lyophilic, lyophobic, multi-molecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian	05		



			movement, electrophoresis, coagulation, emulsion - types of emulsions.			
July	25	Unit 7:p-Block Elements Unit-8 D-Block Elements	<p>Group -15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; Nitrogen preparation properties and uses; compounds of Nitrogen: preparation and properties of Ammonia and Nitric Acid, Oxides of Nitrogen (Structure only); Phosphorus - allotropic forms, compounds of Phosphorus: Preparation and properties of Phosphine, Halides and Oxoacids (elementary idea only).</p> <p>Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: preparation, properties and uses, classification of Oxides, Ozone, Sulphur - allotropic forms; compounds of Sulphur.</p> <p>General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in 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>	10 12	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions, Short & long Questions, Weekly Quiz Paper
August	23	Unit -9: Coordination Compounds	<p>12 Periods Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear</p>	08	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions, Short & long Questions, Weekly



		Unit X: Haloalkanes and Haloarenes. (Revision of Half Yearly Exam-2021)	coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system). Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.	10		Quiz Paper
September	23	Unit-11: Alcohols, Phenols and Ethers Unit-12: Aldehydes, Ketones and Carboxylic	Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol. Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses. Carboxylic Acids: Nomenclature, acidic nature,	08 08	NCERT Notebook & Well Prepared Notes.	Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz Paper.



		Commencement of half yearly Exam-2021	methods of preparation, physical and chemical properties; uses.			
October	17	Unit-13: Amines Unit-14: Biomolecules	<p>Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.</p> <p>Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.</p> <p>Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates.</p> <p>Proteins -Elementary idea of - 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. Classification - natural and synthetic, methods of polymerization (addition and condensation), copolymerization, some important polymers: natural and synthetic like polythene, nylon polyesters, bakelite, rubber. Biodegradable and</p>	08 07	NCERT Notebook & Well Prepared Notes. NCERT Notebook & Well Prepared Notes .	Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz Paper. Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz Paper.



			non-biodegradable polymers.			
November	20	Unit -15: Chemistry in Everyday life 06 Periods Unit -6: General Principles and Processes of Isolation of Elements Revision and Commencement of PT-II-2021	Chemicals in medicines - analgesics, tranquilizers antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines. Chemicals in food - preservatives, artificial sweetening agents, elementary idea of antioxidants. Cleansing agents- soaps and detergents, cleansing action.Principles and methods of extraction - concentration, oxidation, reduction - electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and iron.	10	NCERT Notebook & Well Prepared Notes. NCERT Notebook & Well Prepared Notes .	Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz Paper. Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz Paper .
December	19	Revision of Pre- Board Exam-2021	-----		NCERT Notebook & Well Prepared Notes.	Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz Paper
January	25	Commencement of Pre- Board Exam-2021	-----			



Subject – Mathematics

Month	No. of working days	Name of the chapter	Topic / Sub topic	No of periods	TL resources	Mode of assessment
April	17	1. Matrix	<u>Ch-3 Matrices</u> 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-commutative of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).	8	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.
		2. Determinants	<u>Ch-4 Determinants</u> Determinant of a square matrix (up to 3 x 3 matrices), properties of determinants, minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square Matrix. Consistency, inconsistency and number of	09	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal	Weekly quizzes and the internal exams as per the schedule of the scho



			solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.		exams sample papers of CBSE will be used for revision.	
May	10	1. Continuity and Differentiability	<u>Ch-5 Continuity and Differentiability</u> Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential Pen Paper Test functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation.	10	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.
June	12	1. Applications of derivatives	<u>Ch-6 Applications of Derivatives</u> Applications of derivatives: rate of change of bodies, increasing/decreasing functions, tangents and normals use of derivatives in approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).	12	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.



July	25	1. Integration 2. Applications of integration	<u>Ch-7 Integration</u> 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. Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals. <u>Ch-8 Application of Integration</u> Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only), Area between any of the two above said curves (the region should be clearly identifiable).	12 13	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.
August	23	1. Differential equations	<u>Ch-9 Differential Equations</u> Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation. <u>Ch-10 Vector Algebra</u> Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel	13 10	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.



