



Delhi Public School Srinagar

Syllabus 2020



Class XII

MEDICAL+ NON-MEDICAL

SUBJECT: ENGLISH (301)

MARCH

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			21
2 ND WEEK	<i>Notices, An elementary school classroom in a slum.</i>		
3 RD WEEK	<i>Lost Spring</i>		
4 TH WEEK	<i>Invitations and replies</i>		
5 TH WEEK	<i>Comprehension passages.</i>		

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1 ST WEEK	<i>Roadside Stand</i>		
2 ND WEEK	<i>Memories of Childhood Anecdote 1</i>		
3 RD WEEK	<i>Memories of Childhood Anecdote 2</i>		
4 TH WEEK	<i>Indigo</i>		
5 TH WEEK	<i>Aunt Jennifer's Tigers</i>		

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			27
1 ST WEEK	<i>The last lesson, Curriculum Vitae</i>		
2 ND WEEK	<i>A thing of Beauty, A letter to Editor.</i>		
3 RD WEEK	<i>Third Level, Note making.</i>		
4 TH WEEK	<i>Report Writing (Newspaper Report) (Magazine Report)</i>		
5 TH WEEK	<i>Report Writing (Contd.)</i>		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1 ST WEEK	<i>Going Places Article Writing</i>		
2 ND WEEK	<i>Business Letters</i>		
3 RD WEEK	<i>Business Letters (contd.)</i>		

	<i>ASL</i>
4TH WEEK	<i>Mid-Term Examination</i>
5TH WEEK	<i>Mid-Term Examination</i>

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			5
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>My Mother at Sixty Six</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1ST WEEK	<i>The Rat Trap, Speech Writing</i>		
2ND WEEK	<i>On the Face of It</i>		
3RD WEEK	<i>Should Wizard Hit Mommy? Comprehension Passage.</i>		
4TH WEEK	<i>Enemy</i>		
5TH WEEK	<i>Debate Writing</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			26
1ST WEEK	<i>Keeping Quiet The Tiger King</i>		
2ND WEEK	<i>Journey to the end of the earth, Deep water</i>		
3RD WEEK	<i>Evans Tries an O-Level</i>		
4TH WEEK	<i>Evans Tries an O-Level (contd.) The interview.</i>		
5TH WEEK	<i>Poster Making Note Making Passage</i>		

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
			9
1ST WEEK	<i>Poets and Pan-cakes, Advertisements</i>		
2ND WEEK	<i>Advertisements (Contd.)</i>		

3RD WEEK	<i>Post-Mid Examination</i>
4TH WEEK	<i>Post-Mid Examination</i>
5TH WEEK	<i>Post-Mid Examination</i>

NOVEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>ASL & Project Work</i>	
2ND WEEK	<i>Revision</i>	
3RD WEEK	<i>Preboard Examination</i>	
4TH WEEK	<i>Preboard Examination</i>	
5TH WEEK	<i>Preboard Examination</i>	

DECEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>	
2ND WEEK	<i>External Practical Examination</i>	
3RD WEEK	<i>External Practical Examination</i>	
4TH WEEK	<i>External Practical Examination</i>	

SUBJECT: PHYSICS (042)

(SET A)

MARCH

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter : Electric Charges and Fields</i>		22
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Electric Charges;</i> ➤ <i>Conservation of charge,</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Coulomb's law-force between two point charges</i> ➤ <i>Forces between multiple charges; superposition principle</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Electric field, electric field due to a point charge</i> ➤ <i>Electric field lines,</i> ➤ <i>Electric dipole, electric field due to a dipole,</i> ➤ <i>Torque on a dipole in uniform electric field</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Continuous charge distribution</i> ➤ <i>Electric flux</i> 	

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Electric Charges and Fields (continued)</i> <i>Chapter :Electrostatic Potential and capacitance</i>		26
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Statement of Gauss's theorem and its applications to find</i> ➤ <i>Field due to infinitely long straight wire, Uniformly charged infinite plane sheet ,Uniformly charged thin spherical shell</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field.</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Capacitors and capacitance</i> 	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
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<i>Chapter : Electrostatic Potential and capacitance</i>			22
<i>Chapter : Current Electricity</i>			
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>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</i> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Electric current,</i> ➤ <i>Flow of electric charges in a metallic conductor,</i> ➤ <i>Drift velocity, mobility and their relation with current.</i> 		
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Ohm's law,</i> ➤ <i>Electrical resistance,</i> ➤ <i>V-I characteristics (linear and non-linear),</i> ➤ <i>Electrical energy and power,</i> ➤ <i>Electrical resistivity and conductivity,</i> ➤ <i>Carbon resistors, colour code for carbon resistors;</i> 		
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Series and parallel combinations of resistors</i> ➤ <i>Temperature dependence of resistance.</i> ➤ <i>Internal resistance of a cell,</i> ➤ <i>Potential difference and emf of a cell</i> ➤ <i>Combination of cells in series and in parallel</i> ➤ <i>Kirchhoff's laws and simple applications,</i> 		
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Wheatstone bridge</i> ➤ <i>Metre bridge</i> 		

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter : Current Electricity</i>		
<i>Chapter : Moving Charges and Magnetism</i>		22
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Potentiometer - principle and its applications to measure potential difference and for comparing EMF of two cells measurement of internal resistance of a cell.</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop</i> 	
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Ampere's law and its applications to infinitely long straight wire. Straight and toroidal solenoids (only qualitative treatment)</i> 	
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Mid term Examination</i> 	
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Mid term Examination</i> 	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
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<i>Chapter : Moving Charges and Magnetism</i>		
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>Moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.</i>	

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter : Moving Charges and Magnetism</i> <i>Chapter : Magnetism and Matter</i>		23
1ST WEEK	➤ <i>Force on a moving charge in uniform magnetic and electric fields, Cyclotron. Force on a current-carrying conductor in a uniform magnetic field</i>	
2ND WEEK	➤ <i>Force between two parallel current-carrying conductors- definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment</i>	
3RD WEEK	➤ <i>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</i>	
4TH WEEK	➤ <i>Bar magnet as an equivalent solenoid, magnetic field lines; earth's magnetic field and magnetic elements</i>	
5TH WEEK	➤ <i>Permanent magnets.</i>	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter : Moving Charges and Magnetism</i> <i>Chapter-6: Electromagnetic Induction</i>		25
1ST WEEK	➤ <i>Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths,</i>	
2ND WEEK	➤ <i>Electromagnetic induction; Faraday's laws</i>	
3RD WEEK	➤ <i>Induced EMF and current; Lenz's Law Eddy currents.</i>	
4TH WEEK	➤ <i>Self and mutual induction.</i>	
5TH WEEK	➤ <i>Numericals</i>	

