

DELHI PUBLIC SCHOOL SRINAGAR

Syllabus-2020



Class -XI
Medical +Non-Medical

SUBJECT: ENGLISH (301)

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
2 ND WEEK	<i>The Portrait of a lady</i>		
3 RD WEEK	<i>Speech , A Photograph</i>		
4 TH WEEK	<i>Re-ordering of sentences (Tenses)</i>		
5 TH WEEK	<i>Notices and Letter to the Editor</i> <i>Reading Comprehension</i>		

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1 ST WEEK	<i>The Voice of The Rain</i>		
2 ND WEEK	<i>The Address</i>		
3 RD WEEK	<i>Job Application, Article Writing</i>		
4 TH WEEK	<i>Editing Tasks (Tenses), ASL</i>		
5 TH WEEK	<i>The Summer of the Beautiful White Horse</i>		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			18
1 ST WEEK	<i>The Ailing Planet, Dialogue Completion.</i>		
2 ND WEEK	<i>Albert Einstein at School, Reading Comprehension.</i>		
3 RD WEEK	<i>Note-Making passage, Error Correction (Determiners)</i>		
4 TH WEEK	<i>Mid-Term Examination</i>		
5 TH WEEK	<i>Mid-Term Examination</i>		

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			11
1 ST WEEK	<i>Mid-Term Examination</i>		
2 ND WEEK	<i>Mid-Term Examination</i>		
3 RD WEEK	<i>Summer Break</i>		
4 TH WEEK	<i>Summer Break/ Cross Checking</i>		
5 TH WEEK	<i>Childhood, The Browning Version</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1 ST WEEK	<i>Ranga's Marriage, Birth</i>		
2 ND WEEK	<i>Mother's Day, Gap filling.</i>		
3 RD WEEK	<i>Report Writing-Newspaper and Magazine Reports</i>		
4 TH WEEK	<i>Omission /Editing Passages (Determiners)</i>		
5 TH WEEK	<i>Posters.</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1 ST WEEK	<i>Father to Son, We're not Afraid to Die....</i>		
2 ND WEEK	<i>The Tale of Melon City</i>		
3 RD WEEK	<i>Note making revision, Transformation of sentences (Modals)</i>		
4 TH WEEK	<i>Business Letters</i>		
5 TH WEEK	<i>Reading Comprehension</i>		

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1 ST WEEK	<i>Grammar exercises (Change of voice)</i>		
2 ND WEEK	<i>Classified Advertisements</i>		
3 RD WEEK	<i>Classified Advertisements</i>		
4 TH WEEK	<i>Display Advertisements, ASL (Final Term)</i>		
5 TH WEEK	<i>Revision (All writing skills)</i>		

NOVEMBER (Class XII)

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			25
1 ST WEEK	<i>Introduction to Underprivileged/Spender/Anees Jung</i>		
2 ND WEEK	<i>Elementary School Classroom in a Slum</i>		
3 RD WEEK	<i>Grammar exercises (Clauses)</i>		
4 TH WEEK	<i>Lost Spring /Saheb-e-Alam</i>		
5 TH WEEK	<i>Lost Spring /Mukesh</i>		

DECEMBER (Class XII)

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
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		17
1ST WEEK	<i>Notices (All three types)</i>	
2ND WEEK	<i>Invitations and Replies</i>	
3RD WEEK	<i>Invitations and Replies (Contd.)</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: PHYSICS (042) (PART - A)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Mathematical Tools</i>		14
2ND WEEK	<i>Basic trigonometric ratio with conversions</i>	
3RD WEEK	<i>Elementary concepts of differentiation and integration</i>	
4TH WEEK	<i>Elementary concepts of differentiation and integration</i>	
5TH WEEK	<i>Application of differentiation and integration</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<ul style="list-style-type: none"> ➤ <i>Motion in a Straight Line</i> ➤ <i>Motion in a Plane</i> 		22
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Physical World, units and dimensions (Soft copy of assignment along with video lesson will be provided to students)</i> ➤ <i>Frame of reference</i> ➤ <i>Motion in a straight line: Position-time graph</i> ➤ <i>speed and velocity</i> ➤ <i>uniform and non- uniform motion</i> ➤ <i>average speed and instantaneous velocity</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>uniformly accelerated motion</i> ➤ <i>velocity-time and position-time graphs</i> ➤ <i>Relations for uniformly accelerated motion (graphical treatment)</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Scalar and vector quantities</i> ➤ <i>Position and displacement vectors</i> ➤ <i>General vectors and their notations</i> ➤ <i>Equality of vectors</i> ➤ <i>Multiplication of vectors by areal number</i> ➤ <i>Addition and subtraction of vectors</i> ➤ <i>Unit vector</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Resolution of a vector in a plane</i> ➤ <i>Rectangular components</i> ➤ <i>Scalar and Vector product of vectors</i> 	

5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Motion in a plane</i> ➤ <i>Cases of uniform velocity and uniform acceleration</i>
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JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<ul style="list-style-type: none"> ➤ <i>Motion in a Plane (continued)</i> ➤ <i>Laws of Motion</i> 		22
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Project Projectile motion</i> ➤ <i>Uniform circular motion</i> ➤ <i>Relative velocity</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Intuitive concept of force</i> ➤ <i>Inertia</i> ➤ <i>Newton's first law of motion</i> ➤ <i>Momentum and Newton's second law of motion</i> ➤ <i>Impulse</i> ➤ <i>Newton's third law of motion.</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Law of conservation of linear momentum and its applications.</i> ➤ <i>Equilibrium of concurrent forces</i> 	
4TH WEEK	Mid-Term Examination	
5TH WEEK	Mid-Term Examination	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	Mid-Term Examination	
2ND WEEK	Mid-Term Examination	
3RD WEEK	Summer Break	
4TH WEEK	Summer Break/ Cross Checking	
5TH WEEK	<i>Friction: Static and kinetic friction</i>	

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<ul style="list-style-type: none"> ➤ <i>Laws of Motion(continued)</i> ➤ <i>Work, Energy and Power</i> 		23
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Laws of friction</i> ➤ <i>Rolling friction</i> ➤ <i>Lubrication</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Dynamics of uniform circular motion: Centripetal force</i> ➤ <i>Examples of circular motion (vehicle on a level circular road, vehicle on a banked road)</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Work done by a constant force and a variable force</i> ➤ <i>kinetic energy, work-energy theorem</i> ➤ <i>power</i> 	

4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Notion of potential energy</i> ➤ <i>Conservative forces and non-conservative forces</i>
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Conservation of mechanical energy</i> ➤ <i>Potential energy of a spring</i>

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<ul style="list-style-type: none"> ➤ <i>Work, Energy & Power (continued)</i> ➤ <i>System of Particles & Rotational Motion</i> 		25
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Elastic and inelastic collisions in one and two dimensions.</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Centre of mass of a two-particle system</i> ➤ <i>Momentum conservation and centre of mass motion</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Centre of mass of a rigid body</i> ➤ <i>Centre of mass of a uniform rod.</i> ➤ <i>Moment of a force</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Torque</i> ➤ <i>Angular momentum</i> ➤ <i>Law of conservation of angular momentum and its applications.</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Equilibrium of rigid bodies</i> 	

