

**NEET TIME SAVER COURSE PLAN OF PHYSICS (2020-2021)**

CHAPTER NAME	DATE	LECTURE NO.	CONTENT
<b>RAY OPTICS (12)</b>	UPTO 18-10-2020	1	Plane Mirror -Law of Reflection,Real and Virtual Object,Velocity of Image & Object Relation
		2	Discussion of Plane Mirror
		3	Spherical Mirror,Image Formation
		4	Spherical Mirror
		5	Discussion,Spherical Mirror
		6	Refraction, Snell's Law
		7	TIR,Opticsl Fibre,Near Normal Observation (Happ Depth)
		8	Shifting by Glass Slab,Lateral Shift
		9	Discussion ,Refraction on Plane Surface
		10	Prism
		11	Minimum Deviation, Dispersion
		12	Prism
		13	Refraction by Curved Surface
		14	Refraction by Curved Surface,Lens
		15	Discussion
		16	Lens and Mirror
		17	Power of Lens,Polishing of Lens,Cutting of Lens
		18	Optical Instrument
		19	Optical Instrument Discussion
		20	Displacement Method
		21	HW
<b>Modern physics + Nuclear physics</b>	UPTO 8-11-2020	1	Energy, Momentum of Photon, Intensity due to 3D,2D,1D Source
		2	Force and power
		3	Photoelectric Effect
		4	Stopping Potential,Saturation Current Graphs
		5	Photoelectric Effect (practice)
		6	Atomic Structure,JJ Thomson, Rutherford Model
		7	Bohr Atomic Model, Energy Level of Hydrogen
		8	Bohr Model Practice
		9	Bohr Model in Gravitation and Magnetism, Potential Energy Reference
		10	Emission Spectrum, Lyman , Balmer, Paschen, Brackett, P- Fund (Series)
		11	De-Broglie Hypothesis
		12	X-ray-1
		13	X-ray-2
		14	Practice of Problem
		15	Discussion
		16	Discussion
		17	Brugg's Law, Davission-Germer Experiment
		18	Size of Nucleus,Density of Nucleus,Neutron Proton Graph for Stable Nuclei,Nature of Nuclear Force,Mass Defect and Binding Energy
		19	Q value in Terms of Wars Kg/ Amu, Q Value in Terms of Binding Energy and Kinetic Energy,Binding Energy and Mass no Graph, Fusion and Nuclear Fusion, $\alpha$ -decay
		20	Fission Reaction $u^{235}$ ,Chain Reaction,Natural Uranium,Neutron Reproduction Factor,Nuclear Reaction,Nuclear Fusion
		21	Decay of Alpha ,Beta ,Gamma Particles
		22	Radio Activity
		23	Discussion
		24	Discussion and Production of Nuclear Substances,Parallel Decay,Successive Decay,Rock Analysis,K Capture
<b>KINEMATICS</b>		1	Motion in One Dimension,Constant Accelerated Motion
		2	Graphs
		3	Discussion
		4	Concept of Basic Differentiation,Discussion of Homework -2 Discussion
		5	Basic Integration,Projectile Motion
		6	Projectile Motion Examples,Maximum Height and Time of Flight Variation with Q
		7	Projectile Analysis Example,Incline Projectile,Discussion of Homework -3
		8	Projectile From Height,Relative Motion,Min. Distance (Closest+Approach),Rain Man Problem
		9	Discussion and River Problem
		10	Flag Fluttering and River Boat Problem
		11	Discussion
<b>Newton Law's of Motion + Friction</b>		1	Newton's First Law,2nd Law,3rd Law,FBD,Atwood Machine
		2	Example Based on Newton's 2nd Law,String Block System (Constrained)
		3	String Constraint,Heavy String,Spring, Spring Balance,Weighing Machine, Homework-1
		4	Pseudo Force and Discussion of Homework -2,3
		5	Friction-Basic Concepts,Static and Kinetic Friction,illustration Based on Friction
		6	Minimum Force required to Slides a System,Problem Based on Inclined,Discussion of Homework
		7	Angle of Repose,2 Block System,Discussion of Homework
<b>Circular Motion</b>		1	Relation Between Linear Velocity and Angular velocity,Uniform Circular Motion
		2	Analysis Between Linear and Circular Motion,Relative Angular Velocity,Tangential Acceleration and Centripetal Acceleration,Angular Acceleration
		3	Uniform and Non uniform Circular,Radius of Curvature,Simple Pendulum and Conical Pendulum,Banked Road
		4	Discussion
<b>WORK , POWER AND ENERGY(6)</b>		1	work of constant forces . Central and non central forces , Conservative Forces and Potential energy
		2	Work -Energy Theorm , Work Done on inclined plane
		3	Concept of Power , instaneous and Avg. Conservation of mechanical energy
		4	Vertical Circular Motion , String & Rod Oscillation, Slacking
		5	Condition of Slacking Via trajectory , Complete Circular Motion
<b>Centre of Mass and Collision (6)</b>	UPTO 29-11-2020	1	Defination & Calculation of Discrete and Continous System , COM of Semi-Circular Ring , Half Ring , Hemi- Spherical Shell , Conical Shell Solid Cone ,Triangular Lamina and other Bodies , COM for 2 bodies , cases of cavity
		2	Momentum of System , Acceleration of COM ,Conservation of Momentum and Retainment of COM Cases
		3	System of Variable Mass + Discussion