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter : Alternating Current</i>		<i>12</i>
1ST WEEK	➤ <i>L-C Oscillations</i>	
2ND WEEK	➤ <i>AC Generator and Transformer</i>	
3RD WEEK	➤ <i>Post- mid Examination</i>	
4TH WEEK	➤ <i>Post- mid Examination</i>	
5TH WEEK	➤ <i>Post- mid Examination</i>	

NOVEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Revision/ Project Work</i>		<i>12</i>
1ST WEEK	<i>Revision/ Project Work</i>	
2ND WEEK	<i>Revision/ Project Work</i>	
3RD WEEK	<i>Pre board examination</i>	
4TH WEEK	<i>Pre board examination</i>	
5TH WEEK	<i>Pre board examination</i>	

DECEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>	
2ND WEEK	<i>External Practical Examination</i>	
3RD WEEK	<i>External Practical Examination</i>	
4TH WEEK	<i>External Practical Examination</i>	
5TH WEEK	<i>External Practical Examination</i>	

SUBJECT: PHYSICS (042)
(SET B)

MARCH

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Ray Optics and Optical Instruments</i>			22
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Reflection of light</i> ➤ <i>Spherical mirrors</i> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Mirror formula</i> ➤ <i>Magnification</i> 		
3RD 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> 		
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Refraction at spherical surfaces</i> ➤ <i>Lenses</i> ➤ <i>Lensmaker's formula</i> 		
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Thin lens formula</i> ➤ <i>Magnification</i> ➤ <i>Power of a lens</i> 		

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Ray Optics and Optical Instruments (continued)</i> <i>Chapter: Wave Optics</i>			26
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Combination of thin lenses in contact</i> ➤ <i>Refraction and dispersion of light through a prism.</i> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.</i> 		
3RD 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> 		
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Proof of laws of reflection and refraction using Huygen's principle</i> ➤ <i>Interference</i> 		
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Young's double slit experiment and expression for fringe width</i> 		

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Wave Optics(continued)</i> <i>Chapter: Dual Nature of Radiation and Matter</i>			22
1ST 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> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Resolving power of microscope and astronomical telescope</i> ➤ <i>Polarisation</i> ➤ <i>plane polarised light</i> 		
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Brewster's law</i> ➤ <i>Uses of plane polarised light and Polaroids</i> 		
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Dual nature of radiation</i> ➤ <i>Photoelectric effect</i> ➤ <i>Hertz and Lenard's observations</i> 		
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Experimental study of photoelectric effect</i> 		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Dual Nature of Radiation and Matter (continued)</i> <i>Chapter: Atoms</i>			22
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Einstein's photoelectric equation-particle nature of light</i> ➤ <i>Matter waves-wave nature of particles</i> ➤ <i>de-Broglie relation</i> ➤ <i>Davisson-Germer experiment</i> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Alpha-particle scattering experiment</i> ➤ <i>Rutherford's model of atom</i> 		
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Bohr model of atom</i> ➤ <i>Energy levels</i> 		
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Hydrogen spectrum</i> 		
5TH WEEK	<ul style="list-style-type: none"> ➤ <i>Mid-Term Examination</i> 		

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Mid term Examination</i>			
1STWEEK	<ul style="list-style-type: none"> ➤ <i>Mid-Term Examination</i> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Mid-Term Examination</i> 		
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Summer Break</i> 		

4TH WEEK	➤ <i>Summer Break/ Cross checking</i>
5TH WEEK	➤ <i>Composition and size of nucleus</i>

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Nuclei</i> <i>Chapter: Semiconductor Electronics: Materials, Devices and Simple Circuits</i>			23
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Mass-energy relation</i> ➤ <i>Mass defect</i> ➤ <i>Binding energy per nucleon and its variation with mass number</i> 		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Nuclear fission and nuclear fusion</i> ➤ <i>Radioactivity, alpha, beta and gamma particles/rays and their properties</i> 		
3RD WEEK	➤ <i>Radioactive decay law.</i>		
4TH WEEK	<ul style="list-style-type: none"> ➤ <i>Energy bands in conductors, semiconductors and insulators (qualitative ideas only)</i> ➤ <i>Semiconductor diode and its I-V characteristics in forward and reverse bias</i> 		
5TH WEEK	➤ <i>Diode as a rectifier</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter: Semiconductor Electronics: Materials, Devices and Simple Circuits (continued)</i> <i>Chapter: Electromagnetic Waves</i>			25
1ST WEEK	➤ <i>LED, photodiode, solar cell and their characteristics</i>		
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>Zener diode and its characteristics</i> ➤ <i>Zener diode as a voltage regulator</i> 		
3RD WEEK	<ul style="list-style-type: none"> ➤ <i>Basic idea of displacement current</i> ➤ <i>Electromagnetic waves and their characteristics</i> 		
4TH WEEK	➤ <i>Transverse nature of electromagnetic waves.</i>		
5TH WEEK	➤ <i>Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.</i>		

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
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Chapter: Alternating Current		12
1ST WEEK	<ul style="list-style-type: none"> ➤ <i>Alternating currents</i> ➤ <i>Peak and RMS value of alternating current/voltage;</i> ➤ <i>Reactance and impedance</i> 	
2ND WEEK	<ul style="list-style-type: none"> ➤ <i>LCR series circuit and resonance</i> ➤ <i>Power in AC circuits, power factor, wattless current</i> 	
3RD WEEK	➤ <i>Post-Mid Examination</i>	
4TH WEEK	➤ <i>Post-Mid Examination</i>	
5TH WEEK	➤ <i>Post-Mid Examination</i>	

NOVEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Preboard Examination</i>			12
1ST WEEK	<i>Revision</i>		
2ND WEEK	<i>Revision</i>		
3RD WEEK	➤ <i>Preboard Examination</i>		
4TH WEEK	➤ <i>Preboard Examination</i>		
5TH WEEK	➤ <i>Preboard Examination</i>		

DECEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>		
2ND WEEK	<i>External Practical Examination</i>		
3RD WEEK	<i>External Practical Examination</i>		
4TH WEEK	<i>External Practical Examination</i>		
5TH WEEK	<i>External Practical Examination</i>		

SUBJECT: CHEMISTRY (043)

MARCH

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Solutions, Alkyl Halide And Aryl Halide</i>	6+5	20
2ND WEEK	<i>Classification and types of solution, expressing concentration of a solution, solubility and factors affecting solubility, Henry's law. Classification and nomenclature of haloalkanes, nature of C-X bond, methods of preparation of haloalkanes, physical properties of alkyl halides and aryl halides.</i>	
3RD WEEK	<i>Vapour pressure, Raoult's law for volatile and non volatile solute, ideal and non ideal solution, azeotropic mixture. Nucleophilic substitution and elimination reaction of alkyl halides (mechanism of substitution reactions) and optical isomerism.</i>	
4TH 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>	
5TH WEEK	<i>Abnormal molecular mass, Van't Hoff factor. Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.</i>	