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>System of Particles & Rotational Motion (continued)</i>		25
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Rigid body rotation and equations of rotational motion</i> ➤ <i>Comparison of linear and rotational motions</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Moment of inertia</i> ➤ <i>Values of moments of inertia for simple geometrical objects (no derivation)</i> ➤ <i>Radius of gyration</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Statement of parallel and perpendicular axes theorems and their applications.</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Practicals</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Practicals</i> 	

NOVEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Ray Optics & Optical Instruments (continued)</i>		25
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Reflection of light</i> ➤ <i>Spherical mirrors</i> ➤ <i>Mirror formula</i> ➤ <i>Magnification</i> 	

2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Refraction of light</i> ➤ <i>Total internal reflection</i> ➤ <i>Applications of total internal reflection, optical fibres</i>
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Refraction at spherical surfaces</i> ➤ <i>Lenses</i> ➤ <i>Lensmaker's formula</i>
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Thin lens formula</i> ➤ <i>Magnification</i> ➤ <i>Power of a lens</i>
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Combination of thin lenses in contact</i>

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<ul style="list-style-type: none"> ➤ <i>Ray Optics & Optical Instruments(continued)</i> ➤ <i>Wave Optics</i> 		20
1ST WEEK	➤ <i>Refraction and dispersion of light through a prism</i>	
2ND WEEK	➤ <i>Microscopes and astronomical telescopes (reflecting and refracting)</i>	
3RD WEEK	➤ <i>Magnifying powers of telescope and microscope and their resolving powers.</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: PHYSICS (042) (PART - B)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Mechanical Properties of Solids</i>		19
2ND WEEK	<i>Elastic behaviour, Stress-strain relationship, Hooke's law,</i>	
3RD WEEK	<i>Young's modulus, bulk modulus,</i>	
4TH WEEK	<i>Shear modulus of rigidity, Poisson's ratio;</i>	
5TH WEEK	<i>Elastic energy.</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Mechanical Properties of Solids</i>		22
1ST WEEK	<i>Pressure due to a fluid column; effect of gravity on fluid pressure.</i>	
2ND WEEK	<i>Pascal's law and its applications (hydraulic lift and hydraulic brakes),</i>	
3RD WEEK	<i>Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Reynolds's number</i>	
4TH WEEK	<i>Bernoulli's theorem and its applications, continuity equation.</i>	

5TH WEEK	<i>Surface energy and surface tension</i>
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JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Mechanical Properties of Fluid (Contd.)</i>		20
1ST WEEK	<i>Angle of contact, excess of pressure across a curved surface,</i>	
2ND WEEK	<i>Application of surface tension ideas to drops, bubbles and capillary rise.</i>	
3RD WEEK	<i>Modes of transfer of heat, $C_p - C_v = R$</i>	
4TH WEEK	<i>Mid-Term Examination</i>	
5TH WEEK	<i>Mid-Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Thermodynamics (Contd.)</i>		20
1ST WEEK	<i>Mid-Term Examination</i>	
2ND WEEK	<i>Mid-Term Examination</i>	
3RD WEEK	<i>Summer Break</i>	
4TH WEEK	<i>Summer Break/ Cross Checking</i>	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Basic terminology of thermodynamics</i> ➤ <i>Gravitation(Soft copy of assignment along with video lesson will be provided to students)</i> 	

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Thermodynamics</i>		24
1ST WEEK	➤ <i>Thermal equilibrium and definition of temperature (zeroth law of thermodynamics), heat, work and internal energy.</i>	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>First law of thermodynamics and its applications</i> ➤ <i>Isothermal and adiabatic processes.</i> ➤ <i>Work done in thermodynamic processes.</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Second law of thermodynamics</i> ➤ <i>Reversible and irreversible processes,</i> 	
4TH WEEK	➤ <i>Heat engine and refrigerator.</i>	
5TH WEEK	➤ <i>Numerical problems</i>	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Oscillations and Waves</i>		24
1ST WEEK	➤ <i>Periodic motion - time period, frequency, displacement as a function of time, periodic functions.</i>	

2ND WEEK	➤ <i>Simple harmonic motion (S.H.M) and its equation; phase; Oscillations of a loaded spring restoring force and force constant;</i>
3RD WEEK	➤ <i>Energy in S.H.M. Kinetic and potential energies;</i> ➤ <i>Simple pendulum derivation of expression for its time period.</i>
4TH WEEK	➤ <i>Free, forced and damped oscillations (qualitative ideas only), resonance</i>
5TH WEEK	➤ <i>Wave motion: Transverse and longitudinal waves</i> ➤ <i>Speed of wave motion</i> ➤ <i>Displacement relation for a progressive wave</i>

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Oscillations and Waves</i>		24
1ST WEEK	<i>Principle of superposition of waves, reflection of waves</i>	
2ND WEEK	<i>Waves in strings (Standing waves)</i>	
3RD WEEK	<i>Fundamental mode and harmonics,</i>	
4TH WEEK	<i>Beats, Doppler effect</i>	
5TH WEEK	<i>Numericals related to the waves</i>	

NOVEMBER (Class 12th)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Wave Optics</i>		22
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Wave front and Huygen's principle.</i> ➤ <i>Reflection and refraction of plane wave at a plane surface using wave fronts.</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Proof of laws of reflection and refraction using Huygen's principle.</i> ➤ <i>Interference</i> 	
3RD WEEK	➤ <i>Young's double slit experiment and expression for fringe width</i>	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Coherent sources and sustained interference of light.</i> ➤ <i>Diffraction due to a single slit.</i> ➤ <i>Width of central maximum.</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>resolving power of microscope and astronomical telescope</i> ➤ <i>polarization</i> ➤ <i>plane polarised light</i> 	

DECEMBER (Class 12th)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Ray Optics(Contd.) Optical instruments</i>		24
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Brewster's law.</i> ➤ <i>Uses of plane polarised light and Polaroids.</i> 	

2ND WEEK	<ul style="list-style-type: none">➤ <i>Dual nature of radiation,</i>➤ <i>Photoelectric effect</i>
3RD WEEK	<ul style="list-style-type: none">➤ <i>Hertz and Lenard's observations.</i>
4TH WEEK	<i>Winter Break</i>