		4	Impulse and Impulse relation with change of Momentum , Coefficient of Restitution , Head on Collision and Oblique Collision
		5	Elastic and Non Elastic Collision & Centric and eccentric collision
<b>ROTATIONAL MOTION (10)</b>		1	Introduction , Moment of inertia , parallel and Perpendicular axis theorem
		2	MOI Calculation for complex cases including Cavity , Radius of Gyration
		3	Torque and its relation with angular acceleration , cases of zero torque by a force
		4	Rotational Equilibrium , Hinge reaction on rigid body on release
		5	Concept of Pure Rotation , angular Momentum and relation with impulse (Newtons Law of Rotation )
		6	Angular Momentum and Conservative Cases , Rotational Kinetic energy , energy calculation and hinge reaction
		7	Combination of rotational + translation Motion , Slipping , Pure Rolling ,Mechanical energy
		8	Conservation in Pure Rolling , Pure rolling in inclined Plane
		9	IAOR and its centre , Locating Centre using IAOR
		10	Discussion and Problems
<b>ELECTROSTATICS (10)</b>	UPTO 20-12-2020	1	Charge - Definition and its properties , Coulombs law , Effect of Medium , Electric Field ,Electric field Lines .
		2	Electric field , Properties of electric field , Electric Field Due to point charge , arc , ring , line charge, disc , sheet, E-x
		3	Motion of Charge particle in Electric field , Definition of Flux , Gauss Law , Flux by Gauss law .
		4	Electric Field Due to spherical shell , sphere , cylindrical shell , cylinder , thick sheet , Electric Field Within Cavity ,
		5	Cond. , charge and Electric Field within Conductor , charge distribution on concentric metallic Shells and Parallel
		6	Electric Potential and Potential Difference , Relation between Electric Field and potential difference , Electric
		7	Relation between potential difference and Work Done, Equipotential Surface , charge sharing and earthing of
		8	electric dipole , dipole moment , electric potential and electric field due to electric dipole , dipole in electric field ,
		9	SHM of Dipole , point charge , dipole , dipole-dipole interaction , Properties of Conductor ,electrostatic pressure ,
		10	Shielding in conductor + DISCUSSION
<b>GRAVITATION (4)</b>	UPTO 20-12-2020	1	Gravitational Force Field , Potential , Potential energy and comparison with electrostatic +
		2	Definition of 'g' and its variation with height , depth , rotation and shape , Binding energy , escape velocity
		3	Keplers law , Geo- Stationary and Near Earth Satellite , Long pendulum , SHM if particle in tunnel ,
		4	DISCUSSION
<b>CURRENT ELECTRICITY (8)</b>	UPTO 20-12-2020	1	Current , Drift Velocity ,mobility and relation between Current and drift velocity , Current density , Ohm's law .
		2	Conductivity conductance , ohmic /non ohmic resistance , Resistance in different cases ,Equivalent Resistance , Variation of Resistivity and Conductance with temperature
		3	Battery , EMF , Equivalent of Circuit elements ,Kirchoff's law
		4	Series and parallel combination of resistance and batteries
		5	Wheat stone bridge , symmetry , PT. Potential ,Nodal analysis , More examples on finding equivalent resistance and Resistance for Cubical frame .
		6	Unbalanced wheatstone bridge , symmetric and non symmetric combinations , Power of resistance , battery , parallel connection in home
		7	Max. Power Transfer theorem (MPTT) , Fuse wire , Galvanometer , ammeter , Voltmeter and their Conversion
		8	Meterbridge + Potentiometer + PO Box + Discussion
<b>CAPACITOR (5)</b>	UPTO 20-12-2020	1	capacitor , capacitance , type of capacitor , capacitance of spherical , cylinder , parallel plate and other capacitor
		2	Parallel plate - Equal and unequal charge case , steady state , charging , Energy of capacitor , force between plates , combination of capacitor
		3	Heat loss , dielectric partial and complete , polarization , induced charges , Equivalent Capacitance
		4	Effect of charge in Capacitance , Charging and discharging of capacitor , their equivalent and Equivalent time and battery efficiency
		5	Earthing cases + Discussion
<b>Magnetic Effect of Current and Magnetism</b>	UPTO 10-01-2021	1	Production of Magnetic Field , Biot Savart law , magnetic Field Lines ,
		2	Magnetic Field Due to St. Wire , Loop ,Arc , sheet , Cylinder trough , solenoid
		3	Magnetic Field Lines , Magnetic Field Due to Moving Charge , E/B Value . Ampere's law , Finding Line Integration of
		4	Magnetic Field inside and Outside wires ,Magnetic Field Within Cavity , Magnetic field between sheets , solenoid ,
		5	Magnetic Force , Motion in Uniform magnetic field , Circular and Helical Motion
		6	Lorentz Force , Motion under Electric field and Magnetic field , Velocity Selector ,mass spectrometer , force on wire
		7	Effective length in uniform Magnetic field , Force Between parallel wires , Magnetic dipoles , field Lines
		8	Dipole moment ,M of moving charge , field on dipole ,Torque , energy and force on dipole due to Magnetic field
		9	MCG ,Current /Voltage Sensitivity ,Discussion
		10	Discussion
<b>EMI (10)</b>	UPTO 10-01-2021	1	Earth magnetism , Meridian , Dip angle , dip circle , app. Dip , Vibrational Magnetometer , Mag. Shielding
		2	Meissner effect , Magnetic material and Microscopic explanation
		3	Magnetization variable , Curie law , curie-weiss law , Curie temp .
		4	Hysteresis . B Vs H Graph , coercivity , retentivity , Losses + Discussion
		1	Translational and Rotational of conducting rod in uniform Magnetic field , Accelerating and rotating conducting rod
		2	Magnetic Flux and Faraday Law and Lenz law , Induced Current
		3	Energy Loss , In-out of Magnetic field by a closed body , Horizontal - Vertical Rails
		4	Cases including C , terminal velocity , rotating disc , Cases having Induced EMF and Battery
		5	Disc Rotation about diameter , AC generator , time variation of Magnetic field , Induced EMF inside outside
		6	Finding Potential difference and Induced EMF b/w points , charges flow , impulse , Magnetic Field variation .
7	Mutual Induction Law , Concentric Coils , Co-axial Solenoid , Self induction Law , Inductor		
8	Inductance , equivalent Inductance of solenoid , toroid , Inductor Combination , Magnetic Energy Density , Growth /fall of current in LR Circuit		
9	LR Circuit , L-C Oscillations , Equivalent time calculation , comparison with spring - block		
10	Discussion		
<b>AC (4)</b>	UPTO 10-01-2021	1	AC Current , Frequency , avg , RMS ,peak .AC Circuit , Phase angle , Power and power factor , Phasor diagram ,
		2	AC Circuit , R only , L only , C only . Series Circuit : R-L ,L-C , R-C , L-C-R Circuit , resonance and Circuit analysis .
		3	Quality factor ,half power frequency , Parallel AC Circuit , Conductance , Susceptance and admittance
		4	Choke Coil , Transformer + Discussion
<b>SIMPLE HARMONIC MOTION(6)</b>	UPTO 10-01-2021	1	Equation of SHM , Velocity and Acceleration in SHM , Energy of SHM , Time Period and Angular Frequency in SHM
		2	Two Block system & Combination of Springs in SHM
		3	Angular SHM