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chemical Kinetics, Alcohols And Phenols.</i>	6+4	25
1ST WEEK	<i>Rate of a reaction (Average and instantaneous). Classification and nomenclature of alcohols</i>	
2ND WEEK	<i>Effect of concentration, order and molecularity of reaction, rate law and rate constant. Methods of preparation of alcohols.</i>	
3RD 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>	
4TH 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>	

5TH WEEK	<i>Effect of catalyst on rate. Electrophillic substitution reactions of phenols. Assignment: Chemistry in everyday life. (soft copy of assignment, along with video lesson, will be provided to students)</i>
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MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Electrochemistry, Ether And Nitrogen Containing Compounds</i>	7+5	21
1ST WEEK	<i>Redox reactions. Nomenclature and physical properties of ethers.</i>	
2ND WEEK	<i>Galvanic cells, standard electrode potential, emf of a cell. Methods of preparation and chemical properties of ethers.</i>	
3RD WEEK	<i>Electrochemical series and its applications, Nomenclature, classification of amines.</i>	
4TH WEEK	<i>Nernst equation and its application to galvanic cells. Methods of preparation and physical properties of amines</i>	
5TH WEEK	<i>Relation between Gibbs energy change and Emf of a cell. Basicity and chemical properties of amines</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Electrochemistry, Ether, Nitrogen Containing Compounds(Continued) Carboxylic Acids.</i>	7+5	18
1ST WEEK	<i>Electrolytic cell and qualitative aspect of electrolysis. Identification of primary, secondary and tertiary amines.</i>	
2ND WEEK	<i>Faraday's laws of electrolysis (with numerical), Primary and secondary cells and corrosion of metals. Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.</i>	
3RD WEEK	<i>Electrolytic conductance, specific and molar conductivity, variation of conductivity with concentration. Nomenclature and preparation of Carboxylic acids. Acidic nature and chemical properties of carboxylic acids</i>	
4TH WEEK	<i>Mid – Term Examination</i>	
5TH WEEK	<i>Mid – Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Electrochemistry And Carboxylic Acids</i>	-	05

1ST WEEK	<i>Mid – Term Examination</i>
2ND WEEK	<i>Mid – Term Examination</i>
3RD WEEK	<i>Summer Break</i>
4TH WEEK	<i>Cross Checking</i>
5TH WEEK	<i>Kohlrausch’s law and its application. Physical properties of carboxylic acids Assignment: Biomolecules. (soft copy of assignment , along with video lesson, will be provided to students</i>

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Coordination Chemistry, Aldehydes And Ketones</i>	6+5	22
1ST WEEK	<i>Coordination compounds and complex ions. Classification and nomenclature of aldehyde and ketone</i>	
2ND WEEK	<i>Ligands and its types, coordination number, coordination sphere, oxidation number, charge on complex ion and other important terms. Methods of preparation and physical properties of aldehydes and ketones.</i>	
3RD WEEK	<i>IUPAC nomenclature and formula writing of complexes. Nucleophilic addition reactions of aldehyde and ketone.</i>	
4TH WEEK	<i>Isomerism of coordination compounds, werner’s, valence bond and crystal field theory. Oxidation and reduction of aldehyde and ketone, aldolcondensation, cannizzaro’s reaction.</i>	
5TH WEEK	<i>Importance of coordination compounds. Substitution reaction of the aryl group. Assignment: Polymers (soft copy of assignment, along with video lesson, will be provided to students)</i>	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>P-Block, D&F Block Elements, Surface Chemistry</i>	6+4	25
1ST WEEK	<i>Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: Preparation, Properties and uses. D-Block: 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, atomic radii, ionic radii.</i>	
2ND WEEK	<i>Classification of Oxides, Ozone, Sulphur -allotropic forms; compounds of Sulphur: Preparation Properties and uses of Sulphur-dioxide.</i>	

	D-Block: colour, catalytic property, magnetic properties, interstitial compounds, alloy formation,
3RD WEEK	Sulphuric Acid: industrial process of manufacture, properties and uses; Oxoacids of Sulphur (Structures only). Preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$. F-Block: Lanthanoids - Electronic configuration, oxidation states, chemical reactivity
4TH WEEK	Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens, Preparation, properties and uses of Chlorine and Hydrochloric acid. F-Block: lanthanoid contraction and its consequences. Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids.
5TH WEEK	Interhalogen compounds, Oxoacids of halogens (structures only). Adsorption - physisorption and chemisorption, factors affecting adsorption of gases on solids. Assignment: Metallurgy (soft copy of assignment, along with video lesson, will be provided to students)

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>P- Block(Contd.) And Surface Chemistry(Contd.)</i>		4	09
1ST WEEK	Group 18 Elements: General introduction, electronic configuration, occurrence. Catalysis, homogenous and heterogenous activity and selectivity; enzyme catalysis colloidal state distinction between true solutions,		
2ND WEEK	Trends in physical and chemical properties and uses of noble gases. Colloids and suspension; lyophilic, lyophobic multi-molecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation, emulsion - types of emulsions.		
3RD WEEK	Post-Mid Examination		
4TH WEEK	Post-Mid Examination		
5TH WEEK	Post-Mid Examination		

NOVEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	Revision		
2ND WEEK	Revision		

3RD WEEK	<i>Preboard Examination</i>
4TH WEEK	<i>Preboard Examination</i>
5TH WEEK	<i>Preboard Examination</i>

DECEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>	
2ND WEEK	<i>External Practical Examination</i>	
3RD WEEK	<i>External Practical Examination</i>	
4TH WEEK	<i>External Practical Examination</i>	
5TH WEEK	<i>External Practical Examination</i>	

SUBJECT: MATHEMATICS (041)

MARCH

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Algebra</i> <i>Matrices and Determinants</i>	<i>10</i>	<i>24</i>
2ND WEEK	<i>Introduction to matrices</i> <i>Types of matrices</i> <i>Operations on matrices</i>	
3RD WEEK	<i>Concept of row and column operation</i> <i>Invertible matrices and proof of uniqueness of inverse</i>	
4TH WEEK	<i>Determinant of square matrix up to 3x3</i> <i>Properties of determinants</i> <i>Application of determinants in finding area of triangle</i> <i>Adjoint and inverse of square matrix</i>	
5TH WEEK	<i>Consistency and inconsistency of system of linear equations.</i> <i>Solving system of linear equations by using inverse of matrix.</i>	