SUBJECT: CHEMISTRY (043)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Some basic concepts of chemistry & Structure of Atom.</i>	5+6	20
2ND WEEK	<i>Relative atomic mass, gram atomic mass, average atomic mass, molecular mass, and gram molecular mass, formula mass, gram formula mass and problems based on average atomic mass and molecular mass. Bohr's model of atom-posulates, quantization of energy, usefulness, limitation, hydrogen spectrum.</i>	
3RD WEEK	<i>Mole concept, problems based on mole concept, molarity. Dual nature of matter and radiation-de Broglie's relationship, Heisenberg uncertainty principle.</i>	
4TH WEEK	<i>Molality, mole fraction, parts per million, percentage method and problems based on concentration terms Concept of orbitals, quantum numbers, shapes of s, p and d orbitals,</i>	
5TH WEEK	<i>Stoichiometry, limiting reagent and problems based on Stoichiometry. Energy level diagram of hydrogen atom and multielectron system. rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Some basic concepts of chemistry, Structure of Atom (Contd.), Periodic classification of elements & Redox reactions.</i>	4+4	21
1ST WEEK	<i>Percentage composition, empirical and molecular formula. Hund's rule.</i>	
2ND WEEK	<i>Law of conservation of mass, law of definite proportion, law of multiple proportion, problems based on these laws Electronic configuration of atoms, stability of half-filled and completely filled orbitals</i>	
3RD WEEK	<i>Modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii, inert gas radii, Avagadro's law, numerical on these laws. Concept of oxidation and reduction, calculation of oxidation number.</i>	
4TH WEEK	<i>Electron gain enthalpy, Ionization enthalpy, electronegativity, valency. Balancing redox reactions in terms of loss and gain of electrons.</i>	
5TH WEEK	<i>Nomenclature of elements with atomic number greater than 100, periodic trends in chemical properties Balancing redox reactions in terms of change in oxidation number. Assignment: Environmental chemistry. (Soft copy of assignment will be provided to students along with video lesson).</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chemical bonding & chemical equilibrium.</i>	5+5	18
1ST WEEK	<i>Lewis symbols (valence electrons), ionic bond (formation and examples), factors governing ionic bond, lattice enthalpy, characteristic of ionic bond. Equilibrium in physical and chemical processes, reversible reactions, dynamic nature of chemical equilibrium, characteristics of chemical equilibrium.</i>	
2ND WEEK	<i>Covalent bond, octet rule, lewis structures, formal charge, limitation of octet rule, VSEPR theory. Law of mass action, law of chemical equilibrium, relation between K_p & K_c, characteristics of equilibrium constant, effect of temperature on equilibrium constant, types of chemical equilibrium, expression for equilibrium constant.</i>	
3RD WEEK	<i>Valence bond theory, sigma & pi bond, bond parameters, polar and non-polar, partial ionic character. Units & application of equilibrium constant, Le chatelier principle and its application.</i>	
4TH WEEK	Mid-Term Examination	
5TH WEEK	Mid-Term Examination	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chemical bonding and ionic equilibrium.</i>	5+5	05
1ST WEEK	Mid-Term Examination	
2ND WEEK	Mid-Term Examination	
3RD WEEK	Summer Break	
4TH WEEK	Summer Break/ Cross Checking	
5TH WEEK	<i>Dipole moment & its application, Fajan's rules, hybridization and its types, predicting hybridization, shapes of molecules. Ionic equilibrium- strong & weak electrolytes, degree of dissociation, ionization of weak electrolytes (Ostwald's dilution law)</i>	

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chemical bonding and ionic equilibrium. Organic Chemistry - Some Basic Principles & Techniques and Gaseous state.</i>	10+4	22
1ST WEEK	<i>Molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), hydrogen bond. Ionic product of water, pH & numericals based on pH, salt hydrolysis</i>	

	<i>(elementary), solubility product.</i>
2ND WEEK	<i>Classification and IUPAC nomenclature of organic compounds, inductive effect, electromeric effect. Applications of solubility product, common ion effect, buffer solution, its types and buffer action, Henderson-Hasselbalch equation.</i>
3RD WEEK	<i>Resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond, free radicals. Gaseous state, Boyle's law, Charles law, Lussac's law, Avogadro's law & problems based on these laws.</i>
4TH WEEK	<i>Carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions. Ideal gas equation, nature and value of gas constant, ideal gas equation in terms of density, Dalton's law of partial pressure and its application, ideal and real gases.</i>
5TH WEEK	<i>Isomerism. Ideal and real gases. Assignment: Hydrogen (soft copy of assignment will be provided to students along with video lesson)</i>

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Gaseous state, Hydrocarbons & Thermodynamics</i>	8+7	25
1ST WEEK	<i>Alkanes - Nomenclature, isomerism, conformation (Ethane & Methane), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis. Deviation from ideal behavior, cause of deviation, vanderwals equation, liquefaction of gases and critical temperature.</i>	
2ND WEEK	<i>Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen. Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics, internal energy.</i>	
3RD WEEK	<i>Chemical reactions: water, hydrogen halides (Markownikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition. Enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH, Hess's law of constant heat summation.</i>	
4TH WEEK	<i>Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water. Enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution.</i>	
5TH WEEK	<i>Aromatic Hydrocarbons: chemical properties: mechanism of</i>	

	<p><i>electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation.</i></p> <p><i>Spontaneous and non-spontaneous process, entropy as a state function, spontaneity in terms of entropy change.</i></p>
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OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Hydrocarbons, Thermodynamics (contd) & p block elements</i>	4	26
1ST WEEK	<i>Directive influence of functional group in monosubstituted benzene. Second law of Thermodynamics (brief introduction), Gibb's energy change for spontaneous and non-spontaneous processes, criteria for equilibrium. Third law of thermodynamics (brief introduction).</i>	
2ND WEEK	<i>Group 13 Elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity.</i> <i>Group 14 Elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity.</i>	
3RD WEEK	<i>Group 13 Elements: anomalous properties of first element of the group, Boron - physical and chemical properties.</i> <i>Group 14 Elements: anomalous behaviour of first elements. Carbon-catenation, allotropic forms, physical and chemical properties;</i>	
4TH WEEK	<i>Group 13 Elements: Borax, Boric acid, Boron Hydrides.</i> <i>Group 14 Elements: oxides. Important compounds of Silicon</i>	
5TH WEEK	<i>Group 13 Elements: Aluminium: Reactions with acids and alkalis, uses. Preparation, properties and concentration of hydrogen peroxide.</i> <i>Group 14 Elements: Silicon Tetrachloride, Silicones, Silicates and Zeolites, their uses.</i> Assignment: <i>S-block elements (Soft copy of assignment along with video lesson will be provided to students)</i>	

NOVEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Solutions, Alkyl Halide & Aryl Halide</i>	6+5	25
1ST WEEK	<i>Classification and types of solution, expressing concentration of a solution, solubility and factors affecting solubility, Henry's law.</i> <i>Classification and nomenclature of haloalkanes, nature of C-X bond, methods of preparation of haloalkanes, physical properties of alkyl halides and aryl halides.</i>	
2ND WEEK	<i>Vapour pressure, Raoult's law for volatile and non-volatile solute, ideal and non-ideal solution, azeotropic mixture.</i> <i>Nucleophilic substitution and elimination reaction of alkyl halides</i>	

	<i>(mechanism of substitution reactions) and optical isomerism.</i>
3RD WEEK	<i>Colligative properties-elevation of boiling point, depression of freezing point, osmotic pressure, relative lowering of vapour pressure, determination of molecular masses using colligative properties. Haloarenes: methods of preparation, nature of C-X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).</i>
4TH WEEK	<i>Abnormal molecular mass, Van't Hoff factor. Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.</i>
5TH WEEK	<i>Numericals on Van't Hoff factor.</i>

