COURSE PLAN OF PHYSICS FOR TIME SAVER COURSE (PHASE 2) FOR JEE 2021			
CHAPTER NAME	**Date**	**NO. OF LECTURES**	**CONTENTS OF THE CHAPTER**
Newton's Laws of Motion + Friction + Circular Motion dynamics (6)	Upto 30-10-2020	1	Type of Forces,free body diagram,Newton's laws,Inertial and Non Inertial Reference frames,pseudo forces ,problems based on Newton's laws
		2	Problems based on Newton's laws,Recorded weight-Spring balance and Weighing machine,problems on pseudo and spring forces
		3	Constraints-string and wedge constraints,applying Newton's laws with constraints
		4	Friction-Static and Kinetic Friction , angle of Friction , Friction on incline , angle of repose
		5	Problems on friction in single and multiple contacts between objects
		6	Dynamics of Circular Motion-Centripetal and Centrifugal forces,circular turns and Banking of Roads
Work , Power & Energy(4)	Upto 05-11-2020	1	Work-work done by constant forces,variable forces,central and tangential forces,Kinetic energy and Work Energy theorem
		2	Problems on work energy theorem,Conservative and Non Conservative forces,Average and Instantanous Power
		3	Potential energy & its relation with Conservative force,Gravitational P.E and Elastic P.E stored in spring,conditions and types of translational equilibrium,Mechanical energy
		4	Conservation of Mechanical energy,Motion of a particle along a vertical circle - conditions for completing the circle,leaving the circular path and for oscillation
		1	Electric Charge - Definition and its properties , Coulombs law , Effect of Medium.
		2	Electric field , Properties of electric field , Electric Field intensity Due to point charge , line charge,circular ring,arc, disc , sheet ,spherical shell,solid non conducting sphere
		3	Motion of Charge particle in Electric field , electric field lines.electrostatic potential energy.
		4	Electric Potential and Potential Difference , Relation between Electric Field and potential difference.equipotential surfaces.Self energy and electrostatic energy density

ELECTROSTATICS (9)	Upto 14-11-2020	5	Electric Potential due to Point Charge , ring ,disc , spherical shell , solid nonconducting sphere.
		6	Electric dipole , dipole moment , electric potential and electric field due to electric dipole , interaction of a dipole with external electric field
		7	SHM of dipoles in uniform field.electric flux and its calculation.Gauss law
		8	Applications of Gauss law in finding electric field ,potential and charge density in case of unform/non uniform charge distributions exhibiting spherical,cylindrical and plane symmetry
		9	Properties of conductors,electrostatic shielding,earthing of conductors,electrostatic pressure
GRAVITATION (2)	Upto 16-11-2020	1	Gravitational field and its comparison with electrostatic field, Newton's law of Gravitation,earth's gravity,variation of g,escape velocity and Binding energy,motion of satellites in circular orbits
		2	Geostationary and geo synchronous satellites,weightlessness in a satellite,Binary stars,Kepler's laws,motion of objects in gravitational field,trajectory of object projected from some height above a planet,first and second cosmic speeds
CURRENT ELECTRICITY (6)	Upto 22-11-2020	1	electric current,current density,drift velocity,mobility and Ohm's law in conductors(microscopic and macroscopic form),Conductivity,resistivity and resistance,their variation with temperature
		2	validity of ohm's law,static and dynamic resistance,DC Electrical circuits in steady state;emf of cells, Kirchoff's laws(voltage law and junction law),ideal and real cells
		3	series and parallel combination of resistances,combinations reducible to series/parallel: infinite ladder,balanced wheatsone bridge,symmetry based combinations
		4	equivalent resistance in symmetry based combinations.equivalent resistance in cases without symmetry-by using kirchoff's law,by star delta method
		5	series and parallel combination of cells,circuit solving techniques like Loop method,Nodal method.electrical power,Maximum power transfer theorem

		6	DC measuring instruments: Galvanometer , Ammeter , Voltmeter(Ideal and non ideal),Meterbridge,Potentiometer,PO Box ,Colour codes for resistors
CAPACITOR (4)	Upto 26-11-2020	1	Capacitance-Definition,Capacitance of isolated conductors, redistribution of charges on connecting conductors,capacitanceofcapacitors, type of capacitor:parallel plate, spherical and cylindrical.Force between capacitor plates,Energy stored in capacitor
		2	Combination of capacitors in steady state,circuit solving techniques
		3	RC circuits:Charging and discharging of capacitor with time
		4	Capacitors with dielectrics :effect on capacitance,p.d between plates,energy stored,induced charges etc ,combination of dielectric slabs in between the capacitor plates,force with which a slab gets pulled inside the plates
MAGNETIC EFFECT OF CURRENT (6)	Upto 2-12-2020	1	Magnetic field,Sources of Magnetic Field ,magnetic field induction ,Biot Savart law .Magnetic field due to current carrying straight wire(finite and infinite),Magnetic Field due to circular current Loop ,circular Arc , solenoid
		2	Magnetic Field Due to Moving Charges , Ampere's law :Finding Line Integration of magnetic field.applying Ampere's law to find Magnetic Field inside and Outside long wires , Magnetic field between large current sheets , ideal solenoid , Toroid etc
		3	Force due to magnetic field on moving charges,Motion of charge particles in uniform magnetic field,Circular and helical motions,Lorentz force
		4	Force on a current carrying wire placed in magnetic field, Ampere's force between parallel current wires,miscellaneous problems on magnetic force.
		5	Magnetic dipoles,magnetic dipole moment of current loops,rotating charges,torque and P.E of a magnetic dipole in external magnetic field(analogy with electric dipoles)
		6	Dipole moment ,M of moving charge , field on dipole ,Torque , energy and force on dipole due to Magnetic field.Moving coil galvanometer,Hall's effect