		4	Simple Pendulum , Compound pendulum , Torsional Pendulum
		5	Combination of two or More SHM + Discussion
		6	Discussion
<b>STRING WAVE (4)</b>	UPTO 31-01-2021	1	Equation of Wave , particle Velocity and acceleration , Speed of transverse waves on string ,energy in waves
		2	Superposition , Principal interference of waves
		3	reflection and transmission between 2 strings
		4	Equation of Standing Waves ( Stationary Wave ) , Stationary wave in String , vibration in string wave , Sonometer Wire
<b>SOUND WAVE(6)</b>		1	Equation of Pressure Wave , Velocity , Newton's and Laplace Formula , Loudness and Intensity , energy in Sound
		2	Interference of waves ,reflection and Refraction
		3	Standing wave ( Organ pipe ) , resonance Tube , Quinck's Tube , Kund's Tube
		4	Beats , Doppler's Effect ( Sound Wave )
		5	Complete Wave Discussion
<b>WAVE OPTICS (4)</b>		1	Huygens hypothesis , wave front , secondary wavelets , laws of reflection /refraction , failure
		2	YDSE , Intensity , Variation on screen , no. of maxima & minima on screen , Optical path , slabs on slits
		3	bi and multi chromatic , white light , Medium change , screen movement , Multi slits , shape of fringes , Lloyd's Mirror
	4	Thin Film interference , Newtons Ring + Discussion	
	5	Polarization , polaroid , Malus and Brewster Law , Scattering , Diffraction , Fresnel/Fraunhofer diffraction , slit/Circular Hole , resolution	
<b>ELASTICITY + CALORIMETRY + THERMAL EXPANSION (6)</b>	UPTO 21-02-2021	1	Elastic Body , Restoring Forces Types of Stress and Strain , Stress -strain Graph , Hooke's Law , Measure of Elasticity
		2	Elastic PE , Expansion by Self Weight , Rotation , Temp. and Impurity effect on Elasticity + Discussion
		3	Mechanical Equivalent of heat , Specific Heat Molar heat Capacity Heat/ Thermal Capacity Latent heat ,
		4	Principle of Calorimetry , water equivalent of calorimeter ,sublimation , condensation + discussion .
		5	Temperature and scales , PE and T graph ,Thermal Expansion /Contraction of $\alpha$ , $\beta$ , $\gamma$ . , Application of Bi-Metallic Strips , Cavity , Time loss /Gain by clock
		6	Error in scale reading , apparent expansion of liquid ,anomalous expansion of water + Discussion
<b>HEAT TRANSFER (4)</b>		1	Modes , Law of Conduction , temp. Gradient . Thermal Resistance and different cases of Series and parallel
		2	Radiation , absorptive power , emissive Power and their spectral definition , emissivity ,Black body , Pervost
		3	Stefan's law and Newton's law of Cooling , Distribution of black body and Wein's Law . Solar Constant and Sun Temp.
		4	Spectral energy + Discussion
<b>SURFACE TENSION + VISCOSITY (4)</b>		1	<b>SURFACE TENSION :</b>
		2	excess pressure , angle on contact , effect of impurity on T , Capillary tube , and Liquid rise in capillary tube , Liquid
	3	<b>VISCOSITY :</b>	
	4	Terminal Velocity of drop , Stoke's law , Reynolds No. , coefficient of viscosity for liquid , gases .	
<b>THERMODYNAMICS (6)</b>	1	Thermodynamic system ,Surrounding , closed , open , isolated system . $n$ , T , P as system variables ,state of system .	
	2	Zeroth law , Thermal Equilibrium ,internal energy , Process - Isothermal , isobaric , Adiabatic poytropic , equation and graph of process .	
	3	Indicator Diagrams , sign Conventions ,work done by gas , work done in different process , heat loss in different	
	4	Internal Energy as state function , First law of thermodynamics ,significance and relations with specific heat	
	5	Heat Engine , Efficiency ,Carnot Cycle and its efficiency , carnot theorem , Second Law of thermodynamics , , Kelvin-	
	6	Refrigerator , Coefficient of performance (COP)= Heat extracted from cold body/ WD on Refrigerator , (COP) For	
<b>Fluid Mechanics</b>	UPTO 7-03-2021	1	Ideal Fluid - Density , Relative density , specific gravity , density of mixture , no shearing stress and shape of free
		2	Closed Acceleration container , spilling liquid in rotating cylindrical container and accelerating container , U tube ,
		3	Force of Liquid on Container Base and Side walls .Force on surface , centre of force and other force examples .
		4	Pascal's Principle ,
		5	Archimedes Principle , Buoyant Force , Centre of Buoyancy , Floating Stability in Floating .
		6	Discussion
		1	Ideal Fluid , Steady and turbulent flow , Streamline flow ,Equation of Continuity .
		2	Bernoulli's Equations ,Energy of liquid , PE ,KE Pressure energy
		3	Application of Bernoulli's Principle : Magnus effect , helicopter , aeroplane , atomiser , venturimeter .
		4	Static and Dynamic pressure point , pitot tube , siphon , velocity of efflux , Toricelli's theorem ,
		5	Force on container + Discussion
<b>KTG (3)</b>		1	Solid ,Liquid , Gas . NTP and STP . Concept of Ideal Gas ,postulates of ideal gas , Ideal gas Equation , Boyle's Law , Charles's law , Gay - Lussac Law ,Avogadro Law .
	2	Degree of Freedom , Maxwell's Law of equipartition of energy , Internal energy , Molecular KE , Molar KE , Energy	
	3	Maxwell Law of Velocity distribution , Avg. Velocity , RMS Velocity , Mean Speed .mean Free Path + Discussion	
<b>ELECTRONIC DEVICES(4)</b>	1	Concept of Holes in semi-conductor , Intrinsic ,extrinsic ,doping , N type ,P type , Mass action law , P-N Junction ,diffusion , drift current , potential barrier , depletion layer , Diode- Forward & Reversed Biased	
	2	Zener and avalanche breakdown , application of diode LED ,photodiode ,solarcell ,Zener diode ,rectifier - Full wave , half wave ,Bridge rectifier	
	3	Transistor , E,B,C ,npn ,pnp . Region of Working , Common base , Common emitter Common collector , input output characteristics	
	4	Logic gates : OR ,AND , NOT , NOR,NAND , XOR ,XNOR Gate . Boolean algebra ,truth table , Elec. Analogue and Circuit diagram	
<b>COMMUNICATION (2)</b>	1	Communication and Element of Communication System , types , basic definitions transducer , noise , signal ,attenuation , Prop. Of EM waves , Ground ,Sky ,space Communication	
	2	Modulation : AM ,FM ,PM , Modulation Index , Band Width Sq.law Device ,Band Pass Filter , Demodulation ,IP Stage , Envelope Detector , Cmax.	

\*\* NOTE : Dear Student, Please Follow the Test Schedule to Study NEET Physics

### NEET TIME SAVER COURSE PLAN OF CHEMISTRY (PHYSICAL) (2020-2021)

CHAPTER NAME	CODES	DETAILED CONTENT
<b>Mole concept-3</b>	LC001(23-09-2020)	
	LC002(25-09-2020)	
	LC003(28-09-2020)	
	LC004(30-09-2020)	
	LC005(2-10-2020)	
	LC006(5-10-2020)	
	LC007(7-10-2020)	
	LC008(9-10-2020)	
	LC001(12-10-2020)	
	LC002(14-10-2020)	