			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, scalar triple product of vectors.			
September	24	1. Three Dimensional Geometry	<u>Ch-11 Three Dimensional Geometry</u> 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. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane	24	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.
October	19	1. Linear programming problems 1. Probability	<u>Ch-12 Linear Programming</u> Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up	05	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE	Weekly quizzes and the internal exams as per the schedule of the school.



			to three non-trivial constraints). Ch-13 Probability Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean and variance of random variable.	14	will be used for revision.	
November	20	1. Relation and functions	Ch-1 Relation and Function Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto Functions, composite functions, inverse of a function.	10	NCERT text book Refresher of RD Sharma. At the time of revision for tests and internal exams sample papers of CBSE will be used for revision.	Weekly quizzes and the internal exams as per the schedule of the school.
		2. Applications of trigonometry	Ch-2 Application of trigonometry Definition, range, domain, principal value branch. Graphs of inverse trigonometric Functions Elementary properties of inverse trigonometric functions.	10		

Subject – Biology

Month	No. of working days	Name of the chapter	Topic / Sub topic	No of periods	TL resources	Mode of assessment
April	17	CH-1 Reproduction in organisms.	Asexual Reproduction, Sexual reproduction and Events of reproduction	5	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions ,Short & long Questions, Weekly
		Ch-2 Sexual reproduction in	Male reproductive structure, Female reproductive			



		flowering plants Ch-3 Human reproduction	structure in flowering plants, Microsporogenesis, Megasporogenesis and Events of fertilization Introduction, Male reproductive structure,	10 1		Quiz
May	10	Ch-3 Human reproduction	Female reproductive structure, Gametogenesis, Mestrual cycle, Fertilization, Implantation, Prturition	8	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz
June	11	Ch-4 Reproductive health Ch-5 Principle of inheritance and variation	Reproductive health and strategies, Population explosion and Birth control, MTP, STDs Mendels laws, Chromosomal theory of inheritance	5 5	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions ,Short & long Questions, Weekly Quiz
July	25	Ch-5 Principle of inheritance and variation Ch-6 Molecular basis of inheritance	Linkage and recombination, Sex determination, Genetic disorders, DNA, Search and properties of genetic material, Transcription, Genetic code	6 7	NCERT Notebook & Well Prepared Notes	(Revision Commencement of Unit test-1)
August	23	Ch-6 Molecular basis of inheritance Ch-11 Biotechnology:	Translation, Operon concept, HGP, DNA fingerprinting Principles of biotechnology, Recombinant DNA	4 8	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions ,Short & long Questions, Weekly



		Principle and processes Ch-12 Biotechnology and its Applications Ch-8 Human health and diseases	technology Application of Biotechnology in Agriculture, medicine, Transgenic animals, Bio piracy Common diseases, Immunity,	8 3		Quiz
September	25	Ch-8 Human health and diseases Ch-10 Microbe in human welfare	Drugs Microbes in household products, sewage treatment, production of biogas, bio control agent, biofertilizers	3 6	NCERT Notebook & Well Prepared Notes	(Commencement of half Yearly Exam-2021)
October	17	Ch-13 Organisms and population Ch-15 Biodiversity and its conservation Ch-7 Evolution	Environmental factors, Response to abiotic stress, Adaptation, Population parameters Pattern of biodiversity, Loss of biodiversity, Conserve biodiversity Theory and evidences of evolution,	6 6 5	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions, Short & long Questions, Weekly Quiz
November	20	Ch-7 Evolution Ch-9 Strategies for enhancement in food production	Mechanism of evolution Animal Husbandry, Plant Breeding, SCP, Tissue culture Ecosystem structure and function, Energy flow,	2 6	NCERT Notebook & Well Prepared Notes	Oral questions, Reasoning questions, Short & long Questions, Weekly Quiz



		Ch-14 Ecosystem	Ecological pyramids and succession, Ecosystem service	6		
		Ch-16 Environmental issues	Air and Water pollution and its control, BOD, Eutrophication, Ozone depletion, Global warming	8		
December	19	REVISION	-----		Worksheets and Sample papers	Revision and Commencement of Unit test-II
January	21	REVISION	-----		Worksheets and Sample papers	Commencement of Pre Board-I
February	24	REVISION	-----		Worksheets and Sample papers	Commencement of Pre Board-II
March	24		-----			Commencement of Annual Exam

Subject –Informatics Practices

Month	No. of working days	Name of the chapter	Topic / Sub topic	No of periods	TL resources	Mode of assessment
April	17	Chapter 1 Python Pandas I Practicals based on Chapter 1 Python Pandas I	Introduction to Python libraries- Pandas, Matplotlib. Data structures in Pandas - Series and data frames. Series: Creation of series from ndarray, dictionary, scalar value; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing.	12 5	Informatics Practices By Sumita Arora and Self Prepared Notes	