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chemical kinetics, Alcohols and phenol.</i>		26
1ST WEEK	<i>Rate of a reaction (Average and instantaneous), Effect of concentration, order and molecularity of reaction, rate law and rate constant. Classification and nomenclature of alcohols, Methods of preparation of alcohols.</i>	
2ND WEEK	<i>Integrated rate laws-zero and first order reactions, half-life period of zero and first order reaction. Physical and chemical properties of alcohols, identification of primary, secondary and tertiary alcohols, mechanism of dehydration,</i>	
3RD WEEK	<i>Effect of temperature on rate, Arrhenius equation and activation energy, Elementary concept of collision theory, Nomenclature, methods of preparation, physical properties and acidic nature of phenol.</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: BIOLOGY (044)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
➤ <i>Human Physiology</i> ➤ <i>Plant physiology</i>	17+17	60+60
2ND WEEK	➤ <i>Digestion and absorption.</i> ➤ <i>Plant Respiration.</i>	
3RD WEEK	➤ <i>Breathing and Exchange of gases.</i> ➤ <i>Plant respiration.</i>	
4TH WEEK	➤ <i>Breathing and Exchange of gases.</i> ➤ <i>Mineral nutrition.</i>	
5TH WEEK	➤ <i>Body fluids and circulation.</i> ➤ <i>Photosynthesis in higher plants.</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
➤ <i>Human physiology</i> ➤ <i>Plant physiology</i>	34	60+60
1ST WEEK	➤ <i>Body fluids and circulation.</i> ➤ <i>Photosynthesis in higher plants.</i>	
2ND WEEK	➤ <i>Excretory products and their elimination.</i> ➤ <i>Transport in plants.</i>	
3RD WEEK	➤ <i>Excretory products and their elimination.</i> ➤ <i>Transport in plants.</i>	
4TH WEEK	➤ <i>Excretory products and their elimination.</i> ➤ <i>Transport in plants.</i>	
5TH WEEK	➤ <i>Neural control & coordination.</i> ➤ <i>Plant growth & development.</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
➤ <i>Human physiology</i> ➤ <i>Organization in plants & animals</i>	17+4	60+14
1ST WEEK	➤ <i>Neural control & coordination</i> ➤ <i>Plant kingdom.</i>	
2ND WEEK	➤ <i>Neural control & coordination.</i> ➤ <i>Plant kingdom.</i>	
3RD WEEK	➤ <i>Neural control & coordination.</i> ➤ <i>Plant kingdom.</i>	
4TH WEEK	<i>Mid-Term Examination</i>	
5TH WEEK	<i>Mid-Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Mid-Term Examination</i>	
2ND WEEK	<i>Mid-Term Examination</i>	
3RD WEEK	<i>Summer Break</i>	
4TH WEEK	<i>Summer Break/ Cross Checking</i>	
5TH WEEK	<i>Cell Biology.</i>	

AUGUST

TOPICS / CHAPTERS	WEIGHT -AGE	TEACHING PERIODS
<ul style="list-style-type: none"> ➤ <i>Cell structure & function</i> ➤ <i>Structural organization in plants & animals</i> 	14	30
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Cell biology.</i> ➤ <i>Biomolecules.</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Cell biology.</i> ➤ <i>Biomolecules.</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Cell biology.</i> ➤ <i>Biomolecules.</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Cell cycle.</i> ➤ <i>Biomolecules.</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Cell cycle.</i> ➤ <i>Plant morphology.</i> 	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT -AGE	TEACHING PERIODS
<i>Structural Organisation in Plants & Animals</i>	12	30
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Plant morphology.</i> ➤ <i>Chemical control & coordination.</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Plant anatomy.</i> ➤ <i>Chemical control & coordination.</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Plant anatomy.</i> ➤ <i>Locomotion and movement.</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Plant anatomy.</i> ➤ <i>Locomotion and movement.</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Biological classification.</i> ➤ <i>Locomotion & movement.</i> 	

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Biological classification</i>	10	40

1ST WEEK	➤ <i>Biological classification (Being alive: What does it mean?)</i> ➤ <i>Kingdom Monera</i>
2ND WEEK	➤ <i>Biological classification (Being alive: What does it mean?)</i> ➤ <i>Kingdom Protista</i>
3RD WEEK	➤ <i>Biological classification.</i> ➤ <i>Kingdom Fungi.</i>
4TH WEEK	➤ <i>Biological classification.</i> ➤ <i>Kingdom Fungi.</i>
5TH WEEK	➤ <i>Video Lessons & Assignments to Animal Kingdom and Tissues.</i>

NOVEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
➤ <i>Biotechnology-Principles & Applications</i> ➤ <i>Biology in Human Welfare</i>	10+14	30+30
1ST WEEK	➤ <i>Biotechnology principles and process.</i> ➤ <i>Microbes in human welfare.</i>	
2ND WEEK	➤ <i>Biotechnology principles and process.</i> ➤ <i>Human health and disease.</i>	
3RD WEEK	➤ <i>Biotechnology & its applications.</i> ➤ <i>Human health & disease.</i>	
4TH WEEK	➤ <i>Biotechnology & its applications.</i> ➤ <i>Human health & disease.</i>	
5TH WEEK	➤ <i>Food production.</i> ➤ <i>Organisms in population.</i>	

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
➤ <i>Ecology</i> ➤ <i>Biology in human welfare</i>	14 +14	30+30
1ST WEEK	➤ <i>Food production.</i> ➤ <i>Ecosystem.</i>	
2ND WEEK	➤ <i>Biodiversity & conservation.</i> ➤ <i>Ecosystem.</i>	
3RD WEEK	➤ <i>Biodiversity.</i> ➤ <i>Environmental issues.</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: MATHEMATICS (041)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 1: Sets</i> <i>Chapter 2: Relations & Functions</i>	10	24
2ND WEEK	<i>Sets and their representations. Emptyset. Finite and Infinite sets. Equal sets. Subsets. Subsets of a Set of real numbers especially intervals (with notations). Power set. Universal set. Venn Diagrams.</i>	
3RD WEEK	<i>Union and Intersection of sets. Difference of sets. Complement of a set. Properties of Complement.</i> <i>Ordered pair. Cartesian product of sets. Number of elements in the Cartesian product of two finitesets. Cartesian product of the set of real's with itself (upto $R \times R \times R$).</i>	
4TH WEEK	<i>Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. Function as a special type of relation.</i> <i>Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions</i>	
5TH WEEK	<i>Constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs. Sum, Difference, product and quotients of functions.</i> <i>Lab activity</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 3: Trigonometric Functions</i>	15	23
1ST WEEK	<i>Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $\sin^2x + \cos^2x = 1$, for all x. Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing $\sin(x \pm y)$ and $\cos(x \pm y)$ in terms of $\sin x$, $\sin y$, $\cos x$ & $\cos y$ and their simple applications.</i>	
2ND WEEK	<i>Deducing identities like the following: Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ and $\tan 3x$. General solution of trigonometric Equations.</i>	
3RD WEEK	<i>Trigonometric functions of sum and difference of two angles.</i>	
4TH WEEK	<i>Introduction about principle of mathematical induction. Motivation</i>	
5TH WEEK	<i>Simple Application.</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 4: Complex numbers</i> <i>Chapter 5: Quadratic equations.</i>	20	30