Chemical Kinetics	LC003(16-10-2020)	
	LC004(19-10-2020)	
	LC005(21-10-2020)	
Chemical Equilibrium	LC001(23-10-2020)	
	LC002(26-10-2020)	
	LC003(28-10-2020)	
	LC004(30-10-2020)	
Ionic Equilibrium-11	LC001(02-11-2020)	Acid - Base theories , Amphiprotic species, Levelling effect Arrhenius theory of dissociation, common ion effect
	LC002(04-11-2020)	properties of water, pH scale , Calculation of pH for strong acids /bases, pH of weak Acids
	LC003(06-11-2020)	Calculation of pH of solution containing weak acid or base
	LC004(09-11-2020)	Calculation of pH of mixtures
	LC005(11-11-2020)	Calculation of pH of solution containing polytropic acid/base, Salt hydrolysis
	LC006(13-11-2020)	Buffer solutions and Acid Base Titrations
Thermodynamics	LC001(16-11-2020)	Indicators and selection of Indicators , Solubility and solubility product,Solubility in presence of common ion Condition for precipitation , selective precipitation
	LC002(18-11-2020)	Introduction
	LC003(20-11-2020)	Basic definition
	LC004(23-11-2020)	Types of system
	LC005(25-11-2020)	State function / path function
	LC006(27-11-2020)	Extensive & intensive properties, Work, Heat & Internal Energy
	LC007(30-11-2020)	First law of thermodynamics, Enthalpy , Relation between Enthalpy and Internal Energy
	LC008(02-12-2020)	Thermodynamic Processes , Reversible & Irreversible process and their comparison
	LC008(04-12-2020)	Isochoric process
Electrochemistry-9	LC001(07-12-2020)	Isobaric process , Isothermal process, Adiabatic process
	LC002(09-12-2020)	Comparison between isothermal & adiabatic process
	LC003(11-12-2020)	Polytropic process
	LC004(14-12-2020)	Second law of T.D., Entropy
	LC005(16-12-2020)	Calculation of entropy
	LC006(18-12-2020)	Physical significance of entropy
	LC007(20-12-2020)	Entropy change for phase transformation, Third law of thermodynamics
	LC008(23-12-2020)	Entropy change for chemical reaction
	LC009(25-12-2020)	Gibbs free energy Calculation of change in 'G' Gibb's free energy & non-PV work, Concept of equilibrium
Liquid Solution-6	LC001(27-12-2020)	Introduction, Daniel cell , Representation of cell
	LC002(30-12-2020)	Electrode potential and Standard Electrode Potential , EMF, SHE & Electrochemical Series
	LC003(02-01-2021)	Nernst Equation , Electrode potential & Equilibrium constant
	LC004(04-01-2021)	, different type of half cells, Metal SSS half cell , Thermodynamics of galvanic cells
	LC005(06-01-2021)	Electrolysis and products of electrolysis, Faradays laws of electrolysis Conductance and conductivity cell, molar conductivity & Equivalent conductivity variation of molar conductivity with dilution , Kohlrausch's law and its applications, Types Of Batteries
Solid State	LC001(08-01-2021)	Introduction, Vapour pressure Raoult's law, composition in Liquid & Vapour phase Non-ideal solution, Azeotrope Colligative properties - RLVP, $\Delta T_b$ , $\Delta T_f$ , Osmotic Pressure Abnormal colligative properties, Henry's Law
	LC002(11-01-2021)	Introduction
	LC003(13-01-2021)	Basic definition
	LC004(15-01-2021)	Unit cell / Bravais lattices
	LC005(18-01-2021)	Analysis of unit cells packing in crystals Radius ratio, structure of ionic crystals defects in solids and magnetic properties
Gaseous State	LC001(20-01-2021)	Gas laws and ideal gas equation, types of containers, manometer & barometer
	LC002(22-01-2021)	Dalton's law of Partial pressure, Effusion and diffusion
	LC003(25-01-2021)	Kinetic Theory of gases , types of molecular speeds, kinetic energy and maxwell's speed distribution curve,
	LC004(27-01-2021)	
	LC004(29-01-2021)	Real gases and deviation from ideal behaviour , compressibility factor & calculation, Liquifaction of gases and critical constants
	LC004(01-02-2021)	planck's quantum theory , photo electric effect,rutherford's model
Atomic Structure-3	LC004(03-02-2021)	Bohr's model & Formulae related to it
	LC004(05-02-2021)	Hydrogen spectrum
	LC004(08-02-2021)	De-Broglie Concept & Hiesenberg's principle
	LC004(10-02-2021)	Quantum mechanical model & Schrodinger's wave equation
	LC004(12-02-2021)	Adsorption & Absorption
Surface Chemistry-2	LC004(15-02-2021)	catlysis & their types
	LC004(17-02-2021)	colloids and their classification , preparation of colloids
	LC004(19-02-2021)	properties of colloids, Coagulation and protecton of cooloids, purification and Emulsions
	LC004(22-02-2021)	

### NEET TIME SAVER COURSE PLAN OF CHEMISTRY (INORGANIC) (2020-2021)

CHAPTER NAME	CODES	DETAILED CONTENT
Periodic Properties	LI001	
	LI002	

Chemical Bonding	LI001(24-09-2020)	Introduction of chemical bonding, Formal Charge , Lewis octet rule , Lewis acids & Bases,
	LI002(26-09-2020)	VBT & Overlapping
	LI002(29-09-2020)	Hybridisation & VSEPRT ,
	LI002(1-10-2020)	Allenes , Calculation of pp-dp bonds ,
	LI002(3-10-2020)	Drago Rule, Bent Rule, Hybridisation in solid state
	LI002(6-10-2020)	Bond Parameters - Bond Order, Bond length, Bond Angle & Comparison,
	LI002(8-10-2020)	Dipole moment , applications of dipole moment
	LI002(10-10-2020)	Back bonding , Bridge Bond
	LI002(13-10-2020)	Molecular Orbital Theory (MOT),
	LI002(15-10-2020)	Intermolecular forces , factors affecting vanderwaal forces , comparison of B.P. & M.P. , Hydrogen Bonding
	LI002(17-10-2020)	Hydrogen Bonding , extent & strength of H-bonding , Types of H-Bonding , properties affected
	LI002(20-10-2020)	Ionic Bond, polarisation and Fajan's Rule & It's application
LI002(22-10-2020)	Solubility orders & Thermal stability	
Co-ordination Compounds	LI01(24-10-2020)	Introduction, Classification of Ligands , Oxidation number, Effective atomic number .
	LI02(27-10-2020)	Nomenclature of Coordination Compounds , Werner's coordination theory
	LI03(29-10-2020)	Crystal Field Theory + Valence Bond Theory
	LI04(31-10-2020)	CFT
	LI05(03-11-2020)	Calculation of CFSE, Factors affecting splitting energy , Applications Of CFSE
	LI06(05-11-2020)	Calculation of CFSE, Factors affecting splitting energy , Applications Of CFSE
	LI07(07-11-2020)	Synergic bonding and stability of complexes
Metallurgy-10	LI01(10-11-2020)	froth floatation, Leaching,
	LI02(12-11-2020)	Conversion of ore into oxide, Reduction of oxide into metal (smelting), Self reduction
	LI03(14-11-2020)	Refining of metal
	LI04(17-11-2020)	Thermodynamics of metallurgy - Ellingham Diagram
	LI05(19-11-2020)	Extraction of Fe
	LI06(21-11-2020)	Extraction of Cu
	LI07(24-11-2020)	Extraction of Al
	LI08(26-11-2020)	Extraction of Ag & Au
S-Block-	LI01(28-11-2020)	General Properties of S-block elements
	LI02(01-12-2020)	Properties of S-block elements
	LI03(03-12-2020)	Compounds of S-block elements
P-Block-	LI01(05-12-2020)	Boron Family
	LI02(08-12-2020)	Carbon family & properties
	LI03(10-12-2020)	Silicates & Silicones
	LI04(12-12-2020)	Nitrogen family
	LI05(15-12-2020)	Nitrogen Family
	LI06(17-12-2020)	Oxygen Family
	LI07(19-12-2020)	Oxygen Family
	LI08(22-12-2020)	Halogen Family
	LI09(24-12-2020)	Halogen Family
	LI010(26-12-2020)	Noble gases
D-Block-	LI01(29-12-2020)	Introduction, and general properties of D-block elements ,
	LI02(31-12-2020)	Properties of D-block elements ,
	LI03(02-01-2021)	Important compounds of D-block elements
	LI04(05-01-2021)	F-Block elements & properties
Hydrogen And Its Compound , F-Block-1	LI04(07-01-2021)	Complete properties
	LI05(09-01-2021)	compounds of Hydrogen
	LI05(12-01-2021)	Hardness Of water