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Relations and Functions</i> <i>Inverse trigonometric functions</i>	<i>08</i>	<i>24</i>

<i>Continuity</i>	
1ST WEEK	<i>Introduction of relations Types of Relations</i>
2ND WEEK	<i>introduction of functions one – one and onto functions, composite function, inverse of a function</i>
3RD WEEK	<i>Introduction of ITFs, Domain and range, principal Value branch. Graphs of ITFS</i>
4TH WEEK	<i>Elementary properties of inverse trigonometric functions</i>
5TH WEEK	<i>introduction of continuity and discontinuity.</i>

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Continuity and Differentiability Applications of derivatives</i>	35	24
1ST WEEK	<i>Introduction of differentiability</i>	
2ND WEEK	<i>Methods of differentiation Second order derivative</i>	
3RD WEEK	<i>Rolle's and Lagrange's mean value theorem and their geometric interpretation</i>	
4TH WEEK	<i>Rate of change of quantity Tangents and normal</i>	
5TH WEEK	<i>Increasing and decreasing functions</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Applications of Derivatives contd..</i>		24
1ST WEEK	<i>Approximation Maxima and minima</i>	
2ND WEEK	<i>Mathematical Activities : (i) Rolle's theorem (ii) Lagrange mean Maxima and minima</i>	
3RD WEEK	<i>Mathematical Activity Maxima and minima</i>	
4TH WEEK	<i>Mid – Term Examination</i>	
5TH WEEK	<i>Mid – Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
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<i>Integrals</i>			
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>Introduction to integrals</i>		

AUGUST

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Integrals contd.. Differential Equations</i>		24
1ST WEEK	<i>Integration by substitution integration by partial fractions integration by parts</i>	
2ND WEEK	<i>Definite integrals Definite integrals as a limit of sum, properties of definite integrals</i>	
3RD WEEK	<i>Area under simple curves, Area between any two curves</i>	
4TH WEEK	<i>Order and degree General and particular solution Formation of differential equation</i>	
5TH WEEK	<i>Differential equation of variable separable type</i>	

SEPTEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Differential Equations contd.. Vectors Linear programming Three Dimensional Geometry</i>	19	24
1ST WEEK	<i>Differential equation of Homogeneous type Linear differential equations Introduction of vectors Direction ratio and direction cosine of vectors, Types of vectors</i>	
2ND WEEK	<i>Product of vectors (a) Dot product (b) Vector Product</i>	
3RD WEEK	<i>Introduction Different types of linear programming Graphical method</i>	

	<i>Feasible and infeasible solution</i>
4TH WEEK	<i>Direction ratios and direction cosine of a line joining two point Cartesian and vector equation of a line Coplanar and skew lines Shortest Distance</i>
5TH WEEK	<i>Plane Cartesian and vector equation of plane Angle between two (I) lines (ii) planes (iii) line and plane Distance of a point from a plane</i>

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Probability</i>	<i>08</i>	<i>16</i>
1ST WEEK	<i>Conditional probability , Multiplication theorem of probability, Bayes theorem</i>	
2ND WEEK	<i>Probability Distribution Mean and variance of random variable</i>	
3RD WEEK	<i>Post-Mid Examination</i>	
4TH WEEK	<i>Post-Mid Examination</i>	
5TH WEEK	<i>Post-Mid Examination</i>	

NOVEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
1 ST WEEK	<i>Revision.</i>		
2 ND WEEK	<i>Revision.</i>		
3 RD WEEK	<i>Preboard Examination</i>		
4 TH WEEK	<i>Preboard Examination</i>		
5 TH WEEK	<i>Preboard Examination</i>		

DECEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
1 ST WEEK	<i>External Practical Examination</i>		
2 ND WEEK	<i>External Practical Examination</i>		
3 RD WEEK	<i>External Practical Examination</i>		
4 TH WEEK	<i>External Practical Examination</i>		

SUBJECT: BIOLOGY (044)

MARCH

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Reproduction in Organisms</i>		14	40
2 ND WEEK	<i>Reproduction in organisms + sexual reproduction in angiosperms</i>		
3 RD WEEK	<i>Human reproduction+ sexual reproduction in angiosperms</i>		
4 TH WEEK	<i>Human reproduction+ sexual reproduction in angiosperms</i>		
5 TH WEEK	<i>Human reproduction+ sexual reproduction in angiosperms</i>		

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Reproduction +Genetics</i>		18	42
1 ST WEEK	<i>Human reproduction+ Sexual reproduction in angiosperms</i>		
2 ND WEEK	<i>Human reproduction + Reproductive health</i>		
3 RD WEEK	<i>Reproductive health + Genetics one</i>		
4 TH WEEK	<i>Genetics one + Genetics two</i>		
5 TH WEEK	<i>Genetics one + Genetics two</i>		

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Genetics</i>		18	42
1 ST WEEK	<i>Genetics one + Genetics two</i>		
2 ND WEEK	<i>Genetics one + Genetics two</i>		
3 RD WEEK	<i>Genetics one + Genetics two</i>		
4 TH WEEK	<i>Genetics one + Genetics two</i>		
5 TH WEEK	<i>Genetics one + Genetics two</i>		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Biotechnology</i>		10	20
1 ST WEEK	<i>Biotechnology principles</i>		
2 ND WEEK	<i>Biotechnology principles +biotechnology and applications</i>		

3RD WEEK	<i>Biotechnology applications.</i>
4TH WEEK	<i>Mid – Term Examination</i>
5TH WEEK	<i>Mid – Term Examination</i>

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Revision</i>		<i>30</i>	<i>7</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>Revision + Questions from NCERT</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Ecology</i>		<i>14</i>	<i>30</i>
1ST WEEK	<i>Organisms and population + ecosystem</i>		
2ND WEEK	<i>Organisms and population + ecosystem</i>		
3RD WEEK	<i>Biodiversity + environmental issues</i>		
4TH WEEK	<i>Biodiversity + environmental issues.</i>		
5TH WEEK	<i>Biodiversity + environmental issues.</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Biology in Human Welfare + Evolution</i>		<i>14</i>	<i>30</i>
1ST WEEK	<i>Human health + evolution</i>		
2ND WEEK	<i>Human health + evolution</i>		
3RD WEEK	<i>Human health + evolution</i>		
4TH WEEK	<i>Microbes + food production</i>		
5TH WEEK	<i>Microbes + food production</i>		

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS

1ST WEEK	<i>Revision.</i>
2ND WEEK	<i>Revision</i>
3RD WEEK	<i>Post-Mid Examination</i>
4TH WEEK	<i>Post-Mid Examination</i>
5TH WEEK	<i>Post-Mid Examination</i>