MAGNETISM (2)	Upto 4-12-2020	1	Magnetic materials and magnets:bar magnets,field due to bar magnets at axial and equitorial positions,magnetic material placed in external magnetic field
		2	paramagnetic,diamagneticand ferromagnetic substances,Curie's law.Magnetic hysteresis.Earth's magnetism: geographical and magnetic meridian ,declination and dip.Dip circle to measure true and apparent dip at a place.Neutral points
EMI (4)	Upto 08-12-2020	1	Electromagnetic induction and its types,Magnticflux and Gauss law for magnetism.Faraday's laws.Lenz'S Law and their application
		2	Self Induction,inductor,self inductance of an ideal solenoid,behavior of an inductor in an electric circuit,magnetic energy stored in an inductor,energy density in a magnetic field,LR circuits:growth and decay of current with time
		3	combination of inductors ,Mutual Induction and mutual inductance due to a pair of coils,LC oscillations
		4	Motional emf in a conductor,motional emf forming a part of an external circiut.Induced electric field
Alternating Current(3)	Upto 11-11-2020	1	AC signals: leadand lag concept,mean and rms values.Significance of rms value of an ac signal,difference between dc and ac meters.AC Circuits: power factor,difference between Resistance,Reactance and Impedance
		2	Single element circuits: R only, L only , C only .Mixed circuits in series: R-L ,L-C , R-C , L-C-R Circuit .Resonance in series and parallel LCR circuits
		3	half power frequencies,Quality factor and Band width.Power in ac circuits.Choke Coil , Transformers .Damped oscillations and forced oscillations.
		1	Fermat's principle.optical elements,optical events,real and vitual objects and images.Reflection.Laws of reflection , Plane mirror reflection
		2	Reflection in Spherical Mirrors - Concave /convex , focal length , mirror formula , newtons formula , object - image speed , u-v Graph
		3	Refraction ,Law of refraction, critical angle and TIR

RAY OPTICS (9)	Upto 20-11-2020	4	Angular deviation due to refraction,refraction formula to locate image of point objects in plane and curved interfaces for near normal incidence/paraxialrays.real and apparent depth.Lateral and normal shift caused by a rectangular slab
		5	Refraction through prisms
		6	Dispersion:Cauchy 's Formula , Dispersion due to thin prisms , Dispersive Power , Prism Combination:dispersion without deviation,deviation without dispersion
		7	Spherical Refraction examples , Lens Formula , Magnification , obj-image Velocity , cutting -splitting of lenses
		8	Lens Combination , power ,silvering of lens , Displacement Method ,Chromatic aberration in thin lens,Achromatic combination of thin lenses
		9	Optical instruments:Simple Microscope ,Compound Microscope ,Telescopes,defects of human eye
SIMPLE HARMONIC MOTION(4)	Upto 24-12-2020	1	Periodic Motion,Oscillatory motion.Equation of Linear SHM .Position,Velocity and Accelaration of a particle in SHM , Energy of SHM .Graphs in SHM.Concept of Phasor Circle in SHM and its applications.
		2	Linear SHM in spring block systems- Time period,Angular frequency,Amplitude calculations.SHM in a block connected to a combination of springs
		3	Angular SHM-Definition,equation.Angular SHM in pendulums-Simple Pendulum , Compound pendulum , Torsional Pendulum.
		4	Combination of SHMs-two or more SHMs along same direction,two SHMs along mutually perpendicular directions.Lissajous figures.
STRING WAVES (3)	Upto 31-12-2020	1	Equation of travelling Wave , particle Velocity and accelaration , Speed of transverse waves on string ,energy in waves
		2	Superposition of waves,reflection and transmission of waves between two strings and due to free and fixed boundaries
		3	Equation of Standing Waves (Stationary Wave) , Stationary wave in String , vibration in sttring wave , Sonometer Wire
SOUND WAVES(4)		1	Equation of travelling longitudinal wave:displacement and Pressure Wave , Velocty , Newton's and laplace Formula , Loudness and Intensity , energy in Sound Waves

SOUND WAVES(4)		2	Interference of waves ,Quinke's tube
		3	longitudinal Standing wave (Organ pipe), resonance Tube
		4	Beats , Doppler's Effect (Sound Wave)
WAVE OPTICS & EM waves (5)	Upto 05-01-2021	1	Huygens principle , wave front , secondary wavelets .interference of light.calculation of path difference
		2	YDSE : standard YDSE, location of maxima and minima on screen.Modifications in YDSE arrangement and their effects
		3	Interference due to thin films.Miscellaneous questions
		4	Polarization : polaroid , malus and Brewster Law , Scattering , Diffraction , fresnel/Fraunhofer diffraction , slit/Circular Hole , resolution and resolving power
		5	Maxwell's equations.Displacement current and Ampere's law , Poynting vector ,energy density and intensity of em waves.Specturm of EM Waves
Kinematics(9)	Upto 14-01-2021	1	Position vector,distance & displacement,speed,velocity and acceleration,general equations of motion
		2	1D motion(uniform,uniformly accelerated,non uniform acceleration)
		3	Motion under gravity along a straight line
		4	Motion graphs-nature,shape,interconversion
		5	2D Motion,Projectile motion under gravity in 2D,ground to ground projectiles,equation of trajectory of projectiles
		6	Projectiles projected from some height(horizontal and oblique projection), projectiles over inclined planes
		7	Kinematics of Circular Motion-General equations for circular motion,uniform and non uniform Circular motion
		8	Relative Motion- Introduction,Relative motion under gravity,Relative motion between projectiles
		9	Relative motion- Rain problems,River problems,Relative angular velocity
Centre of Mass	Upto	1	Definition & its location in Discrete systems of particles and in Continous objects ,standard examples,CM of a 2 particle system,composite objects,objects with cavity and problems based on them
		2	Motion of CM-Linear Momentum of System ,velocity and accelaration of CM ,Conservation of Linear Momentum