1ST WEEK	<i>Need for complex numbers, especiallyiota, to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Arg and plane and polar representation of complex numbers.</i>
2ND WEEK	<i>Statement of Fundamental Theorem of Algebra, solution of quadratic equations (with real coefficients) in the complex number system. Square root of a complex number.</i>
3RD WEEK	<i>Revision</i>
4TH WEEK	Mid-Term Examination
5TH WEEK	Mid-Term Examination

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 6: Linear Inequations</i>		
1ST WEEK	Mid-Term Examination	
2ND WEEK	Mid-Term Examination	
3RD WEEK	Summer Break	
4TH WEEK	Summer Break/ Cross Checking	
5TH WEEK	<i>Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Graphical method of finding a solution of system of linear inequalities in two variables. Lab activity</i>	

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 7: Permutations & Combinations (10) Periods. Chapter 8: Binomial Theorem (10) periods</i>	10	10
1ST WEEK	<i>Fundamental principle of counting. Factorial. (n!) Permutations and combination.</i>	
2ND WEEK	<i>Derivation of Formulas and its applications.</i>	
3RD WEEK	<i>History, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle.</i>	
4TH WEEK	<i>General and middle term in binomial expansion.</i>	
5TH WEEK	<i>Simple applications.</i>	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 9: Straight Lines (10) Periods Chapter 10: Conic Sections (20) Periods</i>	10	20
1ST WEEK	<i>Brief recall of two-dimensional geometry from earlier classes. Shifting of origin. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axis, point –slope form.</i>	

2ND WEEK	<i>Slope-intercept form, two-point form, intercept form and normal form. General equation of a line. Equation of family of lines passing through the point of intersection of two lines. Distance of a point from a line.</i>
3RD WEEK	<i>Standard form of the equation of a circle. General form of the equation of a circle, its radius and the center. Equation of the circle in the parametric form. Equation of a circle when the end points of a diameter are given.</i>
4TH WEEK	<i>Sections of a cone. Equations of conic sections in standard form. Applications of Parabola, Ellipse and Hyperbola.</i>
5TH WEEK	<i>Revision.</i>

OCTOBER

	TOPICS / CHAPTERS	WEIGHT -AGE	TEACHING PERIODS
	<i>Chapter 11: Introduction to Three-dimensional Geometry (10) Periods Chapter 12: Limits & Derivatives Chapter 13: Statistics</i>	15	24
1ST WEEK	<i>Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula. Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials.</i>		
2ND WEEK	<i>Limits of rational functions trigonometric, Exponential and logarithmic functions. Definition of derivative relate it to slope of tangent of the Curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.</i>		
3RD WEEK	<i>Random experiments; outcomes, sample spaces (set representation). Events; occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability.</i>		
4TH WEEK	<i>Connections with other theories of earlier classes. Probability of an event, Probability of 'not', 'and' and 'or' events.</i>		
5TH WEEK	<i>Statistics. (Soft copy of assignment, along with video lesson, will be provided to students.)</i>		

NOVEMBER (Class XII)

	TOPICS / CHAPTERS	WEIGHT -AGE	TEACHING PERIODS
	<i>Chapter 1: Matrices & Determinants</i>		
1ST WEEK	<i>Determinants Determinant of square matrix up to 3x3 Properties of determinants Exercise related to determinants</i>		
2ND WEEK	<i>Introduction of matrices Types of matrices Operations of matrices</i>		

3RD WEEK	<i>Concept of row and column operation Invertible matrices and proof of uniqueness of inverse</i>
4TH WEEK	<i>Determinant of square matrix up to 3x3 Properties of determinants</i>
5TH WEEK	<i>Exercise related to determinants</i>

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT -AGE	TEACHING PERIODS
<i>Determinants: (continued)</i> <i>Application of determinants in finding area of triangle Adjoint and inverse of square matrix Consistency & inconsistency of system of linear equations Solving system of linear equations by using inverse of matrix</i>		
1ST WEEK	<i>(i) Application of determinants in finding area of triangle (ii) Adjoint and inverse of square matrix</i>	
2ND WEEK	<i>Consistency and inconsistency of system of linear equations</i>	
3RD WEEK	<i>Solving system of linear equations by using inverse of matrix</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: COMPUTER SCIENCE (083)

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>DATA MANAGEMENT-I</i>		15	30
2 ND WEEK	<i>Database Purpose of Database DBMS Relational Database Model Database Keys (Primary key, Foreign key, Candidate key, Alternate key) Introduction to MySQL DBMS MySQL Data Types DDL vs DML Statements.</i>		
3 RD WEEK	<i>Create command Show databases command Show tables command Desc Command</i>		
4 TH WEEK	<i>Insert command Select command Selecting all rows</i>		
5 TH WEEK	<i>Selecting specific columns. Eliminating redundant records – DISTINCT Keyword</i>		

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>DATA MANAGEMENT-I Contd. COMPUTER ORGANIZATION</i>		10	20
1 ST WEEK	<i>Order by clause and Group by Clause Relational, Logical and Arithmetic Operators Update and Delete Command Alter and Drop Command</i>		
2 ND WEEK	<i>SQL Aggregate functions (Sum(), Min(), Max(), Count(), Avg()) Introduction to NoSQL databases.</i>		
3 RD WEEK	<i>Introduction to Computers Basic Computer Organization Components of a Computer (Hardware and Software) Types of software</i>		
4 TH WEEK	<i>Operating System Compiler and Interpreter</i>		
5 TH WEEK	<i>Memory and types of memory Memory Units</i>		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>COMPUTER ORGANIZATION Contd.</i>			
1ST WEEK	<i>Logic Gates Circuit design</i>		
2ND WEEK	<i>Introduction to Number Systems. Conversion of one number system into another.</i>		
3RD WEEK	<i>Concept of Algorithms and Flowcharts Flowchart Symbols Drawing Flowcharts</i>		
4TH WEEK	<i>Mid-Term Examination</i>		
5TH WEEK	<i>Mid-Term Examination</i>		

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>COMPUTER ORGANIZATION CONTD.</i>			
1STWEEK	<i>Mid-Term Examination</i>		
2ND WEEK	<i>Mid-Term Examination</i>		
3RD WEEK	<i>Summer Break</i>		
4TH WEEK	<i>Summer Break/ Cross Checking</i>		
5TH WEEK	<i>Cloud Computing Parallel Computing Strings – ASCII, UNICODE, ISCH, UTF8, UTF32</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>PROGRAMMING AND COMPUTATIONAL THINKING-1</i>		35	60
1st WEEK	<i>Introduction to programming Basics of python programming Features of python</i>		
2ND WEEK	<i>Simple programs in python Python tokens Python comments Input() and Print() statements Writing programs using these statements.</i>		
3RD WEEK	<i>Introduction to conditional statements If, if-else and if-elif-else Programs on conditional statements</i>		