### NEET TIME SAVER COURSE PLAN OF ORGANIC CHEMISTRY (2020-2021)

CHAPTER NAME	Date	NO. OF LECTURES	CONTENT OF CHAPTER
Structural Isomerism	Sunday, September 20, 2020	L : 1	Structural Isomerism (Introduction)
	Monday, September 21, 2020	L : 2	Structural Isomerism (Including basics of tautomerism)
Stereoisomerism(12-13)			(a) Geometrical Isomerism
	Tuesday, September 22, 2020	L : 3	Difference between structural & stereoisomerisms, Introduction of geometrical Isomerism
	Thursday, September 24, 2020	L : 4	Condition of geometrical isomerism compounds showing G.I
	Saturday, September 26, 2020	L : 5	Properties of G.I. isomers Naming of G.I., (cis trans, E-Z, syn-anti) calculation of G.Is.
	Wednesday, September 30, 2020	L : 6	(b) Conformational Analysis Basic ideas information for conformational analysis Conformations in acyclic compounds and stability
	Sunday, October 04, 2020	L : 7	Conformations in cyclic compounds Identification of direction of equilibrium Stability of Conformations in cyclic compounds
	Wednesday, October 07, 2020	L : 8	(c) Optical Isomerism Introduction, conditions for optical isomers, chiral centre and stereocentre
	Saturday, October 10, 2020	L : 9	Configuration of compound (D/L - and R/S)
	Monday, October 12, 2020	L : 10	Elements of symmetry (POS, COS, AAOS, AOS), Optical isomerism in compound with one and two chiral centre
	Thursday, October 15, 2020	L : 11	Meso compound, Enantiomers, Diastereomers, Racemic mixture Compounds having zero chiral centres, spiro and bicyclo systems
	Sunday, October 18, 2020	L : 12	Comparison between different type of isomers and other compounds
	Tuesday, October 20, 2020	L : 13	calculation of total S.Is.
	Sunday, October 25, 2020	L : 14	Comparison between Resolution, optical purity, Enantiomeric excess, Calculation, stereoisomers

General Organic Chemistry (10-12)	Tuesday, October 27, 2020	L : 1	Inductive effect and its types Application of I-effect
	Thursday, October 29, 2020	L : 2	Resonance concept conditions for resonance (conjugated systems)
	10/30/2020	L : 3	How to draw various resonance structures Involvement of d- orbital and back bonding in resonance
	Tuesday, November 03, 2020	L : 3	Stability of resonating structures Method of resonance, +R and -R group
	Thursday, November 05, 2020	L : 4	Aromaticity
	Saturday, November 07, 2020	L : 5	Application of Aromaticity
	Sunday, November 08, 2020	L : 6	Hyperconjugation of cation, free radical Hyperconjugation of alkene and benzene
	Monday, November 09, 2020	L : 7	Bond length comparison HOC, HOH, Resonance energy and its calculation
	Tuesday, November 10, 2020	L : 8	Acidic strength comparison Pka of diff acids, phenol & benzoic acid and derivatives
	Friday, November 13, 2020	L : 9	Acid Base equilibrium Basic strength
Sunday, November 15, 2020	L : 10	Basic strength Basic strength	
Classification and Nomenclature of Organic Compound (7-8)	Wednesday, November 18, 2020	L : 1	Introduction, method of presentation of O.C. (bond Line notation) Classification/ types of C, H, R-X, R-OH, Amines, Functional group
	Friday, November 20, 2020	L : 2	IUPAC-Naming Rule
	Saturday, November 21, 2020	L : 3	IUPAC-Naming of hydrocarbons
	Tuesday, November 24, 2020	L : 4	IUPAC-Naming of functional groups
	Thursday, November 26, 2020	L : 5	IUPAC-Naming of polyfunctional group compounds
	Saturday, November 28, 2020	L : 6	IUPAC-Naming Aromatic Compound
Sunday, November 29, 2020	L : 7	common names and Miscellaneous problems	
Halogen Derivatives (18)	Monday, November 30, 2020	L : 1	Reactant reagents Electrophile, nucleophile, Variation of Electrophilicity and nucleophilicity Important Reaction of hydrocarbons
	Wednesday, December 02, 2020	L : 2	Addition of HX and H <sub>3</sub> O <sup>+</sup> addition with alkenes / alkynes Anti-Markovnikov
	Friday, December 04, 2020	L : 3	Addition of X <sub>2</sub> , IX, NOX, HO-X with alkenes/alkynes
	Sunday, December 06, 2020	L : 4	Ozonolysis and hot KMnO <sub>4</sub> Nucleophilic Substitution reaction (SN-RXN) Leaving groups and SN2
	Monday, December 07, 2020	L : 4	SN2 SN1
	Tuesday, December 08, 2020	L : 5	Lucas Test and Comparison of SN1 & SN2
	Wednesday, December 09, 2020	L : 6	Hydrolysis of ether and reaction of R-OH with conc. HI
	Thursday, December 10, 2020	L : 7	SN-ngp Chlorobenzene
	Saturday, December 12, 2020	L : 8	Examples of SN reactions of R-X, R-OH, R-O-R
	Sunday, December 13, 2020	L : 9	SNar
	Tuesday, December 15, 2020	L : 10	SNea Elimination Reaction
	Wednesday, December 16, 2020		E1, Dehydration of alcohol (E1-Reaction) E1 and SN1 comparison
	Friday, December 18, 2020	L : 11	Pinacol-Pinacolone rearrangement, Dienone Phenol Demjanav rearrangement,
	Saturday, December 19, 2020	L : 12	E2 Dehydration, Dehalogenation
	Sunday, December 20, 2020	L : 13	E2 Hoffman, E1CB Pyrolytic / thermal elimination rxn
	Tuesday, December 22, 2020	L : 14	Grignard Reagent preparation Grignard Reagent - reactions
	Thursday, December 24, 2020	L : 15	Grignard Reagent - remaining reactions
Friday, December 25, 2020	L : 16	Important Reaction involving FR (Kolbe, Electrolysis, wurtz reaction) and , Pinacol-formation	
Saturday, December 26, 2020	L : 17	Photohalogenation (Chlorination, Bromination) Per-oxide effect, NBS Rxn	
Alcohol & Ether (6)	Monday, December 28, 2020	L : 1	preapartion OMDM, HBO
	Tuesday, December 29, 2020	L : 2	Reduction of various functional group
	Wednesday, December 30, 2020	L : 3	Reduction by H <sub>2</sub> /cat Reduction by LiAlH <sub>4</sub>
	Friday, January 01, 2021	L : 4	Reduction by SBH, BH <sub>3</sub> -THF/H <sup>+</sup> , DIBAL-H Some other important reduction
	Sunday, January 03, 2021	L : 5	Oxidation Oxidation - 1 (Alkane, alkene, alkyne) Oxidation - 2 (R-OH)
	Tuesday, January 05, 2021	L : 6	Oxidation - 3 HIO <sub>4</sub> Oxidation - 4 (Aldehyde)
Carbonyl compounds (Aldehyde, Ketone) (6-7)	Thursday, January 07, 2021	L : 1	Heating effect Decarboxylation Heating effect on various other compound Nucleophilic addition reaction
	Saturday, January 09, 2021	L : 2	Reaction with NaHSO <sub>3</sub> , HCN, H <sub>2</sub> O, H <sub>2</sub> N-Z Reaction with R-OH Name reactions
	Sunday, January 10, 2021	L : 3	Haloform reaction
	Tuesday, January 12, 2021	L : 4	Aldol condensation reaction Cannizaro's reacion
	Thursday, January 14, 2021	L : 5	Some other reactions