Centre of Mass and Collision (5)	Upto 19-01-2021	3	Motion of a 2 particle system,2 body oscillator,Linear Impulse,Impulse-Momentum equation
		4	Collisions of objects-elastic,inelastic and perfectly inelastic collision,Newton's formula for restitution,Head on collision
		5	Obliue collision,Variable mass systems-Concept of thrust force,Rocket propulsion and other examples
Rotational Dynamics(7)	Upto 26-01-2021	1	Introduction , Moment of inertia- definition and calculation for discrete systems of particles & for continuous objects, Parallel and Perpendicular axis theorem.Standard results on M.I,M.I of composite objects,objects with cavity,Radius of Gyration
		2	Torque- definition,condition for rotational equilibrium,and relation of torque with angular acceleration in fixed axis rotation of rigid objects.Work done,Power delivered due to torqueWork energy theorem,mechanical energy conservation applied to fixed axis rotation.
		3	applications of torque including toppling, hinge reaction calculation in fixed axis rotation,rotating pulley block systems
		4	Angular Momentum-defintion,calculation in case of pure translation of a particle& in fixed axis rotation of a rigid object.Rotational Kinetic energy,Conservation of Angular Momentum in fixed axis rotation of rigid objects.ICOR and IAOR
		5	Combined Rotation and translation of rigid objects-Total kinetic energy and angular momentum,Rolling motion-Pure Rolling & Rolling withSlipping , uniform and accelerated pure rolling
		6	Mechanical energy and its conservation in Pure Rolling , Pure rolling over a rough inclined Plane .Problems on rolling
		7	Angular Impulse-Definition and Relation with Torque ,Angular momentum.Rigid body collisions with examples.
MODERN PHYSICS(6)	Upto 02-02-2021	1	EM radiation,Photon , wave particle duality,Power ,intensity , force and radiation pressure due to a photon beam
		2	Photo electric effect: photoelectric equation,photoelectric cell,stopping potential
		3	Physics of the atom: Bohr atom
		4	X Rays: Continuous and Characteristic X rays,Moseley's law

PHYSICS(6)	02-02-2021	5	Representation of nuclei and Nucleons,size of the nucleus,stabilty criteria,Radioactive decay
		6	Nuclear reactions,Q value,thresholdenergy.Alpha,beta decay,K capture.gamma decay,Mass defect,Binding energy,Binding energy per nucleon,Nuclear fission and Nuclear fusion reactions
ELASTICITY +THERMOMETRY+ CALORIMETRY + THERMAL EXPANSION (5)	Upto 07-02-2021	1	Definition and explanation of elasticity in solids,Deforming and Restoring Forces,Stress,Strain and their types.Elastic constants and Hookes Law
		2	Stress-Strain curve for a light wire under tension,expression for Elastic PE and elongation in a wire/rod under stress.Examples and problems
		3	Thermometry : Heat and Temperature,Thermometric property of a substance,different temperature scales .Calorimetry: specific and latent heat capacity of a substance,thermal capacity,mechanical equivalent of heat,water equivalent,heating curve,thermal equilibrium,zeroth law,Principle of Calorimetry.
		4	Thermal expansion: types of thermal expansion,density variation with temperature,relation between α,βand γ in solids(isotopic & anisotropic),cause of thermal expansion,α for combination of rods.Applications:loss/gain in time in clocks,Bimetallic strips,error in length measurement by metal scale
		5	thermal stress and strain.Thermal expansion in liquids-relation between γreal & γapp in liquids, anomalous expansion of water,effect of temperature change on bouyancy.Miscellaneous problems.
KTG (2)	Upto 09-02-2021	1	Concept of Ideal Gas ,state variables and state equation for a gas. Ideal and real gas Equation,Ideal gas laws
		2	Kinetic gas equation,Degree of Freedom , Maxwell's Law of equipartition of energy , Internal energy ,Maxwell's speed distribution , Avg. speed , RMS speed , Mean Speed .mean Free Path.

THERMODYNAMICS (4)	Upto 13-02-2021	1	Thermodynamic system ,Surrounding , closed , open , isolated system .First law of Thermodynamics: heat exchanged,internal energy change and mechanical work done in any thermodynamic process.Sign conventions for first law. Relation between Cp AND Cv for ideal gases.work done from P-V curve
		2	Cyclic processes,Internal energy,Cp,Cv,γ,degree of freedom,molecular weight of a mixture of ideal gases,Polytropic process: expressions for W,ΔU and ΔQ ,slope of P-V curve,polytropic bulk modulus.
		3	Standard processes like Isothermal,Adiabatic ,Isobaric and Isochoric.Cyclic processes,efficiency of a cyclic process.
		4	Second Law of thermodynamics: Kelvin-Planck statement , clausiuss Statement.Heat Engine and its efficiency ,Carnot Cycle and its efficiency , Carnot theorm ,Refrigerator and heat pump and their COP,Carnot refrigerator.Reversible and irreversible processes.Second law statement for entropy.
HEAT TRANSFER (3)	Upto 17-02-2021	1	Modes of heat transfer, Law of steady state Conduction , temp. Gradient,Thermal Resistance, heat current for linear, spherical and cylindrical flow.
		2	Different cases of Series and parallel and general Combination of conductors, wheatstone bridge,Growth of ice .
		3	Thermal Radiation , absorpive power , emmisive Power and their spectral definition , emmisitivity ,Black body radiation, Prevost Theory of exchange , kirchhof's Law,stefans law,spectral radiancy curve and Wiens law.Stefan's law of cooling,Newtons law of Cooling , Solar Constant .
FLUID MECHANICS (5)	Upto 20-02-2021	1	Fluid statics: hydrostatic pressure and its variation with depth.pressure variation due to acceleration and rotation of vessel
		2	Hydrostatic thrust force,Force of Liquid on Container Base and Side walls .barometer and manometer,Pascal's law.
		3	Archimedes principl and its applications in determining R.D of a substance , Centre of Buoyancy , Floating ,Stability in Floating
		4	Fluid Dynamics: Steady and turbulent flow , Streamlime flow ,Equation of Contiunity .,Bernoulli's theorem