			Data Frames: creation of data frames from dictionary of series, list of dictionaries, text/CSV files, display, iteration.			
May	17	Chapter 1 Python Pandas I Chapter 2 Python Pandas II	Operations on rows and columns: add (insert /append), select, delete (drop column and row), rename, Head and Tail functions, indexing using labels, Boolean indexing; joining, merging and concatenation of data frames.	5 12	Informatics Practices By Sumita Arora and Self Prepared Notes	
June	11	Chapter 2 Python Pandas II Practicals based on Chapter 2 Python Pandas II	Descriptive Statistics: max, min, count, sum, mean, median, mode, quartile, Standard deviation, variance. Data Frame operations: Aggregation, group by, Sorting, Deleting and Renaming Index, Pivoting. Handling missing values – dropping and filling.	3 8	Informatics Practices By Sumita Arora and Self Prepared Notes	
July	25	Chapter 3 Plotting with PyPlot Practicals based on Chapter 3 Plotting with PyPlot	Purpose of plotting, drawing and saving of plots using Matplotlib (line plot, bar graph, histogram, pie chart, frequency polygon, box plot and scatter plot). Customizing plots: color, style (dashed, dotted), width; adding label, title, and legend in plots.	12 6	Informatics Practices By Sumita Arora and Self Prepared Notes	PERIODIC TEST 7
August	23	Chapter 4 Importing/Exporting Data between CSV Files Practicals based on Chapter 4 Importing/Exporting Data between CSV Files Chapter 5 MySQL SQL Revision Tour	Importing/Exporting Data between MySQL database and Pandas.	10 6 7	Informatics Practices By Sumita Arora and Self Prepared Notes	
Sept	25	Chapter 5 MySQL SQL Revision Tour	Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE	3 6	Informatics Practices By	HALF YEARLY EXAM



		REVISION FOR HALF YEARLY EXAM	()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().		Sumita Arora and Self Prepared Notes	16
Oct	17	Chapter 6 MySQL Functions Chapter 7 Querying using SQL	Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by.	7 10	Informatics Practices By Sumita Arora and Self Prepared Notes	
Nov	20	Chapter 8 Joins and Set Operations Chapter 9 Introduction to Computer Network Chapter 10 Introduction to Internet and Web	Operations on Relations - Union, Intersection, Minus, Cartesian Product, JOIN (Cartesian Join, Equi Join, Natural Join) Introduction to networks, Types of network: LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh. Introduction to Internet, URL, WWW and its applications- Web, email, Chat, VoIP.	7 10 3	Informatics Practices By Sumita Arora and Self Prepared Notes	
Dec	19	Chapter 10 Introduction to Internet and Web Chapter 11 Societal Impacts	Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies. Digital footprint, net and communication etiquettes, data protection, intellectual property	5 7	Informatics Practices By Sumita Arora and Self Prepared Notes	PERIODIC TEST 7



			rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.			
Jan	25	Chapter 12 Data Protection REVISION FOR ANNUAL EXAM	E-waste: hazards and management. Awareness about health concerns related to the usage of technology.	9 16	Informatics Practices By Sumita Arora and Self Prepared Notes	
Feb	24	REVISION FOR ANNUAL EXAM	-----	24		
March	24	ANNUAL EXAMS	-----	24		
Total	247		-----			

Subject –Physical Education

Month	No. of working days	Name of the chapter	Topic / Sub topic	No of periods	TL resources	Mode of assessment
April	17	1)Planning in Sports	Meaning & Objectives of Planning Various Committees & its Responsibilities (pre; during& post) Tournament-Knock-Out, League or Round Robin & Combination Procedure to Draw Fixtures-Knock-Out (Bye & Seeding) & League (Staircase & Cyclic)	17	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment
May	09	1)Planning in Sports	Intramural & Extramural- Meaning, Objectives & Its Significance	04	Lecture method/Activity	Weekly quiz, question-answer