4TH WEEK	<i>Introduction to loops</i> <i>While loop</i> <i>For loop</i> <i>Range keyword</i>
5TH WEEK	<i>Programs on loops</i>

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>PROGRAMMING AND COMPUTATIONAL THINKING-1 contd.</i>		
1ST WEEK	<i>Introduction to errors</i> <i>Types of errors</i> <i>Debugging</i> <i>Pdb break points</i>	
2ND WEEK	<i>Introduction to lists</i> <i>Programs on lists</i>	
3RD WEEK	<i>Introduction to tuple</i> <i>Introduction to dictionary</i> <i>Programs on tuples and dictionary</i>	
4TH WEEK	<i>Bubble sort</i> <i>Selection sort</i> <i>Insertion sort</i>	
5TH WEEK	<i>Strings and String functions.</i>	

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>PROGRAMMING AND COMPUTATIONAL THINKING-1 contd.</i> <i>SOCIETY, LAW AND ETHICS-I</i>	<i>10</i>	<i>5</i>
1ST WEEK	<i>Python Modules</i> <i>Math module</i> <i>Random module</i>	
2ND WEEK	<i>Statistics module</i> <i>Working with turtle module</i>	
3RD WEEK	<i>Cyber Safety</i> <i>Threats to the security of the systems.</i>	
4TH WEEK	<i>Social networking</i> <i>Usage rules</i>	
5TH WEEK	<i>Safely Communicating Data</i>	

NOVEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>DATA MANAGEMENT - 2</i>	<i>15</i>	<i>30</i>
1ST WEEK	<i>Revision of SQL queries</i>	
2ND WEEK	<i>Where, having, group by, and order by clause Interfacing python with MySQL</i>	
3RD WEEK	<i>Interfacing python with MySQL</i>	
4TH WEEK	<i>Interfacing python with MySQL</i>	
5TH WEEK	<i>Interfacing python with MySQL</i>	

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Introduction to Django Framework</i>	
2ND WEEK	<i>Django Architecture How to install Django and its virtual environment Django GET and POST methods Simple web applications using django</i>	
3RD WEEK	<i>Writing on to flat file. Writing on to CSV file.</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: PSYCHOLOGY (037)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 1: What is Psychology?</i>	7	24
2ND WEEK	<i>What is Psychology?</i> <i>Understanding Mind and Behaviour.</i> <i>Popular Notions about the Discipline of Psychology.</i> <i>Evolution of Psychology.</i> <i>Development of Psychology in India.</i>	
3RD WEEK	<i>Branches of Psychology.</i> <i>Themes of Research and Application.</i> <i>Psychology and other Disciplines.</i> <i>Psychologists at work.</i> <i>Psychology in everyday life.</i>	
4TH WEEK	<i>Goals of Psychological Enquiry.</i> <i>Nature of Psychological Data.</i>	
5TH WEEK	<i>Observational Method.</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 2: Methods of Psychological enquiry</i>	10+8	26
1ST WEEK	<i>Experimental Psychology.</i> <i>Correlational Research.</i> <i>Survey Research.</i> <i>Psychological Testing.</i> <i>Case Study.</i>	
2ND WEEK	<i>Analysis of Data.</i> <i>Limitations of Psychological Enquiry.</i> <i>Ethical Issues.</i> <i>Introduction to the Bases of Human Behaviour.</i> <i>Evolutionary Perspective.</i> <i>Biological and Cultural Roots.</i> <i>Biological Bases of Behaviour.</i>	
3RD WEEK	<i>Neuron.</i> <i>Structure and functions of Nervous System.</i>	
4TH WEEK	<i>Endocrine System and its relationship with behaviour.</i> <i>Heredity: Genes and Behaviour.</i> <i>Cultural Basis: Concept of Culture.</i> <i>Socio-Cultural Shaping of Behaviour.</i>	
5TH WEEK	<i>Enculturation</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
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<i>Chapter 3: Basis of Human Behaviour</i>		6	18
<i>Chapter 4: Human Development</i>			
1ST WEEK	<i>Socialization.</i> <i>Acculturation.</i> <i>Introduction to Human Development: Basic Concepts.</i> <i>Life-Span Perspective on Development.</i> <i>Factors influencing Development: Heredity and Environment.</i> <i>Context of Development.</i>		
2ND WEEK	<i>Prenatal Stage.</i> <i>Infancy.</i> <i>Childhood.</i>		
3RD WEEK	<i>Challenges of Adolescence.</i> <i>Adulthood.</i> <i>Old age.</i> <i>Introduction to Sensory, Attentional and Perceptual processes.</i>		
4TH WEEK	Mid-Term Examination		
5TH WEEK	Mid-Term Examination		

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Contd.</i>		-	3
1ST WEEK	Mid-Term Examination		
2ND WEEK	Mid-Term Examination		
3RD WEEK	Summer Break		
4TH WEEK	Summer Break/ Cross Checking		
5TH WEEK	<i>Nature and varieties of Stimuli.</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 5: Sensory, Attentional & Perceptual Processes.</i>		8	23
1ST WEEK	<i>Sense Modalities:</i> <i>Visual Sensation.</i> <i>Auditory Sensation.</i> <i>Other Senses.</i> <i>Attentional Processes.</i>		
2ND WEEK	<i>Selective Attention.</i> <i>Sustained Attention.</i> <i>Divided Attention.</i> <i>Perceptual Processes.</i>		
3RD WEEK	<i>Processing approaches in Perception.</i> <i>The Perceiver.</i> <i>Principles of Perceptual Organisation.</i> <i>Perception of Space, Depth and Distance.</i>		

4TH WEEK	<i>Monocular Cues and Binocular Cues. Illusions. Socio-Cultural influences on Perception. Introduction to Learning. Nature of Learning.</i>
5TH WEEK	<i>Introducing the Paradigms of Learning.</i>

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 6: Learning Chapter 7: Memory</i>	9+8	26
1ST WEEK	<i>Classical Conditioning. Determinants of Classical Conditioning. Operant/ Instrumental Conditioning. Determinants of Operant Conditioning. Observational Learning.</i>	
2ND WEEK	<i>Cognitive Learning. Verbal Learning. Concept Learning. Skill Learning. Transfer of Learning. Factors facilitating Learning.</i>	
3RD WEEK	<i>Learning Styles. Learning Disabilities. Applications of Learning Principles. Introduction to Human Memory. Nature of Memory. The Stage Model of Memory. Memory Systems: Sensory, Short-Term and Long-Term Memory.</i>	
4TH WEEK	<i>Levels of Processing. Types of Long-Term Memory. Knowledge representation and Organisation in Memory. Memory as a Constructive Process. Nature and Causes of Forgetting.</i>	
5TH WEEK	<i>Enhancing Memory.</i>	

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 8: Thinking & Problem Solving Chapter 9: Motivation & Emotion</i>	7+7	26
1ST WEEK	<i>Introduction to Thinking. Nature of Thinking. The Process of Thinking. Problem Solving.</i>	
2ND WEEK	<i>Reasoning. Decision Making.</i>	