		5	Applications of Bernoulli's theorem: Magnus effect , atomiser , venturimeter,siphon pipe,pitot tube,efflux through a narrow hole.
SURFACE TENSION + VISCOSITY (2)	Upto 22-02-2021	1	**SURFACE TENSION :** Surface tension , Surface tension Force , Surface energy , excess pressure,angle on contact ,concave and convex meniscus , Capillary rise/fall of liquids -Jurin's law
		2	**VISCOSITY :** Viscous Force , its unit in SI and CGS , Viscous Flow in Steady state in a cylinder , Poiseuille equation , Stoke's law and terminal velocity in a viscous fluid,Reynolds No.
SEMICONDUCTORS & COMMUNICATION(5)	Upto 27-02-2020	1	Concept of Holes in semi-conductor , Intrinsic ,extrinsic ,doping , N type ,P type , Mass action law , P-N Junction ,diffusioin , drift current , potential barrier , deplection layer , Diode- Forward & Reversed Biased
		2	Zener and avalanche breakdown , application of diode LED ,photodiode ,solarcell ,Zener diode ,rectifier - Full wave , half wave ,Bridge recitifier
		3	Transistor , E,B,C, npn ,pnp . Region of Working , Common base , Common emiiter Common collecter , input output charateristics
		4	Logic gates : OR ,AND, NOT , NOR,NAND , XOR, XNOR Gate . Boolean algebra ,truth table , Elec. Analogue and Circuit diagram
		5	Basic elements of communication systems,Modulation : AM ,FM , Modulation Index , Band Width of signals and Transmission medium.Ground,sky and space wave propagation
Unit and Dimension & Vector (3)	Upto 02-03-2021	1	Concepts and questions on Unit and Dimensions
		2	Concepts of Vectors
		3	Concepts and questions on Vectors
Errors	upto 04-023-2021	1	Accuracy and precision,significant figures,rounding off digits in mathematical operations, true value,error,relative and percentage,error,combination of errors
		2	Vernier callipers,screw gauge

COURSE PLAN OF TIME SAVER COURSE (PHASE 2) FOR JEE MAIN AND ADVANCE 2021 (PHYSICAL + INORGANIC CHEMISTRY)

CHAPTER NAME	DATE	LECTURE NO.	DETAILED CONTENT
		LC001	Basic moles , average molar mass ,% of element , emperical & Molecular Formula, Laws Of chemica Combination

Mole concept-4 (PS sir)	upto 2-11-2020	LC002	Stochiometry , Limiting Reagent, % Yield , POAC, Series Reactions
		LC003	Concentration Terms and their interconversion,Dilution and mixing of solutions
		LC004	, Volume strength of H2O2 , Eudiometry & Methods of atomic mass determination
Chemical Equilibrium-5 (PS sir)	upto 13-11-2020	LC005	Introduction characteristics of equilibrium, Law of mass action and equilibrium constant , Characteristics of equilibrium constant, writing equilibrium constant for various reactions
		LC006	Calculation of Equilibrium constant and numerical application
		LC007	Significance of value of equilibrium constant, calculation of degree of dissociation by V.D. Measurement , Simultaneous equilibrium
		LC008	Reaction Quotient & Le chatlier's principle
		LC009	Le chatlier's principle & Physical equilibrium
Thermodynamics-9 (PS sir)	upto 24-11-2020	LC010	Introduction Basic definition Types of system State function / path function Extensive & intensive properties, Work, Heat & Internal Energy, heat capacities
		LC011	First law of thermodynamics, Enthalpy , Relation between Enthalpy and Internal Energy, Calorimetry
		LC012	Thermodynamic Processes , Reversible & Irreversible process and their comparision
		LC013	Isochoric process Isobaric process , Isothermal process, Adiabatic process
		LC014	Comparison between isothermal & adiabatic process Polytropic process
		LC015	Second law of Thermodynamics , Entropy &spontaniety , Calculation of ΔS total ΔSsys & ΔS surr.
		LC016	Calculation of entropy in different cases ,, third law of thermodyanmics
		LC017	Gibbs free energy , calculation of Change in G, condition for spontaniety,
		LC018	Variation of gibbs free energy with P & T, concept of equilibrium
Thermochemistry-	upto	LC019	Enthalpy of reaction, Enthalpy of formation, Enthalpy of combustion , Hess's law
		LC020	Enthalpy of neutrilisation, lattice enthalpy, Enthalpy of hydration