		2) Sports & Nutrition	Specific Sports Programme Balanced Diet & Nutrition: Macro & Micro Nutrients Nutritive & Non-Nutritive Components of Diet	05	based	based on topic and assignment
June	11	2) Sports & Nutrition	Nutritive & Non-Nutritive Components of Diet Eating for Weight Control- Healthy Weight, The Pitfalls of Dieting, Food Intolerance & Food Myths	06	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment
		3) Yoga & Lifestyle	Asanas as preventive measures Obesity, Diabetes, Asthma, Hypertension, Back Pain	05		
July	25	4) Physical Education & Sports for CWSN	Concept of Disability & Disorder Types of Disability, its causes & nature (cognitive disability, intellectual disability, physical disability) Types of Disorder, its cause & nature (ADHD, SPD, ASD, ODD, OCD) Disability Etiquettes Advantage of Physical Activities for children with special needs *Strategies to make Physical Activities assessable for children with special needs	15	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment Pre-Mid Term
		5) Children & Women in Sports	Motor development & factors affecting it Exercise Guidelines at different stages of Growth & Development	10		
August	23	5) Children & Women in Sports	Sports participation of women in India. Special consideration Female Athletes Triad.	07	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment
		6) Test & Measurement in Sports	Motor Fitness Test General Motor Fitness - Barrow three item general motor ability Measurement of Cardio Vascular Fitness - Harvard Step Test/Rockport Test	16		



			Rikli & Jones - Senior Citizen Fitness			
Sept	25	7) Physiology & Injuries in Sports	Physiological factor determining component of Physical Fitness Effect of exercise on Cardio Respiratory System Effect of exercise on Muscular System Physiological changes due to ageing Sports injuries : Classification -Soft Tissue Injuries ,Bone & Joint Injuries First Aid- Aims &Objectives	14	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment Mid-Term
		8) Biomechanics & Sports	Meaning and Importance of Biomechanics in Sports Types of movements (Flexion, Extension, Abduction& Adduction) Newton's Law of Motion & its application in sports	11		
Oct	17	9) Psychology & Sports	Personality; its definition & types Trait & Types (Sheldon & Jung Classification) & Big Five Theory Motivation, its types & techniques Exercise Adherence; Reasons to Exercise, Benefits of Exercise. Strategies for Enhancing adherence to Exercise. Meaning, Concept &Types of Aggressions in Sports	17	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment
Nov	20	10) Training in Sports	Strength- Definition, types& methods of improving Strength Isometric, Isotonic & Isokinetic Endurance - Definition, types & methods to develop Endurance- Continuous Training, Interval Training & Fartlek Training Speed-Definition, types & methods to develop Speed- Acceleration Run & Pace Run Flexibility- Definition, types & methods to improve flexibility Coordinative Abilities- Definition & types Circuit Training -Introduction & its importance	20	Lecture method/Activity based	Weekly quiz, question-answer based on topic and assignment
Dec	19	Revision	-----			Pre Board-I



Jan	25	Revision	-----			Pre-Board-II
Feb	24		-----			Annual Practical Examination
March	24		-----			
			विषय – हिंदी			
April	17	(गद्य)1- भक्तिन (काव्य)1- आत्मपरिचय (गद्य)2- बाज़ार दर्शन	विषय वस्तु का बोध एवं व्याख्या , लेखक के मनोभावों को समझना, शब्दों का प्रसंगानुकूल अर्थ , सौंदर्य- बोध आलोचनात्मक चिंतन , तार्किकता	6 6 5	एन सी ई आर टी पाठ्यपुस्तक आरोह , यू-ट्यूब वीडियोज़	मौखिक प्रश्न , लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली क्विज़
May	09	(काव्य)2- पतंग (पूरक पाठ्य-पुस्तक) वितान 1- सिल्वर वेडिंग	सौंदर्य-बोध, बिंब तथा प्रतीक , अलंकार विषय वस्तु का बोध एवं व्याख्या , लेखक के मनोभावों को समझना, शब्दों का प्रसंगानुकूल अर्थ समझना	5 4	एन सी ई आर टी पाठ्यपुस्तक आरोह तथा वितान , यू-ट्यूब वीडियोज़	मौखिक प्रश्न , लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली क्विज़
June	17	(गद्य) 3- काले मेघा पानी	विषय वस्तु का बोध एवं व्याख्या , लेखक के मनोभावों को समझना, शब्दों	6	एन सी ई आर टी	मौखिक प्रश्न ,