Carboxylic Acid Derivatives and Amines (4)	Saturday, January 16, 2021	L : 1	G.M.P. (General Method of Preparation and Reactions) General reactions
	Monday, January 18, 2021	L : 2	General Method of Preparation
	Tuesday, January 19, 2021	L : 3	Reactions of Amines Reactions of Amines
	Friday, January 22, 2021	L : 4	Benzene diazonium chloride and its rxn preparation of Benzene
Aromatic Compound (6-7)	Sunday, January 24, 2021	L : 1	EAS mechanism Directing influence
	Tuesday, January 26, 2021	L : 2	types of EAS : FC reactions
	Thursday, January 28, 2021	L : 3	types of EAS : others Phenols
	Saturday, January 30, 2021	L : 4	G.M.P. Rxn. of Phenol Aniline
	Tuesday, February 02, 2021	L : 5	G.M.P. & GR of aniline
	Thursday, February 04, 2021	L : 6	Test of phenol and aniline, coupling reactions
Biomolecules (8)	Saturday, February 06, 2021	L : 1	Amino Acid & Proteins Introduction, classification, physical properties isoelectronic point Reaction of Amino acid, protein and its classification
	Tuesday, February 09, 2021	L : 2	Carbohydrates Introduction, Classification Structure of monoseccharides (Glucose, fructose)
	Thursday, February 11, 2021	L : 3	Reactions of monoseccharides test of carbohydrates
	Saturday, February 13, 2021	L : 4	Disaccharides and polysaccharides
	Sunday, February 14, 2021	L : 5	polymers classification
	Tuesday, February 16, 2021	L : 6	Polymers examples and uses
	Thursday, February 18, 2021	L : 7	Chemistry in every day life introduction
	Saturday, February 20, 2021	L : 8	Chemistry in every day life
Purification methods and POC (2-3)	Monday, February 22, 2021	L : 1	General methods
	Wednesday, February 24, 2021	L : 2	Elemental detection (C, N, O, S, P, Cl)

### NEET TIME SAVER COURSE PLAN OF BIOLOGY (2020-2021)

CHAPTER NAME	Date	NO. OF	CONTENT OF CHAPTER
Reproduction in Organisms (3)	18-09-2020	1	Introduction Life span , Asexual reproduction, Reproduction, Fission, Budding, Fragmentation
	19-09-2020	2	Vegetative Propagation- Natural and Artificial
	21-09-2020	3	Sexual Reproduction & Parthenogenesis
Human Reproduction (8)	22-09-2020	1	Steps of Reproduction, Male Reproductive System
	23-09-2020	2	Seminiferous tubules, Sertoli cells, Leyding calls, Hormonal control, Spermatogenesis, Structure of Human sperm
	24-09-2020	3	Female Reproductive System, Mammary glands
	25-09-2020	4	Follicle development, Oogenesis
	26-09-2020	5	Fraternal twins, Hormonal control menstrual cycle, Estrous & Rut cycle, Egg membranes, Human egg
	28-09-2020	6	Steps in fertilization, Embryology, Cleavage, Morula, Blastula, Implantation
	29-09-2020	7	Extra- Embryonic membranes, Gastrulation, Neurulation, Fate of germ layers , Placenta sits types
	30-09-2020	8	Human placenta , Umbilical cord, Gestation period, Teratogens, Parturition , Laction
Reproductive Health (2)	01-10-2020	1	Opverpopulation , Amniocentesis, Contraception
	02-10-2020	2	MTP, Infertility , ART, STI
Sexual Reproduction in Flowering plants (5)	03-10-2020	1	Flower Structure, Structure of stamen, Anther wall, Tapetum, Microsporogenesis, Pollen grain
	05-10-2020	2	Male Gametophyte, Gynoecium, ovule, Megasporogenesis, Female Gametophyte, Embryo-sac
	06-10-2020	3	Pollination - Self & cross, Pollination agents, Mutualism, pollen pistil interaction,
	07-10-2020	4	Double fertilization, post - fertilization events, Embryo development
	08-10-2020	5	Endosperm, Seed fruit , Parthenocarpy, Apomixis , Polyembryony
Evolution (5)	10-10-2020	1	Origin of universe, Earth , Life chemosynthetic theory, spark- discharge experiment, protobiones
	12-10-2020	2	Evidence of Evolution , Geological Time scale
	13-10-2020	3	Geological time scale , Biological Evolution
	14-10-2020	4	Speciation, Hardy weinberg, Natural selection
	15-10-2020	5	Hourse & Human Evolution
Human Health & Diseases (7)	16-10-2020	1	Classification, Bacterial diseases
	17-10-2020	2	Viral diseases, Protozoal disease
	19-10-2020	3	Malaria , Roundworm & Flatworm, Fungal diseases
	20-10-2020	4	AIDS , Cancer
	21-10-2020	5	Immunity - Innate & Aquired, Antibody structure
	22-10-2020	6	Active & Passive immunity , Primary & Secondary immune response, Autoimmunity , Immunodeficiency Grafting
	23-10-2020	7	Mental Health , Drug & Alcohol abuse
Microbes in human welfare (4)	24-10-2020	1	Microbes in household & industrial products
	26-10-2020	2	Industrial products
	27-10-2020	3	As biofertilizers, sewage left
	28-10-2020	4	Biogas, Biocontrol agents
Strategies for Enhancement in Food production (4)	29-10-2020	1	Animal husbandry, Breeding, Apiculture, Sericulture, piscicultur
	31-10-2020	2	Plant breeding Hybridisation, Inbreeding depression, Mutation breed
	02-11-2020	3	Green revolution, Disease & Insect resistance, Biofortification SCP
	03-11-2020	4	Plant Tissue culture , Protoplast food
Biotechnology – Principles & Processes (3)	04-11-2020	1	Principles first rDNA, Gene cloning, Lysases
	05-11-2020	2	RE, & other enzymes, cloning vectors, Insertional inactivation
	06-11-2020	3	Process of rDT, Gel electrophoresis, PCR, Bioreactor , Downstream processing
Biotechnology – application (3)	07-11-2020	1	Genetically engineered Insulin, Gene therapy , Monoclonal Antibody
	09-11-2020	2	PCR, Autoradiography, ELISA, Golden Rice Bt cotton, RNAi
	10-11-2020	3	Pest resistant Tobacco, Flavr savr Tomato GMO, Cloning, Bioethics & Biopiracy
Principles of Inheritance & Variations (8)	11-11-2020	1	Blending inheritance, Terminology, Mendelism, Rediscovery
	17-11-2020	2	Reason for Non-recognition & Success of mend, Low of Dominance
	18-11-2020	3	Law of Segregation, Exceptions to law of Dominance
	19-11-2020	4	Dihybrid cross, Law of Independent Assortment, Non-Allelic Interactions
	20-11-2020	5	Chromosomal theory of inheritance, Linkage