NOVEMBER

TOPICS / CHAPTERS		WEIGHT- AGE	TEACHING PERIODS
1ST WEEK	<i>Revision.</i>		
2ND WEEK	<i>Revision.</i>		
3RD WEEK	<i>Preboard Examination</i>		
4TH WEEK	<i>Preboard Examination</i>		
5TH WEEK	<i>Preboard Examination</i>		

DECEMBER

TOPICS / CHAPTERS		WEIGHT- AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>		
2ND WEEK	<i>External Practical Examination</i>		
3RD WEEK	<i>External Practical Examination</i>		
4TH WEEK	<i>Winter Break</i>		

SUBJECT: COMPUTER SCIENCE (083)

MARCH

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Computer Networks</i>		<i>10</i>	<i>25</i>
2ND WEEK	<i>Network, Need of network. Types of networks Internet and WWW Client/Server introduction Wired and Wireless Networks</i>		
3RD WEEK	<i>Cloud introduction Private vs Public Cloud IoT introduction Networking Devices</i>		
4TH WEEK	<i>Network stack: Amplitude and frequency modulation. Collision in wireless networks Error checking</i>		
5TH WEEK	<i>IP Addressing (IPv4 and IPv6) MAC Address Concept of routing Routing table</i>		

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Computer Networks Contdd. Programming And Computational Thinking-2</i>		<i>30</i>	<i>70</i>
1STWEEK	<i>Network Protocols TCP (Basic idea of retransmission) IP protocol 2G, 3G, 4G, Wi-Fi</i>		
2ND WEEK	<i>DNS URL HTTP FTP SCP SSH POP/IMAP/SMTP VoIP/NFC</i>		
3RD WEEK	<i>Secure Communication Encryption HTTPS Basic Network tools</i>		

4TH WEEK	<i>Programming and Computational Thinking-2 Revision of Python Basics</i>
5TH WEEK	<i>Function Parameterized and non-parameterized functions Variable Scope (local and Global Variable)</i>

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Programming And Computational Thinking-2 Contd.....</i>		
1ST WEEK	<i>Functions with default arguments Passing lists to a function Functions returning values Library functions (mathematical/string/random)</i>	
2ND WEEK	<i>Python libraries Create and import python libraries. Recursion Simple programs using recursion</i>	
3RD WEEK	<i>Factorial using recursion Fibonacci series, Binary search using recursion</i>	
4TH WEEK	<i>Files Text file vs Binary file Open and Closing a file Read, write and Append to a file.</i>	
5TH WEEK	<i>Standard input, output and error streams. Relative and Absolute paths.</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Programming And Computational Thinking-2 Contd.....</i>		
1ST WEEK	<i>Time Complexity Calculating the time complexity of various programs.</i>	
2ND WEEK	<i>Data Visualization Concept of Matplotlib library PyPlot module Concept of charts (Bar chart/Pie chart/Line chart) Data visualization using line chart/bar chart/pie chart</i>	
3RD WEEK	<i>Lists and List operations</i>	
4TH WEEK	<i>Mid – Term Examination</i>	
5TH WEEK	<i>Mid – Term Examination</i>	

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
Programming And Computational Thinking-2 Contd.....			
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>Stack and Queue</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Data Management - 2</i>		<i>15</i>	<i>30</i>
1 st WEEK	<i>Revision of SQL queries</i>		
2 ND WEEK	<i>Where, having, group by and order by clause Interfacing python with MySQL</i>		
3 RD WEEK	<i>Django introduction Web framework</i>		
4 TH WEEK	<i>Django Architecture How to install Django and its virtual environment Django GET and POST methods Simple web applications using django</i>		
5 TH WEEK	<i>Writing on to flat file. Writing on to CSV file.</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Society, Law And Ethics-2 Project Work</i>		<i>10</i>	<i>5</i>
1 st WEEK	<i>Intellectual property rights (plagiarism, digital rights management, Licensing. Privacy laws, frauds Cyber crimes Cyber Forensics Technology and Society E-Waste Management Identity theft, unique id's and Biometrics Gender and Disability issues</i>		
2 ND WEEK	<i>Project based of python and Data Management</i>		

3RD WEEK	<i>Project based of python and Data Management</i>
4TH WEEK	<i>Project based of python and Data Management</i>
5TH WEEK	<i>Project based of python and Data Management</i>

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>PROJECT WORK</i>		
1ST WEEK	<i>Project based of python and Data Management</i>	
2ND WEEK	<i>Project based of python and Data Management</i>	
3RD WEEK	<i>Post-Mid Examination</i>	
4TH WEEK	<i>Post-Mid Examination</i>	
5TH WEEK	<i>Post-Mid Examination</i>	

NOVEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>Project based of python and Data Management</i>	
2ND WEEK	<i>Project based of python and Data Management</i>	
3RD WEEK	<i>Preboard Examination</i>	
4TH WEEK	<i>Preboard Examination</i>	
5TH WEEK	<i>Preboard Examination</i>	

DECEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>	
2ND WEEK	<i>External Practical Examination</i>	
3RD WEEK	<i>External Practical Examination</i>	
4TH WEEK	<i>External Practical Examination</i>	

SUBJECT: ENGINEERING GRAPHICS (046)

MARCH

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Isometric Projections of Solids</i>		
	25	50
2ND WEEK	<i>Construction of isometric scale showing main divisions of 10mm and smaller divisions of 1mm, also showing the leading angles. Drawing helping view/such as triangles, pentagon, hexagon, etc., using isometric scale.</i>	
3RD WEEK	<i>Isometric projection of prisms</i>	
4TH WEEK	<i>Isometric projection of pyramids</i>	
5TH WEEK	<i>Isometric projection of frustum of pyramids</i>	

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Isometric Projections of Solids</i>		
	25	50
1ST WEEK	<i>Isometric projection of cylinder, cone, spheres and hemispheres.</i>	
2ND WEEK	<i>Isomeric Projection of Combination of Solids</i>	
3RD WEEK	<i>Isomeric Projection of Combination of Solids</i>	
4TH WEEK	<i>Isomeric Projection of Combination of Solids</i>	
5TH WEEK	<i>Isomeric Projection of Combination of Solids</i>	

MAY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing (Assembly drawings and Dis-Assembly drawings)</i>		
	45	118
1ST WEEK	<i>Bearings (Open Bearing)</i>	
2ND WEEK	<i>Bearings (Bushed Bearing)</i>	
3RD WEEK	<i>Cotter-joints for circular-rods (socket and spigot joint)</i>	
4TH WEEK	<i>Cotter-joints for round-rods (sleeve and cotter joint)</i>	
5TH WEEK	<i>Cotter-joints for square rods (Gib and cotter-joint)</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing</i>		
	45	118