4 (PS sir)	28-11-2020	LC021	Enthalpy of solution, enthalpy for phase transformation, Enthalpy of atomisation
		LC022	Bond energy, Calculation of Enthalpy of reaction by bond energy data
Electrochemistry-7(JH sir)	upto 14-12-2020	LC023	Introduction, Construction of galvenic cell, cell reaction and cell representation Electrode potential, EMF of cell, Siginificance of electrode potential
		LC024	Nernst Equation , EMF and equilibrium constant , Application of nernst equation, Concentration cells
		LC025	, different type of half cells, Metal SSS half cell , Thermodynamics of galvenic cells
		LC026	Electrolysis and products of electrolysis,
		LC027	Faradays laws of electrolysis
		LC028	Conductance and conductivity cell, variation of molar conductivity with dilution , Kohlrausch's law and its applications
		LC029	Application of Kohlrausch's law , Type of batteries
Liquid solution-4 (PS sir)	upto 18-12-2020	LC030	Introduction, Vapour pressure,Phase diagram , Raoult's law & Application
		LC031	Mole fractions in liquid and vapor phase , Ideal & Non-Ideal solutions
		LC032	Colligative properties , RLVP, Eubllioscopy, Cryoscopy, Osmotic pressure
		LC033	Abnormal colligative properties and Van't hoff factor, Henry's law
Solid State-4 (JH sir)	upto 22-12-2020	LC034	Introduction Basic definition Unit cell / Bravais lattices
		LC035	Analysis of unit cells and packing in crystals
		LC036	Radius ratio, structure of ionic crystals
		LC037	defects in solids and magnetic properties
Gaeous State-4 (PS sir)	upto 26-12-2020	LC038	Gas laws and ideal gas equation, types of containers, manometer & barometer
		LC039	Dalton's law of Partial pressure, Effusion and diffusion
		LC040	Kinetic Theory of gases , types of molecular speeds, kinetic energy and maxwell's speed distribution curve,
		LC041	Real gases and deviation from ideal behaviour , compressibility factor & calculation, Liquifaction of gases and critical constants
Atomic Structure-3 (PS sir)	upto 29-12-2020	LC042	planck's quantum theory , photo electric effect,rutherford's model
		LC043	Bohr's model & Hydrogen spectrum
		LC044	Quantum mechanical model & Schrodinger's wave equation

Surface Chemistry-4 (PS sir)	upto 2-1-2021	LC045	Adsorption & Absorption
		LC046	catlysis & their types
		LC047	colloids and their classification , preparation of colloids
		LC048	properties of colloids, Coagulation and protecton of cooloids, purification and Emulsions
Kinetics & Radioactivity-7(JH sir)	upto 11-1-2021	LC049	Introduction Rate of reaction Rate law, order and molecularity , significance of order of reaction
		LC050	Zero order,1st order, 2nd order, nth order
		LC051	Calculation of 1st order rate constant in terms of different Parameters
		LC052	Calculation of 1st order rate constant in terms of different ParametersKinetics of parallel reaction
		LC053	Collision Theory and Arrhenius Equation
		LC054	Maxwell's distribution, factors affecting rate of reaction,
		LC055	Basic Radioactivity useful upto Mains [As it is not in MAINS syllabus]
Ionic Equilibrium-8 (JH sir)	upto 20-1-2021	LC056	Acid - Base theories , Amphiprotic species, Levelling effect Arrhenius theory of dissociation, common ion effect
		LC057	properties of water, pH scale , Calculation of pH for strong acids /bases
		LC058	Calculation of pH of solution containing weak acid or base Calculation of pH of mixtures
		LC059	Calculation of pH of solution containing polytropic acid/base, Salt hydrolysis
		LC060	Buffer solutions and Acid Base Titrations
		LC061	Indicators and selection of Indicators
		LC062	Solubility and solubility product,Solubility in presence of common ion Condition for precipitation , selective precipitation
		LC063	Solubility in buffer and complex formation
Redox-3 (PS sir)	upto 23-1-2021	LC064	Introduction Oxidation number, Balancing of redox reactions
		LC065	n-factor calculation & Law of chemical equivalence
		LC066	Acid base , redox, iodometric titrations

COURSE PLAN OF TIME SAVER COURSE (PHASE 2) FOR JEE MAIN AND ADVANCE 2021 (INORGANIC CHEMISTRY)

CHAPTER NAME	DATE	LECTURE NO.	DETAILED CONTENT
Chemical Bonding-7 (PS sir)	upto 3-11-2020	LC001	Introduction of chemical bonding, Formal Charge , Lewis octet rule , Lewis acids & Bases, VBT & Overlapping
		LC002	Involvement of d-orbitals in Overlapping,Hybridization and VSEPRT,Practice Session -2
		LC003	Calculation of pπ - dπ Bonds,Bond Order,Bond Length and Bent Rule, Bond Order and Drago's Rule,Hybridisation in Solid State
		LC004	Structures by Bent Rule,Dipole Moment and Applications, Back Bonding and its Application,Practice Session
		LC005	Bridge Bond,MOT and its Application
		LC006	Intermolecular Forces and their Types,Hydrogen Bonding and its Types
		LC007	Ionic Bond,Polarisation and Fajan's Rule, Applications of Polarisation,Solubility and Solubility Order
Metallurgy-7 (PS sir)	upto 18-11-2020	LC008	Introduction, ore, mineral Steps involved in Metallurgy , Gravity separation, Magnetic separation
		LC009	froth floatation,Leaching,
		LC010	Conversion of ore into oxide, Reduction of oxide into metal (smelting), Self reduction
		LC011	Refining of metal
		LC012	Thermodynamics of metallurgy - Ellingham Diagram
		LC013	Extraction of Fe & Cu
		LC014	Extraction of Al, Ag & Au
S-Block-2 (JH sir)	upto 23-11-2020	LC015	General Properties of S-block elements
		LC016	Compounds of S-block elements
P-Block-10 (PS sir)	upto 9-12-2020	LC017	Boron Family
		LC018	Carbon family & properties
		LC019	Silcates & Silicones
		LC020	Nitrogen family
		LC021	Nitrogen Family
		LC022	Oxygen Family
		LC023	Oxygen Family
		LC024	Halogen Family
		LC025	Halogen Family
		LC026	Noble gases
D-Block-3 & F-Block-1(JH sir)	upto 18-12-2020	LC027	Introduction, and general properties of D-block elements ,
		LC028	Properties of D-block elements ,