		दे (जनसंचार माध्यम और लेखन) 1. विभिन्न माध्यमों के लिए लेखन (काव्य) 3- कविता के बहाने, बात सीधी थी पर	का प्रसंगानुकूल अर्थ समझना, आलोचनात्मक चिंतन, तार्किकता, सौंदर्य- बोध, अभ्यास-प्रश्न	6 5	पाठ्यपुस्तक आरोह तथा वितान, अभिव्यक्ति और माध्यम यू-ट्यूब वीडियोज़	लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली किज़
July	25	(गद्य) 4- पहलवान की ढोलक (जनसंचार माध्यम और लेखन) 2. पत्रकारीय लेखन के विभिन्न रूप और लेखन प्रक्रिया (काव्य) 4. कैमरे में बंद अपाहिज (काव्य) 5- सहर्ष स्वीकारा है (वितान) 2- जूझ	विषय वस्तु का बोध एवं व्याख्या, लेखक के मनोभावों की समझना, शब्दों का प्रसंगानुकूल अर्थ समझना, आलोचनात्मक चिंतन, तार्किकता, सौंदर्य- बोध, अभ्यास-प्रश्न सौंदर्य- बोध, भावार्थ लेखक के मनोभावों को समझना	5 5 5 5	एन सी ई आर टी पाठ्यपुस्तक आरोह तथा वितान, अभिव्यक्ति और माध्यम यू-ट्यूब वीडियोज़	मौखिक प्रश्न, लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली किज़
August	23	जनसंचार माध्यम और	विषय वस्तु का बोध एवं व्याख्या,	5	एन सी ई आर टी	मौखिक प्रश्न,



		लेखन) 3. विशेष लेखन - स्वरूप और प्रकार (गद्य) 5- चार्ली चैपलिन यानी हम सब (काव्य)6- उषा (गद्य)6- नमक	शब्दों का प्रसंगानुकूल अर्थ समझना, आलोचनात्मक चिंतन , तार्किकता, अभ्यास-प्रश्न भाव-सौंदर्य तथ काव्य- सौंदर्य, अलेकार तथा बिंब विषय वस्तु का बोध	5 5 4 4	पाठ्यपुस्तक आरोह वितान तथा अभिव्यक्ति और माध्यम यू-ट्यूब वीडियोज़	लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली किज़
September	25	(सृजनात्मक लेखन) 4. कैसे बनती है कविता 5. नाटक लिखने का व्याकरण 6. कैसे लिखें कहानी (गद्य)7. शिरीष के फूल (काव्य)7. कवितावली , लक्ष्मण मूर्छा और राम का विलाप (वितान) 3. अतीत में दबे पाँव	विषय वस्तु का बोध एवं व्याख्या , लेखक के मनोभावों को समझना, शब्दों का प्रसंगानुकूल अर्थ समझना, लेखक के मनोभावों को समझना आलोचनात्मक चिंतन,तार्किकता, सौंदर्य- बोध , छंद विषय वस्तु का बोध तथा व्याख्या	5 5 5 5 5	एन सी ई आर टी पाठ्यपुस्तक - आरोह वितान तथा अभिव्यक्ति और माध्यम यू-ट्यूब वीडियोज़	मौखिक प्रश्न , लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली किज़
October	17	(गद्य)8- श्रम विभाजन और जाति प्रथा	विषय वस्तु का बोध एवं व्याख्या , लेखक के मनोभावों को समझना, शब्दों का प्रसंगानुकूल अर्थ	6	एन सी ई आर टी पाठ्यपुस्तक	मौखिक प्रश्न ,



		(काव्य) 8- रुबाइयाँ , गज़ल (सृजनात्मक लेखन) 9. नए और अप्रत्याशित विषयों पर लेखन	सौंदर्य- बोध, छंद आलोचनात्मक चिंतन, तार्किकता	6 5	आरोह वितान तथा अभिव्यक्ति और माध्यम यू-ट्यूब वीडियोज़	लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली किज़
November	20	(काव्य) 9. छोटा मेरा खेत, बगुलों के पंख (वितान) 4- डायरी के पन्ने (व्यावहारिक व्याकरण) 10. कार्यालय लेखन और प्रक्रिया	भाव- सौंदर्य तथा शिल्प- सौंदर्य, अलंकार विषय वस्तु का बोध एवं व्याख्या , लेखक के मनोभावों को समझना, शब्दों का प्रसंगानुकूल अर्थ , आलोचनात्मक चिंतन , तार्किकता	6 7 7	एन सी ई आर टी पाठ्यपुस्तक आरोह वितान तथा अभिव्यक्ति और माध्यम यू-ट्यूब वीडियोज़	मौखिक प्रश्न , लिखित अभ्यास-पत्र बहुविकल्पीय प्रश्न वीकली किज़
December	19	पुनरावृत्ति कार्य				
January	25	पुनरावृत्ति कार्य				
February	24	पुनरावृत्ति कार्य				
March	24	BOARD EXAM				