<i>(Assembly drawings and Dis-Assembly drawings)</i>		
1ST WEEK	<i>Tie-rod and Pipe-joint (Turnbuckle)</i>	
2ND WEEK	<i>Solid cast iron pulley</i>	
3RD WEEK	<i>Introduction of threads: Standard profiles of screw threads - Square, Knuckle, B.S.W., Metric (external and internal)</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 (Drawing of Machine Parts)</i>		45	118
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>Introduction of threads: Standard profiles of screw threads - Square, Knuckle, B.S.W., Metric (external and internal)</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing (Drawing of Machine Parts)</i>		45	118
1ST WEEK	<i>Nuts (Square and Hexagonal);</i>		
2ND WEEK	<i>Bolts (Square, Hexagonal, Tee and Hook)</i>		
3RD WEEK	<i>Plain washer, combination of nut and bolt with or without washer for assembling two parts together</i>		
4TH WEEK	<i>Single riveted lap joint with standard dimensions.</i>		
5TH WEEK	<i>Industrial Visit (Two)</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing</i>		45	118
1ST WEEK	<i>Unprotected Flange Coupling</i>		
2ND WEEK	<i>Protected Flange Coupling</i>		
3RD WEEK	<i>Flange pipe joint</i>		

4TH WEEK	<i>Free-hand sketches</i>
5TH WEEK	<i>Conventional representation of external and internal threads</i>

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing</i>		<i>45</i>	<i>118</i>
1ST WEEK	<i>Practicals</i>		
2ND WEEK	<i>Computer Aided Design (CAD) – Project</i>		
3RD WEEK	<i>Computer Aided Design (CAD) – Project</i>		
4TH WEEK	<i>Computer Aided Design (CAD) – Project</i>		
5TH WEEK	<i>Computer Aided Design (CAD) – Project</i>		

NOVEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Machine Drawing</i>		<i>45</i>	<i>118</i>
1ST WEEK	<i>Computer Aided Design (CAD) – Project</i>		
2ND WEEK	<i>Computer Aided Design (CAD) – Project</i>		
3RD WEEK	<i>Preboard Examination</i>		
4TH WEEK	<i>Preboard Examination</i>		
5TH WEEK	<i>Preboard Examination</i>		

DECEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>		
2ND WEEK	<i>External Practical Examination</i>		
3RD WEEK	<i>External Practical Examination</i>		
4TH WEEK	<i>External Practical Examination</i>		

SUBJECT: PSYCHOLOGY (037)

MARCH

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 1: Variations in Psychological Attributes</i>	9	21
2ND WEEK	<i>Introduction to Variations in Psychological Attributes. Individual Differences in Human functioning. Assessment of Psychological Attributes. Intelligence.</i>	
3RD WEEK	<i>Psychometric Theories of Intelligence. Information Processing Theory. Theory of Multiple Intelligences.</i>	
4TH WEEK	<i>Triarchic Theory of Intelligence. PASS Model of Intelligence. Individual differences in Intelligence.</i>	
5TH WEEK	<i>Culture and Intelligence.</i>	

APRIL

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 2: Self & Personality</i>	10	26
1STWEEK	<i>Emotional Intelligence. Special Abilities. Creativity. Introduction to Self and Personality. Concept of Self. Cognitive and Behavioural aspects of Self.</i>	
2ND WEEK	<i>Culture and Self. Concept of Personality. Type Approach to the study of personality. Trait Approach. Psychodynamic Approach.</i>	
3RD WEEK	<i>Behavioural Approach. Cultural Approach. Humanistic Approach. Assessment of Personality. Self-Report Measures.</i>	
4TH WEEK	<i>Projective Techniques. Behavioural Techniques. Introduction to Meeting Life Challenges.</i>	
5TH WEEK	<i>Nature of Stress.</i>	

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 3: Meeting Life Challenges</i>		7	26
1 ST WEEK	<i>Types and Sources of Stress. Effects of Stress on Psychological Health. Stress and Health. General Adaptation Syndrome.</i>		
2 ND WEEK	<i>Stress and Immune System. Lifestyle. Coping with Stress. Stress Management Techniques.</i>		
3 RD WEEK	<i>Promoting positive health and well-being. Introduction to Psychological Disorders. Concepts of Abnormality and Psychological Disorders. Historical Background.</i>		
4 TH WEEK	<i>Classification of Psychological Disorders. Factors underlying abnormal behaviour. Major Psychological Disorders.</i>		
5 TH WEEK	<i>Anxiety Disorder.</i>		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 4: Psychological Disorders</i>		10	18
1 ST WEEK	<i>Obsessive-Compulsive and related Disorders. Trauma and Stressor-related Disorders. Somatic Symptom and related Disorders. Dissociative Disorders.</i>		
2 ND WEEK	<i>Depressive Disorder. Bipolar and related Disorders. Schizophrenia spectrum and other Psychotic Disorders. Neurodevelopmental Disorders.</i>		
3 RD WEEK	<i>Disruptive, Impulse-control and Conduct Disorders. Feeding and Eating Disorders.</i>		
4 TH WEEK	<i>Mid – Term Examination</i>		
5 TH WEEK	<i>Mid – Term Examination</i>		

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Contd...</i>		0	0
1 ST WEEK	<i>Mid – Term Examination</i>		

2ND WEEK	<i>Mid – Term Examination</i>
3RD WEEK	<i>Summer Break</i>
4TH WEEK	<i>Cross Checking</i>
5TH WEEK	<i>Substance related and Addictive Disorders. Practicals</i>

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 5: Therapeutic Approaches.</i>		7	24
1ST WEEK	<i>Nature and process of Psychotherapy. Therapeutic relationship. Types of Therapy. Psychodynamic therapy.</i>		
2ND WEEK	<i>Behaviour Therapy. Cognitive Therapy. Humanistic-existential Therapy. Bio-medical Therapy. Alternative Therapies.</i>		
3RD WEEK	<i>Rehabilitation of the Mentally ill. Introduction to Attitude and Social Cognition. Explaining Social Behaviour. Nature and Components of Attitudes.</i>		
4TH WEEK	<i>Attitude Formation and Change. Prejudice and Discrimination. Strategies for handling Prejudice.</i>		
5TH WEEK	<i>Social Cognition.</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 6: Attitude and Social Cognition Chapter 7: Social Influences & Group Processes</i>		8+7	26
1ST WEEK	<i>Schemas and Stereotypes. Impression formation and Attribution. Attribution of Causality. Behaviour in presence of others. Pro-Social Behaviour.</i>		
2ND WEEK	<i>Factors affecting Pro-social Behaviour. Introduction to Social Influences and Group Processes. Nature and formation of Groups. Types of Groups. Project Work</i>		
3RD WEEK	<i>Influence of Group on Individual Behaviour.</i>		