Block-1(JH sir)	18-12-2020	LC029	Important compounds of D-block elements
		LC030	F-block
Hydrogen And Its Compound-2 (PS	upto 23-12-2020	LC031	Complete properties
		LC032	compounds of Hydrogen
Co-ordination Compounds-9 (JH sir)	upto 2-1-21	LC033	Introduction, Classification of Ligands , Oxidation number, Effective atomic number .
		LC034	Nomenclature of Coordination Compounds , Werner's coordination theory
		LC035	
		LC036	Crystal Field Theory + Valence Bond Theory
		LC037	CFT
		LC038	Calculation of CFSE, Factors affecting splitting energy , Applications Of CFSE
		LC039	Synergic bonding and stability of complexes
		LC040	
		LC041	Structural isomerism & Stereoisomerism
Pre-requisites	upto 6-1-2021	LC042	**Electronic conficurations, valence electrons & Covalncy, Naming of elements with Z>100, Effective Nuclear Charge & screening effect , Idea of I.E., Electron Affinity & Electronegativity , Hydration & Hydration energy , acidic basic & Amphoteric oxides**
		LC043	
		LC044	

COURSE PLAN OF TIME SAVER COURSE (PHASE 2) FOR JEE MAIN AND ADVANCE 2021 (ORGANIC CHEMISTRY)

Chapter Name	Date	No. of Lectures	Content of Chapter
Structural Isomerism	up to 27-10-2020	L : 1	Structural Isomerism (Inducting tautomerism)
		L : 2	Structural Isomerism (Inducting tautomerism)
Stereoisomerism	up to 06-11-2020		**(a) Geometrical Isomerism**
		L : 1	Difference between structural & stereoisomerisms, Introduction of geometrical Isomerism
			Condition of geometrical isomerism
		L : 2	Naming of G.I,. (cis trans, E-Z, syn-anti)
			Properties of G.I. isomers, calculation of G.Is.
			(b) Conformational Analysis
		L : 3	Basic ideas information for conformational analysis
			Conformations in acylic compounds
		L : 4	Conformations in acydic + cyclic compounds
			Conformations in acydic compounds
			(c) Optical Isomerism
		L : 5	Introduction, variation of q, chiral atom
			Elements of symmetry (plane, centre)
		L : 6	Elements of symmetry (AAOS, AOS), Condition for Optical activity

		L : 6	Methods of representation of diff. molecule and their interconversion
		L : 7	Configuration of compound (D/L - and R/S)
			Optical isomerism in compound with one and two chiral centre
		L : 8	Meso compound, Enantiomers, Diastereomers, Racemic mixture
			Resolution, optical purity, Enantiomeric excess, Calculation, stereoisomers
Halogen Derivatives (21) General Organic Chemistry (10-12)	upto 09-12-2020		**Reactant reagents**
		L : 1	Electrophile, nucleophile, Variation of Electrophilicity and nucleophilicity
			Carbocation
		L : 2	General ,General reaction and its rearrangements
			Important Reaction involving carbocation (R-X, form + Rxn)
		L : 3	Addition of HX and H_3O^+ addition with alkenes / alkynes
		L : 4	Addition of X_2, IX, NOX, HO-X with alkenes/alkynes
		L : 5	OMDM, HBO
		L : 6	Dehydration of alcohol (E_1-Reaction)
		L : 8	Pinacol-Pinacolone rearrangement, Demjanav rearrangement, Dienone Phenol
			Nucleophillic Substitution reaction (SN-RXN)
		L : 9	SN^1 & SN^2
		L : 10	Comparision of SN^1 & SN^2
		L : 11	Examples of SN reactions of R-X, R-OH, R-O-R
		L : 12	Examples of SN reactions of R-X, R-OH, R-O-R + SNGNP
			Elimination Reaction
		L : 16	E_1, E_2, E_{1CB}
			E_1, E_2, E_{1CB}
		L : 17	Orientation of E.R.
		L : 18	Pyrrolytic / thermal ellimination rxn
			Dehydration, Dehalogenation
		L : 19	Important Reaction involving FR (Kolbe, Electrolysis, wurtz reaction) and related reactions
		L : 20	Photohalogenation (Chlorination, Bromination)
		L : 21	Per-oxide effect, NBS Rxn, Pinacol-form n
		L : 1	Inductive effect and its types
			Application of I-effect
		L : 2	Resonance coordination of resonance method of resonance
			Method of resonance, +R and -R group
		L : 3	Syability of resonating structures
			Aromaticity