	<i>Nature and Process of Creative Thinking. Developing Creative Thinking. Thought and Language.</i>
3RD WEEK	<i>Development of Language and Language use. Introduction to Motivation and Emotion. Nature of Motivation. Types of Motives. Maslow's Hierarchy of Needs. Nature of Emotions.</i>
4TH WEEK	<i>Physiological Bases of Emotions. Cognitive Bases of Emotions. Cultural Bases of Emotions. Expression of Emotions. Managing Negative Emotions.</i>
5TH WEEK	<i>Enhancing Positive Emotions.</i>

NOVEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 1: Variations in Psychological Attributes.</i>	<i>0</i>	<i>22</i>
1ST WEEK	<i>Introduction to Variations in Psychological Attributes. Individual Differences in Human functioning. Assessment of Psychological Attributes. Intelligence.</i>	
2ND WEEK	<i>Psychometric Theories of Intelligence.</i>	
3RD WEEK	<i>Information Processing Theory. Theory of Multiple Intelligences. Triarchic Theory of Intelligence. PASS Model of Intelligence. Individual differences in Intelligence.</i>	
4TH WEEK	<i>Culture and Intelligence. Emotional Intelligence. Special Abilities.</i>	
5TH WEEK	<i>Creativity</i>	

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 2: Self & Personality</i>	<i>0</i>	<i>24</i>
1ST WEEK	<i>Introduction to Self and Personality. Concept of Self. Cognitive and Behavioural aspects of Self. Culture and Self.</i>	
2ND WEEK	<i>Concept of Personality. Type Approach to the study of personality. Trait Approach.</i>	

	<i>Psychodynamic Approach.</i>
3RD WEEK	<i>Behavioural Approach. Cultural Approach. Humanistic Approach. Assessment of Personality.</i>
4TH WEEK	<i>Winter Break</i>

SUBJECT: PAINTING (049)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
	70/30	08
2ND WEEK	<i>Theory: Introduction and Fundamentals of ART</i> <i>Practicals: Art materials Introduction</i>	
3RD WEEK	<i>Theory: Introduction and Fundamentals of ART</i> <i>Practicals: Art materials Introduction</i>	
4TH WEEK	<i>Theory: Art and Culture.</i> <i>Practicals: Introduction to "Object study"</i>	
5TH WEEK	<i>Theory: Origin and development of different forms of fine arts in India.</i> <i>Practicals: Object study.</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
	70/30	08
1ST WEEK	<i>Theory: Prehistoric Rock Paintings.</i> <i>Practicals: Object study.</i>	
2ND WEEK	<i>Theory: Study of plates (prehistoric rock paintings)</i> <i>Practicals: Introduction to Figurative Sketching.</i>	
3RD WEEK	<i>Theory: Art of Indus valley (Introduction)</i> <i>Practicals: Figurative quick Sketching.</i>	
4TH WEEK	<i>Theory: Art of Indus valley (Study of the artifacts of this period)</i> <i>Practicals: Figurative quick Sketching.</i>	
5TH WEEK	<i>Theory: Art of Indus valley (Study of art works)</i> <i>Practicals: Figurative quick Sketching.</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
	70/30	08
1ST WEEK	<i>Theory: Buddhist, Jain and Hindu art (Introduction)</i> <i>Practicals: Colour and design compositions.</i>	
2ND WEEK	<i>Theory: The art during Mauryan period (Introduction)</i> <i>Practicals: Colour and design compositions</i>	
3RD WEEK	<i>Theory: The art during Mauryan period (study of sculptures)</i> <i>Practicals: Colour and design compositions</i>	
4TH WEEK	Mid-Term Examination	
5TH WEEK	Mid-Term Examination	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
	70/30	08

1ST WEEK	<i>Mid-Term Examination</i>
2ND WEEK	<i>Mid-Term Examination</i>
3RD WEEK	<i>Summer Break</i>
4TH WEEK	<i>Summer Break/ Cross Checking</i>
5TH WEEK	

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1ST WEEK	<i>Theory: Artistic aspect of Indian Temple and Sculptures Practicals: Object study in Colour</i>		
2ND WEEK	<i>Theory: Artistic aspect of Indian Temple and Sculptures Practicals: Object study in Colour</i>		
3RD WEEK	<i>Theory: Artistic aspect of Indian Temple and Sculptures Practicals: Object study in Colour</i>		
4TH WEEK	<i>Theory: Indian Bronze Sculptures Practicals: Object study in Colour</i>		
5TH WEEK	<i>Theory: Indian Bronze Sculptures Practicals: Object study in Colour</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1ST WEEK	<i>Theory: Indian Bronze Sculptures Practicals: sketching</i>		
2ND WEEK	<i>Theory: Some artistic aspects of Indo Islamic Architecture. Practicals: Sketching</i>		
3RD WEEK	<i>Theory: Some artistic aspects of Indo Islamic Architecture. Practicals: Sketching</i>		
4TH WEEK	<i>Theory: Some artistic aspects of Indo Islamic Architecture. Practicals: Sketching</i>		
5TH WEEK	<i>Theory: Some artistic aspects of Indo Islamic Architecture. Practicals: Sketching</i>		

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1ST WEEK	<i>Theory: The Art of Ajants Caves Practicals: Object study in Colour</i>		
2ND WEEK	<i>Theory: The Art of Ajants Caves Practicals: Object study in Colour</i>		
3RD WEEK	<i>Theory: The Art of Ajants Caves Practicals: Object study in Colour</i>		

4TH WEEK	<i>Theory: The Art of Ajants Caves</i> <i>Practicals: Object study in Colour</i>
5TH WEEK	<i>Theory: The Art of Ajants Caves</i> <i>Practicals: Object study in Colour</i>

NOVEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
	<i>70/30</i>	<i>08</i>
1ST WEEK	<i>Theory: Fundamentals of Art</i> <i>Practicals: Nature and Object Study</i>	
2ND WEEK	<i>Theory: Fundamentals of Art</i> <i>Practicals: Nature and Object Study</i>	
3RD WEEK	<i>Theory: Fundamentals of Art</i> <i>Practicals: Nature and Object Study</i>	
4TH WEEK	<i>Theory: Fundamentals of Art</i> <i>Practicals: Nature and Object Study</i>	
5TH WEEK	<i>Theory: Fundamentals of Art</i> <i>Practicals: Nature and Object Study</i>	