	21-11-2020	6	Sex determination Mutations,Genetic disorders
	21-11-2020	7	Cytoplasmic inheritance, RH Inheritance
	23-11-2020	8	Pedigree, Numericals
Molecular Basis of Inheritance (6)	23-11-2020	1	Nucleic acid , Double helix DNA, DNA packaging, Types of DNA
	24-11-2020	2	Search for Genetic material Properties , RNA world
	24-11-2020	3	Mechanism of DNA Replication, RNA Structure
	25-11-2020	4	Types. Transcription Unit , Transcription, Transcription, Gene code
	25-11-2020	5	Gene mutation, Gene regulation, Lac operon,HGP
	26-11-2020	6	DNA fingerprinting , VNTRs, Numerical solving
Cell The Unit of Life (5)	26-11-2020	1	Historic background, prokaryotic & Eukaryotic cell structure of typical bacterial cell
	27-11-2020	2	Plant & Animal cell , cell wall, Plasmodesmata,Cell membrane
	27-11-2020	3	Vacuoles,ER, Golgi body, Lysosomes, Microbodies ,Ribosomes
	28-11-2020	4	Mitochondria& plastids,Cytoskeleton, Centriole
	28-11-2020	5	Cilia & flagella,Nucleus, Chromatin, Chromosomes
Cell Cycle & Cell Division (3)	30-11-2020	1	Basis for cell division, Amitosis, cell cycle
	30-11-2020	2	Mitosis
	01-12-2020	3	Meiosis
Biomolecules (4)	01-12-2020	1	Primary & Secondary Metabolites, Ash Analysis, Amino acids,Proteins
	02-12-2020	2	Lipids,Lipids, Mono & Oligosaccharides
	02-12-2020	3	Polysaccharides, Nucleoside & Nucleotides,Phospho-di-ester bond
	03-12-2020	4	Structure of DNA,Metabolism, Enzymes
Biological Classification (6)	03-12-2020	1	Aristotle, 2/3/4/5/6 Kingdom classification, Monera –I,Bacteria
	04-12-2020	2	Reproduction in bacteria, BGA,Mycoplasma, Rickettsia
	04-12-2020	3	Chlamydia, Actinomycetes,Archaeobacteria
	05-12-2020	4	Protista-I (Dinoflagellates),Protista –II (Diatoms, Euglenoids, Slime moulds
	05-12-2020	5	Fungi – I,Fungi –II
	07-12-2020	6	Lichens, Viruses, Viroids, Prions
Digestion & Absorption (5)	07-12-2020	1	Steps of nutrition, Nutrients, Minerals, Vitamins, PEM,Human Digestive System
	08-12-2020	2	Buccal cavity, palate, Tongue, Teeth,Pharynx Histology of Alimentary canal Oesophagus
	08-12-2020	3	Stomach,Small & Large Intestine, Salivary glands, Liver Gall Bladder
	09-12-2020	4	Pancreas, Digestive juices, physiology of Digestion,Absorption, Assimilation,
	09-12-2020	5	Excretion,GI Hormones, Hepatic portal system, Compound stomach, GIT disorders
Breathing & Exchange of Gases (4)	10-12-2020	1	Respiration types , Respiratory organs, Human Respiratory tract,Lungs, Pleura
	10-12-2020	2	Breathing mechanism, Pulmonary volumes & capacity,Exchange of Gases of Tissues Alveoli,
	11-12-2020	3	Transport of O <sub>2</sub> , Transport of CO <sub>2</sub> ,
	11-12-2020	4	Regulation of Breathing,Respiratory diseases ,CO poisoning
Body fluids & Circulation (4)	12-12-2020	1	Open & closed circulatory system ABO & Rh blood groups,Blood vessels
	12-12-2020	2	Evolution of Heart, Human Heart, External structure, Human heart Internal structure
	13-12-2020	3	Nodal tissue,Heart Rate Regulation, Cardiac Cycle, Double circulation,
	14-12-2020	4	Coronary System & Hepatic portal system,Hypophyseal& Renal portal system, Pulse Blood pressure CBS disorders, Lymphatic System.
Excretory products & their elimination (6)	14-12-2020	1	Excretory organs & products, Human Excretory system kidney,Internal structure of kidney
	15-12-2020	2	Ureter, Urinary bladder Urethra,Nephron- Structure, types, Urine passage
	15-12-2020	3	Urine formation, Counter- current mechanism,Urine Composition, Abnormal Urine constituents
	16-12-2020	4	Osmoregulation (JGA & RAAS),Urea cycle, Renal disorders, Dialysis
Locomotion & Movement (3)	16-12-2020	1	Types of movement , Muscles types &Structure Sarcomere,Myosin & Actin filament Sliding filament theory
	17-12-2020	2	Energy sources of muscle,Cori cycle, Red & White muscle, disorders of Muscular system
	17-12-2020	3	Skeletal system, Axial System,Appendicular system, Joints, Disorders of skeletal system
Neural control & Coordination (5)	18-12-2020	1	Nerve Impulse Generation & Conduction, synapse,Statutory Conduction, Nervous system
	19-12-2020	2	Classification, Meninges,Ventricles of CNS, CSF, Grey & White matter,Forebrain, midbrain, Hindbrain, Brain Stem
	19-12-2020	3	Spinal Cord,spinal&Cranial Nerves, Reflex Action,Autonomic Nervous system
	21-12-2020	4	Sense organs classification, skin & olfactory receptors,Gustatory Receptors, Eye structure
Chemical Coordination Integration (4)	21-12-2020	5	Retina M/A vision, Accommodation, Eye disorders,Human Ear
	22-12-2020	1	Hormones –Properties, Classification, M/A, Pituitary gland,Hypothalamic Control, Pineal
	22-12-2020	2	Thymus gland,Thyroid, Parathyroid gland,Pancreas,
	23-12-2020	3	Adrenal gland,Gonads, Synergistic, Antagonist5ic hormones
Plant Kingdom (5)	23-12-2020	4	Feedback Inhibition, Other hormone producing organs
	24-12-2020	1	Classification systems, Taxonomy branches, Algae
	24-12-2020	2	Red/ Brown/ Green Algae, Economic Importance life
	26-12-2020	3	Bryophytes-I,Bryophytes- II, Pteridophytes
	26-12-2020	4	Gymnosperms 1,Gymnosperms 2,Angiosperms,
Animal Kingdom (6)	28-12-2020	5	Life cycle patterns in Plants,Comparative study of all groups
	28-12-2020	1	Classification, Euglenoids, Protozoa,
	29-12-2020	2	Classification of metazoan, Porifera, coelenterate, Ctenophora
	30-12-2020	3	Platy &Aschelminthes,Annelida, Arthropoda
	30-12-2020	4	Arthropoda, Mollusca,Echinodermata, Hemichordata
	31-12-2020	5	General characters of chordate, Protochordata,Cyclostomata, Pisces
Morphology of flowering plants (6)	31-12-2020	6	Amphibians, reptilian,Aves, mammalia
	02-01-2021	1	General characters , Root system * Root modifications
	02-01-2021	2	Root & stem modifications,Stem modification & Leaves
	04-01-2021	3	Venation , Phyllotaxy, Modifications of Leaves,Inflorescence
	04-01-2021	4	Flower- calyx, Corolla, Aestivation,Androecium & Gynoecium
	05-01-2021	5	Placentation, Fruits & types,Seeds
Anatomy of flowering plants (5)	06-01-2021	6	Fabaceae, Solanceae, Liliaceae,Some other plant families
	06-01-2021	1	Plant Tissue, Meristematic Tissue
	08-01-2021	2	Permanent simple Tissue,Complex permanent Tissue
	08-01-2021	3	Epidermal & Ground & Vascular Tissue system,Anatomy of leaf & Roots
	09-01-2021	4	Anatomy of stem, Secondary growth in dicot stem,Types of wood,
Organisms & Population (3)	10-01-2021	5	periderm, Bark,Lenticels, secondary Growth in Dicot Root
	11-01-2021	1	Ecological Hierarchy, Habitat, Niche, Climatic Zones,Biomes, Temperature, water, Light
	12-01-2021	2	Soil, Response to Abiotic factors,Adaptations in Animals & Plants
Ecosystem (3)	13-01-2021	3	Population Attributes & Growth models,Interactions
	14-01-2021	1	Types & Components of ecosystem, structure,Productivity
	15-01-2021	2	Decomposition,Energy flow, food chains & food webs
	16-01-2021	3	Ecological Pyramids, Succession Types,Nutrient Cycling, Ecosystem Services
Biodiversity & its Conservation	18-01-2021	1	Genetic , Species & Ecological biodiversity, Global Indian diversity,Patterns of biodiversity