		L : 4	Resonance energy
		L : 5	Hyperconjugation
		L : 6	Application of all effect
			Application of all effect
		L : 7	Application of all effect
			Application of all effect
		L : 8	Audity of diff acids, phenol & benzoic acid and derivatives
			Audity of diff acids, phenol & benzoic acid and derivatives
		L : 9	Audity of diff acids, phenol & benzoic acid and derivatives
			Basic strength
		L : 10	Basic strength
			Basic strength
Alcohol & Ether (6)	upto 19-12-2020		**Grignard Reagent**
		L : 1	Grignard Reagent - 1
		L : 2	Grignard Reagent - 2
			Reduction of various functional group
		L : 3	Reduction by H_2/cat
			Reduction by $LiAlH_4$
		L : 4	Reduction by SBH, BH_3-THF/H^+, DIBAL-H
			Some important reduction
			Oxidation
		L : 5	Oxidation - 1 (Alkane, alkene, alkyne)
			Oxidation - 2 (Alkane, alkene, alkyne)
		L : 6	Oxidation - 3 (R-OH, R-X)
			Oxidation - 4 (Aldehyde)
Carbonyl compounds (Aldehyde, Ketone) (6)	upto 24-12-2020		**Heating effect**
		L : 1	Heating effect on various compound - (2)
			Heating effect on various compound - (2)
			Nucleophilic addition reaction
		L : 2	Reaction with $NaHSO_3$, HCN, H_2O, H_2N-Z
			Reaction with R-OH
			Name reactions
		L : 3	Haloform reaction
		L : 4	Aldol condensation reaction
			Cannizaro's reacion
		L : 5	Some other reactions
Carboxylic Acid Derivatives and Amines (4)	upto 28-12-2020		**Carboxylic acid derivatives**
		L : 1	G.M.P. (General Method of Preparation)
			G.M.P. (General Method of Preparation and Reactions)
			General reactions
		L : 2	General Method of Preparation
		L : 3	Reactions of Amines
			Reactions of Amines
		L : 4	Benzene diazonium chloride and its rxn

Aromatic Compound (4-5)	upto 01-01-2021	L : 1	Alkanes
			Alkenes
			Alkynes
			Benzene
			Phenols
		L : 2	G.M.P.
			Rxn. of Phenol
			Rxn. of Phenol
			Aniline
		L : 3	G.M.P. & GR, Test of phenol and aniline, coupling reactions
			Chlorobenzene
		L : 5	
Biomolecules (4)	upto 04-01-2021		**Amino Acid & Proteins**
		L : 1	Introduction, classification, physical properties isoelectronic point
			Reaction of Amino acid, protein and its classification
			Carbohydrates
		L : 2	Introduction, Classification
			Structure of monoseccharides (Glucose, fructose)
		L : 3	Reactions of monoseccharides
			Disaccharides and polysaccharides
		L : 4	Polymers
		L : 5	Chemistry in every day life
Classification and Nomenclature of Organic Compound (8-9)	upto 20-01-2021	L : 1	Introduction, method of presentation of O.C. (bond Linenotation)
			Classification/ types of C, H, R-X, R-OH, Amines, Functional group
		L : 2	Homologous series Degree of unsaturation
		L : 3	IUPAC-Naming Rule
		L : 4	IUPAC-Naming Rule
		L : 5	IUPAC-Naming Examples
		L : 6	IUPAC-Naming Examples
		L : 7	IUPAC-Naming Examples, IUPAC-Naming Aromatic Compound, Miscellaneous

COURSE PLAN OF TIME SAVER COURSE (PHASE 2) FOR JEE MAIN AND ADVANCE 2021 (MATHS)

CHAPTER NAME	DATE	LECTURE NO.	DETAILED CONTENT
		LM01	1. Cartesian product of two sets 2. Function 3. Domain, Co-domain & Range Of A Function 4. Some Important Functions 5. Algebraic operations on functions
		LM02	Examples on Domain Range

Function-9	upto 31-10-2020	LM03	6. Equal or Identical Function 7. Homogeneous Functions 8. Bounded Function 9. Implicit & Explicit Function 10. Applications of functional rule 11. Transformations of The graph
		LM04	12. Classification of Functions
		LM05	13. Composite of uniformly & non-uniformly defined Functions
		LM06	14. Inverse of A Function 15. Odd & Even Functions
		LM07	16. Periodic Function
		LM08	Composite function
		LM09	Illustratoin of a function and illustration based upon function rule.
Inverse Trigonometric Function-3	upto 1-11-2020	LM010	1. General introduction 2. Domain, Range & Graph of Inverse trigonometric functions
			3. Properties of inverse trigonometric function (P1, P2 ……. P5)
			3. Properties of inverse trigonometric function (P6, P7)
		LM011	4. Simplification & Transformation of Inverse functions by elementary substitution and their graphs5. Equations involving inverse trigonometric functions6. Identities involving inverse trigonometric functions
		LM012	7. Simultaneous equations and inequations involving I.T.F. 8. Summation of series
Method of Differentiation-4	upto 5-11-2020	LM013	1. Derivative by first principle 2. Derivative of standard functions 3. Supplementary theorems/result
			4. Logarithmic differentiation 5. Parametric differentiation 6. Derivative of f(x) w.r.t. g(x)
		LM014	7. Derivative of implicit function 8. Derivative of infinite series 9. Derivative of homogeneous equation 10. Derivative of inverse function
		LM015	11. Derivatives of inverse trigonometric function by transforming them into simpler functions 12. Analysis and graphs of some inverse trigonometric functions 13. Successive differentiation
		LM016	14. Deduction of new identities by differentiating a given identity 15. Derivative of functions expressed in the determinant form 16. L'Hospital's Rule
Indefinite Integration-6	upto 7-11-2020	LM017	1. Antiderivative 2. Geometrical interpretation of indefinite integral 3. Antiderivative or reverse phenonmenon of differentiating 4. Properties of integration Basic Examples
		LM018	5. Integration by substitution