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
	<i>70/30</i>	<i>08</i>
1ST WEEK	<i>Theory: Introduction of Indian Miniatures.</i> <i>Practicals: Sketching</i>	
2ND WEEK	<i>Theory: Rajisthani School of Art</i> <i>Practicals: Sketching</i>	
3RD WEEK	<i>Theory: Rajisthani School of Art</i> <i>Practicals: Sketching</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: PHYSICAL EDUCATION (048)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
2ND WEEK	<i>Meaning and definition of Physical Education</i>	
3RD WEEK	<i>Aims and objectives of Physical Education</i>	
4TH WEEK	<i>Career objectives in Physical Education</i>	
5TH WEEK	<i>Competitions in various sports at national and international level/ khelo India khelo</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Olympic Movements :Paralympics and special Olympics</i>	
2ND WEEK	<i>Olympic symbols, ideals, objectives and values of Olympics.</i>	
3RD WEEK	<i>International Olympic committee</i>	
4TH WEEK	<i>Indian Olympic association</i>	
5TH WEEK	<i>Physical fitness and wellness: introduction, aims and objectives,</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Meaning and importance of physical fitness and wellness.</i>	
2ND WEEK	<i>Components of Physical Fitness, Wellness and wellness/ components of health related fitness,</i>	
3RD WEEK	<i>Yoga: meaning and importance of yoga/elements of yoga introduction to Asanas</i>	
4TH WEEK	<i>Mid-Term Examination</i>	
5TH WEEK	<i>Mid-Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Mid-Term Examination</i>	
2ND WEEK	<i>Mid-Term Examination</i>	
3RD WEEK	<i>Summer Break</i>	
4TH WEEK	<i>Summer Break/ Cross Checking</i>	
5TH WEEK	<i>Relaxation techniques for improving concentration</i>	

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1 ST WEEK	<i>Physical Activity and leadership training: leadership qualities and role of leader/ Creating leaders through physical education.</i>	
2 ND WEEK	<i>Meaning, objectives & types of adventure sports/safety measures to prevent sports injuries..</i>	
3 RD WEEK	<i>Test Measurement and evaluation: definition & importance of test measurement and evaluation in sports.</i>	
4 TH WEEK	<i>Test Measurement and evaluation calculation of BMI, somato types, measurement of health related fitness.</i>	
5 TH WEEK	<i>Fundamentals of Anatomy and physiology definition and importance</i>	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1 ST WEEK	<i>Functions of Skelton system classification of bones and joints, types of joints.</i>	
2 ND WEEK	<i>Properties functions and stricture of respiratory system.</i>	
3 RD WEEK	Properties of circulatory system	
4 TH WEEK	<i>Equilibrium- dynamic and static</i>	
5 TH WEEK	<i>Centre of gravity and its application in sports.</i>	

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1 ST WEEK	<i>Physiology and Sports :definition and importance of physiology in phy.edu& sports/ differentiate between growth and development</i>	
2 ND WEEK	<i>Developmental characters at different stages of development/adolescent problems& their management.</i>	
3 RD WEEK	<i>Doping :concept and classification/prohibited substances and methods</i>	
4 TH WEEK	<i>Athletics responsibilities/side effects of prohibited substances.</i>	
5 TH WEEK	<i>Doping in sports/doping control procedures.</i>	

NOVEMBER (Class 12th)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1 ST WEEK	<i>Physical Education and Sports for CWSN - 1</i>	
2 ND WEEK	<i>Physical Education and Sports for CWSN – 2</i>	
3 RD WEEK	<i>Planning in Sports: meaning and objectives of planning, Various comities and their responsibilities</i>	

4TH WEEK	<i>Procedure of drawing the fixtures, Tournaments</i>
5TH WEEK	<i>Intra and extra murals/ specific sports programs.</i>

DECEMBER (Class 12th)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Sports and nutrition: balanced diet and nutrition.</i>	
2ND WEEK	<i>Nutritive and non nutritive components of diet.</i>	
3RD WEEK	<i>Eating for diet control.</i>	
4TH WEEK	<i>Winter Break</i>	

SUBJECT: ENGINEERING GRAPHICS (046)

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing (Orthographic Projections of Simple Machine Blocks)</i>	27	35/50
2ND WEEK	<i>Introduction to Orthographic Projections.</i>	
3RD WEEK	<i>Orthographic projections of simple machine blocks</i>	
4TH WEEK	<i>Orthographic projections of simple machine blocks</i>	
5TH WEEK	<i>Orthographic projections of simple machine blocks</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing (Orthographic Projections of Simple Machine Blocks)</i>	27	35/50
1ST WEEK	<i>Orthographic projections of simple machine blocks</i>	
2ND WEEK	<i>Orthographic projections of simple machine blocks</i>	
3RD WEEK	<i>Orthographic projections of simple machine blocks</i>	
4TH WEEK	<i>Orthographic projections of simple machine blocks</i>	
5TH WEEK	<i>Orthographic projections of simple machine blocks</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing (Development of Surfaces)</i>	27	15/50
1ST WEEK	<i>Development of surfaces</i>	
2ND WEEK	<i>Development of surfaces</i>	
3RD WEEK	<i>Development of surfaces</i>	
4TH WEEK	<i>Mid-Term Examination</i>	
5TH WEEK	<i>Mid-Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing (Development of Surfaces)</i>	27	15/50
1ST WEEK	<i>Mid-Term Examination</i>	
2ND WEEK	<i>Mid-Term Examination</i>	
3RD WEEK	<i>Summer Break</i>	

4TH WEEK	<i>Summer Break/ Cross Checking</i>
5TH WEEK	<i>Development of surfaces</i>

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Solid Geometry (Orthographic Projections of Points & Lines)</i>		27	86
1ST WEEK	<i>Orthographic projections of points</i>		
2ND WEEK	<i>Orthographic projections of lines</i>		
3RD WEEK	<i>Orthographic projections of lines</i>		
4TH WEEK	<i>Orthographic projections of regular plane figures</i>		
5TH WEEK	<i>Orthographic projections of regular plane figures</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Solid Geometry (Projections of Planes, Solids & Section of Solids)</i>		27	86
1ST WEEK	<i>Orthographic projections of right regular solids</i>		
2ND WEEK	<i>Orthographic projections of section of solids</i>		
3RD WEEK	<i>Orthographic projections of section of solids</i>		
4TH WEEK	<i>Orthographic projections of section of solids</i>		
5TH WEEK	<i>Letter Printing/ Dimensioning</i>		

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Plane Geometry</i>		16	38
1ST WEEK	<i>Special Curves: ellipse, parabola, involute, cycloid, helix and sine curve</i>		
2ND WEEK	<i>Circles and tangents</i>		
3RD WEEK	<i>Lines, angles and rectilinear figures</i>		
4TH WEEK	<i>Practicals (AutoCAD)</i>		
5TH WEEK	<i>Practicals (AutoCAD) & Industrial Visit</i>		

NOVEMBER (Class XII)

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Isometric Projection of Solids</i>		27	40/50
1ST WEEK	<i>Construction of isometric scale showing main divisions of 10mm and</i>		

	<i>smaller divisions of 1mm, also showing the leading angles. Drawing helping view/s such as triangles, pentagon, hexagon, etc., using isometric scale.</i>
2ND WEEK	<i>Isometric projection of planes</i>
3RD WEEK	<i>Isometric projection of Prisms</i>
4TH WEEK	<i>Isometric projection of Prisms</i>
5TH WEEK	<i>Isometric projection of Pyramids</i>

DECEMBER (Class XII)

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Isometric Projection of Solids</i>	<i>27</i>	<i>40/50</i>
1ST WEEK	<i>Isometric projection of Pyramids</i>	
2ND WEEK	<i>Isometric projection of Pyramids</i>	
3RD WEEK	<i>Isometric projection of combination of solids</i>	
4TH WEEK	<i>Winter Break</i>	