Biodiversity & its Conservation (3)	19-01-2021	2	David Tilman experiment Rivet Popper hypothesis, Causes of , biodiversity loss , Reasons for Conservation,
	20-01-2021	3	Extinction susceptibility, In-situ & Ex-situ methods of conservation
Environmental Issues (3)	21-01-2021	1	Pollution Types , Air pollution, Bhopal gas Tragedy, Vehicle pollution Noise pollution
	22-01-2021	2	BOD & DO Relation, water pollutions, Case study of Integrated waste water Treatment, Chemical oxygen Demand , Bio magnification, Eutrophication, Case study for plastic waste Remedy
	23-01-2021	3	Case Study of organic Farming, Green house effect, Global warming, International Initiates for GHG & Ozone depletion, Peoples initiatives for wildlife protection
Transport in Plants (7)	25-01-2021	1	Types & Direction of Transport & Solution Membrane permeability, Active & Passive Transports
	26-01-2021	2	Diffusion pressure, Facilitated diffusion
	27-01-2021	3	Uni/ sym/ Antiport, Plant- water , Relation, Osmosis, Osmotic pressure, osmotic potential, Plasmolysis, Turgid & Flaccid cell
	28-01-2021	4	Turgor & wall pressure, water potential, Solute potential , pressure potential, DPD, Imbibition
	29-01-2021	5	Long distance transport in plants Bulk flow, positive & negative hydrostatic pressure gradient, Apoplast, symplast pathway, mycorrhiza,
	30-01-2021	6	soil water types, Ascent of sap-Root pressure, Guttation, Transpiration pull & types, Cohesion- Tension- Transpiration pull theory
	01-02-2021	7	Stomata apparatus, Opening & Closing of stomata, Potassium pump theory, Factors affecting stomata
Mineral nutrition (4)	02-02-2021	1	Factors affecting transpiration, Transpiration & Photosynthesis , Mineral ions uptake phloem Mass flow
	03-02-2021	2	Hydroponics, Macro & Micronutrients, Beneficial elements, Disease symptoms of essential elements, Element toxicity
	04-02-2021	3	, N, P, K, Mg, Ca, S, Role & Deficiency symptoms of Micronutrients
	05-02-2021	4	Uptake & transport, Soil-Reservoir of elements, Metabolism of N <sub>2</sub> , N <sub>2</sub> Cycle, N <sub>2</sub> fixation, Biological N <sub>2</sub> fixers
Photosynthesis in Higher plants (5)	08-02-2021	1	Root nodule formation, N <sub>2</sub> fixation mechanism, Fate of Ammonia.
	09-02-2021	2	Historical background, site of photosynthesis, Photosynthesis pigments,
	10-02-2021	3	Absorption & Action spectrum, Red Drop, Emerson enhancement, Photosystem 1 & 2 ,
	11-02-2021	4	Light Reaction- water photolysis Cyclic Photophosphorylation, Non- cyclic photophosphorylation,
	12-02-2021	5	ETS, Chemiosmotic Theory for ATP formation , Quantum Yield & requirement, Dark Reaction (C <sub>3</sub> Pathway)
Respiration in Plants (4)	13-02-2021	1	C <sub>4</sub> /CAM pathway, Photorespiration , Factors affecting photosynthesis Bacterial photosynthesis, C <sub>3</sub> & C <sub>4</sub> difference
	15-02-2021	2	Salient features, Respiratory fuels, Do plants breathe? Types of respiration, Glycolysis
	16-02-2021	3	Fate of Pyruvic Acid, Alcoholic & LA fermentation, Link Reaction, Respiratory Quotient
	17-02-2021	4	Krebs Cycle, ETS, Oxidative phosphorylation
Plant growth & Development (4)	18-02-2021	1	Respiration inhibitors, Respiration Balance sheet , GP & MS shuttels, PPP , Amphibolic pathway, Factors affecting respiration
	19-02-2021	2	Growth – characteristics, Types, phases, Arithmetic & Geometric growth, Conditions for growth , differentiation
	20-02-2021	3	De&Redifferentiation, plasticity & Heterophylly, PGRS- Classification & Chemical nature, Auxin Gibberellins
	22-02-2021	4	Cytokinin, Abscisic Acid, Ethylene, phytochromes & Photoperiodism
Structural Organization in Animal (8)	23-02-2021	1	Effect of PGRs on Photoperiodism, Vernalisation, Difference between photoperiod & vernalisation
	24-02-2021	2	Animal tissue Types & origin, Epithelia tissue- simple & compound, Glandular epithelium,
	25-02-2021	4	gland types, Connective tissue- components & classification Loose, Dense C.T
	26-02-2021	5	Skeletal C.T- Bones & Cartilage, Types of Bones & Cartilage, Haversian system in bone
	27-02-2021	6	Vascular connective tissue- Blood (plasma, RBC, WBC, Platelet), Blood coagulation,
	01-03-2021	7	Lymph, Nervous tissue, Muscular tissue
	02-03-2021	8	Earthworm
	03-03-2021	9	Cockroach
The Living World (3)	04-03-2021	1	Frog
	05-03-2021	2	Characteristics of Living, Taxonomy
	06-03-2021	3	Nomenclature, Taxonomic hierarchy, Tautonym, Autonym
			Species- concept, types, Taxonomic Aids