	<i>Social Loafing. Group Polarisation. Confirmity, Compliance and Obedience. Cooperation and Competition.</i>
4TH WEEK	<i>Social Identity. Intergroup Conflict: Nature and Causes. Conflict Resolution Strategies. Psychology and Life: Introduction.</i>
5TH WEEK	<i>Human-Environment Relationship.</i>

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Chapter 8: Psychology & Life Chapter 9: Developing Psychological Skills</i>		6+6	12
1ST WEEK	<i>Environmental Effects on Human Behaviour. Promoting Pro-environmental Behaviour. Psychology and Social Concerns. Practicals</i>		
2ND WEEK	<i>Developing Psychological Skills. General Skills. Observational Skills. Specific Skills. Interviewing Skills. Counselling Skills.</i>		
3RD WEEK	<i>Post-Mid Examination</i>		
4TH WEEK	<i>Post-Mid Examination</i>		
5TH WEEK	<i>Post-Mid Examination</i>		

NOVEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>Revision</i>		30	12
1ST WEEK	<i>Revision</i>		
2ND WEEK	<i>Revision</i>		
3RD WEEK	<i>Preboard Examination</i>		
4TH WEEK	<i>Preboard Examination</i>		
5TH WEEK	<i>Preboard Examination</i>		

DECEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		0	
1 ST WEEK	<i>External Practical Examination</i>		
2 ND WEEK	<i>External Practical Examination</i>		
3 RD WEEK	<i>External Practical Examination</i>		
4 TH WEEK	<i>External Practical Examination</i>		

SUBJECT: PAINTING (049)

MARCH

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

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1 ST WEEK	<i>Practicals :Nature and Object Study</i> <i>Theory: Introduction of Indian Miniature Paintings.</i>		
2 ND WEEK	<i>Practicals :Quick Life Sketching</i> <i>Theory: The Rajasthani School of Miniature Paintings</i>		
3 RD WEEK	<i>Practicals :Quick Life Sketching</i> <i>Theory: The Rajasthani School of Miniature Paintings</i>		
4 TH WEEK	<i>Practicals :Quick Life Sketching</i> <i>Theory: The Rajasthani School of Miniature Paintings</i>		
5 TH WEEK	<i>Practicals :Quick Life Sketching</i> <i>Theory: The Rajasthani School of Miniature Paintings</i>		

MAY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1 ST WEEK	<i>Practicals :Colour Composition</i> <i>Theory: The Pahari School of art</i>		
2 ND WEEK	<i>Practicals :Colour Composition</i> <i>Theory: The Pahari School of art</i>		
3 RD WEEK	<i>Practicals :Colour Composition</i> <i>Theory: The Pahari School of art</i>		
4 TH WEEK	<i>Practicals :Colour Composition</i> <i>Theory: The Pahari School of art</i>		
5 TH WEEK	<i>Practicals :Still life</i> <i>Theory: Mughal School of Miniature art</i>		

JUNE

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1 ST WEEK	<i>Practicals :Still life</i> <i>Theory: Mughal School of Miniature art</i>		
2 ND WEEK	<i>Practicals :Still life</i> <i>Theory: Mughal School of Miniature art</i>		
3 RD WEEK	<i>Practicals :Still life</i> <i>Theory: Mughal School of Miniature art</i>		
4 TH WEEK	Mid – Term Examination		
5 TH WEEK	Mid – Term Examination		

JULY

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1 ST WEEK	Mid – Term Examination		
2 ND WEEK	Mid – Term Examination		
3 RD WEEK	Summer Break		
4 TH WEEK	Summer Break/ Cross Checking		
5 TH WEEK	<i>Practicals :Outdoor Sketching</i> <i>Theory: The Deccan School of Painting</i>		

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1 st WEEK	<i>Practicals :Outdoor Sketching</i> <i>Theory: The Deccan School of Painting</i>		
2 ND WEEK	<i>Practicals :Outdoor Sketching</i> <i>Theory: The Deccan School of Painting</i>		
3 RD WEEK	<i>Practicals :Outdoor Sketching</i> <i>Theory: Evolution of Indian National Flag.</i>		
4 TH WEEK	<i>Practicals :Outdoor Sketching</i> <i>Theory: Evolution of Indian National Flag.</i>		
5 TH WEEK	<i>Practicals :Outdoor Sketching</i> <i>Theory: The Bengal School of Painting</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1ST WEEK	<i>Practicals :Outdoor Sketching Theory: The Bengal School of Painting</i>		
2ND WEEK	<i>Practicals :Outdoor Sketching Theory: SLIDE STUDY OF SOME Bengali School of art.</i>		
3RD WEEK	<i>Practicals :Colour Figurative Composition Theory: SLIDE STUDY OF SOME Bengali School of art.</i>		
4TH WEEK	<i>Practicals :Colour Figurative Composition Theory: Contribution of Indian Artists in the struggle for National Freedom Movement</i>		
5TH WEEK	<i>Practicals :Colour Figurative Composition Theory: Contribution of Indian Artists in the struggle for National Freedom Movement</i>		

OCTOBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1ST WEEK	<i>Practicals :Canvas Painting Theory: Modern trends in Indian art</i>		
2ND WEEK	<i>Practicals :Canvas Painting Theory: Paintings and Sculptures of the Contemporary Modern Indian Artists</i>		
3RD WEEK	<i>Post-Mid Examination</i>		
4TH WEEK	<i>Post-Mid Examination</i>		
5TH WEEK	<i>Post-Mid Examination</i>		

NOVEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1ST WEEK	<i>Practicals : Final preparations of FINE ARTS PORTFOLIO Theory: Paintings and Sculptures of the Contemporary Modern Indian Artists</i>		
2ND WEEK	<i>Revision.</i>		
3RD WEEK	<i>Preboard Examination</i>		
4TH WEEK	<i>Preboard Examination</i>		
5TH WEEK	<i>Preboard Examination</i>		

DECEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
		70/30	08
1 ST WEEK	<i>Final External examination</i>		
2 ND WEEK	<i>Final External examination</i>		
3 RD WEEK	<i>Final External examination</i>		
4 TH WEEK	<i>Final External examination</i>		

SUBJECT: PHYSICAL EDUCATION (048)

MARCH

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>PLANNING IN SPORTS</i>		8	10
2 ND WEEK	<i>Meaning and objectives of planning. Various committee and its responsibilities.</i>		
3 RD WEEK	<i>Tournament knockout, league and combination. Procedure to draw fixtures (bye and seeding)</i>		
4 TH WEEK	<i>Intramural and extramural meaning objective and its significance.</i>		
5 TH WEEK	<i>Specific sports programme, sports day health run, run for fun, run for unity.</i>		

APRIL

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>SPORTS AND NUTRITION. YOGA AND LIFESTYLE.</i>		6	4
		5	4
1 ST WEEK	<i>Balanced diet and nutrition: micro and macro nutrients. Nutritive and non nutritive components of diet.</i>		
2 ND WEEK	<i>Eating for diet control, a healthy weight the pitfalls of dieting Food intolerance and food myths.</i>		
3 RD WEEK	<i>Sports nutrition and its effect on performance. Food supplements for children.</i>		
4 TH WEEK	<i>Asanas as preventive measures. Obesity procedure, benefits and contraindications for Vajrasana, Hastasana, Trikonasana, Ardhamatsyendrasan.</i>		
5 TH WEEK	<i>Diabetes procedure benefits and contraindications for bhujangasana, paschimottasana,</i>		

MAY

TOPICS / CHAPTERS		WEIGHT-	TEACHING
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	AGE	PERIODS
<i>YOGA AND LIFESTYLE (Contd.) PHYSICAL EDUCATION AND SPORTS FOR DIFFERENTLY ABLED.</i>		
	6	5
1ST WEEK	<i>Asthma procedure benefits and contraindications for sukhāsana, chakrasāna, gomukhāsana, paratāsana, bhujangāsana, pashchimottāsana, matsyāsana.</i>	
2ND WEEK	<i>Hypertension : Tadasāna, Vajrasāna, pavanmuktāsana, Back pain: Tadasānārdhmatsyendrasāna, vakrasāna, shalabhasāna, bhujangāsana.</i>	
3RD WEEK	<i>PE Practicals (Athletics)</i>	
4TH WEEK	<i>Concept of disability and disorder. Types of disability, its causes and nature (cognitive disability, intellectual disability, physical disability.)</i>	
5TH WEEK	<i>Types of disorder: its causes and nature (ADHD, SPD, ASD, ODD, OCD)</i>	

JUNE

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>PHYSICAL EDUCATION AND SPORTS FOR DIFFERENTLY ABLED contd.</i>		
1ST WEEK	<i>Disability etiquettes. Advantages of physical activities for children with special needs.</i>	
2ND WEEK	<i>Strategies to make physical activities accessible for children with special need.</i>	
3RD WEEK	<i>PE Practicals (Athletics)</i>	
4TH WEEK	<i>PE Practicals (Athletics)</i>	
5TH WEEK	<i>Mid – Term Examination</i>	

JULY

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>MIDTERM EXAMINATION</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>PE Practicals (Athletics)</i>	

AUGUST

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>CHILDREN AND SPORTS.</i>		6	7
<i>WOMEN AND SPORTS.</i>		5	5
1ST WEEK	<i>Motor development and factors affecting it. Exercise guidelines at different stages of growth and development. Advantages and disadvantages of weight training.</i>		
2ND WEEK	<i>Concept and advantages of correct posture. Causes of bad posture.</i>		
3RD WEEK	<i>Common postural deformity, knock knee, flat foot, round shoulder, lordosis, kyphosis, bow legs, and scoliosis. Correct measures for postural deformities.</i>		
4TH WEEK	<i>Sports performance of women in India. Special consideration(menarche, menstrual, dysfunction, pregnancy, menopause)</i>		
5TH WEEK	<i>Female athletic triad (Anemia, osteoporosis, amenorrhea.) Psychological aspect of women athlete. Sociological aspects of sports participation.</i>		

SEPTEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
<i>TEST AND MEASUREMENT.</i>		6	7
<i>PHYSIOLOGY AND SPORTS.</i>		5	5
1ST WEEK	<i>Computation of fat percentage. Slaughter- lohman children skin fold measurement. Measurement of muscular strength –kraus weber test. Motor fitness test. AAPHER. General motor fitness</i>		
2ND WEEK	<i>Measurement of cardiovascular fitness. Computation of fitness index. Rikli and jones senior citizen fitness test. Chair stand test for lower body strength. Arm curl test</i>		
3RD WEEK	<i>Chair sit and reach test for upper body strength. Eight foot up and go test for agility. Six minute walk test for aerobic endurance.</i>		
4TH WEEK	<i>Gender difference in physical and physiological parameters. Physiological factors determining component of physical fitness. Effect of exercise on cardiovascular system.</i>		
5TH WEEK	<i>Effect of exercise on respiratory system. Effect of exercise on muscular system. Physiological changes due to ageing. Role of physical activity in maintaining functional fitness in aged population.</i>		

OCTOBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>SPORTS MEDICINE.</i>	5	4
<i>KINESIOLOGY BIOMECHANICS AND SPORTS.</i>	7	7
1ST WEEK	<i>Concept aim and scope of sports medicine. Sports injuries classification causes and prevention. First Aid aim and objective. Management of injuries. Projectile and factors affecting projectile trajectory. Newton's laws of motion and their application in sports.</i>	
2ND WEEK	<i>Aerodynamics principles Friction and sports. Introduction to Axes and plane. Types of movements (flexion ,extension, abduction and adduction) Major muscle involved in running jumping and throwing.</i>	
3RD WEEK	<i>Post-Mid Examination</i>	
4TH WEEK	<i>Post-Mid Examination</i>	
5TH WEEK	<i>Post-Mid Examination</i>	

NOVEMBER

TOPICS / CHAPTERS	WEIGHT-AGE	TEACHING PERIODS
<i>PSYCHOLOGY AND SPORTS.</i>	5	4
<i>TRAINING IN SPORTS</i>	6	6
1ST WEEK	<i>Understanding stress and coping strategies Personality its definition and types. Motivation its type and techniques. Self esteem and body image. Psychological benefits of exercise. Meaning concept and types of aggressions in sports.</i>	
2ND WEEK	<i>Strength definition types and methods Endurance definition types and methods. Speed definition types and methods Flexibility definition types and methods Coordinative abilities definition and types. Circuit training and high altitude training introduction and its impact.</i>	
3RD WEEK	<i>Preboard Examination</i>	
4TH WEEK	<i>Preboard Examination</i>	
5TH WEEK	<i>Preboard Examination</i>	

DECEMBER

TOPICS / CHAPTERS		WEIGHT-AGE	TEACHING PERIODS
1ST WEEK	<i>External Practical Examination</i>		
2ND WEEK	<i>External Practical Examination</i>		
3RD WEEK	<i>External Practical Examination</i>		
4TH WEEK	<i>External Practical Examination</i>		