Limit-5	upto 8-11-2020	LM019	1. General introduction 2. Definition of limit 3. Left hand limit and right hand limit of a function* 4. Î - d Definition (A formal definition of limit) 5. Indeterminate forms 6. Five Fundamental Theorems 7. Various Strategies (To evaluate limit)
		LM020	8. Sandwich / Squeeze play Theorem 9. Limits of Trigonometric Functions 10. Limit using Series Expansion
		LM021	
Indefinite Integration-6	upto 12-11-2020	LM022	6. Integration by parts
		LM023	7. Integrals of trigonometric function
		LM024	8. Integration of rational function
		LM025	9. Integration of irrational algebraic function 10. Miscelleneous 11. Reduction formula 12. Some integrals which cannot be found in terms of known elementary functions
Definite Integration-7	upto 14-11-2020	LM026	1. Definite integral as the limit of sum 2. The fundamental theorem of calculus
		LM027	3. Geometrical Interpretation of Definite integral 4. Evaluating definite integrals by finding antiderivatives 5. Walli's theorem
Limit-5	upto 15-11-2020	LM028	11. Limit of Exponential Functions 12. Limits of the function of the form 1¥
		LM029	13. Generalized Formula for 1¥ 14. limits of functions having built in limit with them
Definite Integration-7	upto 20-11-2020	LM030	6. Properties of definite integral (P1, P2, P3, P4, P5, P6)
		LM031	
		LM032	6. Properties of definite integral (P7) 7. Derivatives of antiderivatives (newton-leibnitz formula)
		LM033	10. Determination of function 11. Estimation of definite integral and general inequality in integration
		LM034	12. Reduction formula 13. Differentiating and integrating series
Tangent & Normal-1	upto 21-11-2020	LM035	Tangent & Normal
Continuity-3	upto 22-11-2020	LM036	Continuity
		LM037	
		LM038	
Monotonocity-3	upto 25-11-2020	LM039	Monotonocity
		LM040	
		LM041	
Maxima-Minima-3	upto 26-11-2020	LM042	Maxima-Minima
		LM043	
		LM044	
Differentiability-3	upto 29-11-2020	LM045	Differentiability
		LM046	
		LM047	

Differential Equation-3	upto 2-12-2020	LM048	1. Definition 2. Order and degree of differential equation 3. Solving differential equation 4. Formation of A differential Equation 5. General and particular solutions
		LM049	6. Elementary types of first order & first degree differential equations
		LM050	7. General & miscellaneous problems
Area Under The Curve-2	upto 4-12-2020	LM051	1. Area under the curves (given by Cartesian equation) 2. Area enclosed between two curves 3. Standard areas
		LM052	4. Area under various cases
Straight Line-7	upto 10-12-2020	LM053	1. General introduction 2. Co-ordinates system 3. Distance formula 4. Section formula 5. Application of distance formulae
		LM054	6. Co-ordinates of some particular points 7. Area of a Triangle and condition for collinearity
			8. Brief description of elementary locus (Four basic steps) 9. Straight line 10. Equation of straight Line
		LM055	11. Different forms of straight lines 12. Position of a point w.r.t. a line 13. Length of perpendicular
		LM056	14. Reflection of a point 15. Internal angles of triangle 16. Line inclined at an angle to other line(s)
		LM057	17. Condition for concurrency 18. Family of straight line
		LM058	19. Transformation of axes 20. Equation of Bisectors of angles between two lines
		LM059	21. Pair of Straight lines 22. General equation of second degree representing a pair of straight lines 23. Problems on locii
Circle-6	upto 15-12-2020	LM060	1. Definition 2. Diametrical form of circle
			3. Intercept (Made by the circle) 4. Position of a point w.r.t a circle 5. Parametric equation of a circle
		LM061	6. Line & A Circle 7. Tangent and normal 8. Director circle Length of Tangent & Power of a point
		LM062	9. Equation of chord with given middle point 10. Chord of contact
		LM063	11. Pair of Tangents 12. Family of circles
		LM064	13. Pole & Polar 14. Common tangents to two circles
		LM065	15. Radical Axis & Radical Centre 16. Coaxial system of circles
			17. Orthogonality of two circles Discussion

Parabola-4	upto 19-12-2020	LM066	1. Introduction to conic sections 2. General equation of a conic 3. Centre of the central conic 4. Standard equation of parabola 5. Shifted parabola
		LM067	6. Position of a point relative to a parabola 7. Focal distance/focal radii 8. Parametric coordinates 9. Chord joining two points t_1 and t_2
			10. Tangents to the parabola 11. Length of chord of the conic intercepted on line
		LM068	12. Normal's to the parabola 13. Rules of transformation 14. Common tangents to two conics
		LM069	16. Pair of tangent 17. Chord of contact
			18. Chord with a given middle point 19. Important highlights
Ellipse-3	upto 21-12-2020	LM070	1. General equation of an ellipse 2. Deriving standard equation of ellipse 3. Tracing of an ellipse 4. Two standard ellipse 5. Eccentricity Shifted ellipse, Generalized version
		LM071	6. Position of a point relative to an ellipse 7. Focal distance / focal radii 8. Auxiliary circle/eccentric angle/ parametric coordinates 9. Chord joining two points whose eccentric angles are a & b
		LM072	10. Tangents to the ellipse 11. Normal's
			12. Common articles 13. Important highlights
Hyperbola-3	upto 24-12-2020	LM073	1. General equation of a hyperbola 2. General terminology of hyperbola 3. Two standard hyperbola 4. Shifted hyperbola
			5 Conjugate hyperbola 6. Position of a point 'P' w.r.t. A Hyperbola 7. Auxiliary Circle/eccentric angle / parametric coordinates 8. Chord joining two points of hyperbola
		LM074	9. Tangents to the hyperbola* 10. An important concept 11. Normal's to the hyperbola 12. Common articles
		LM075	13. Rectangular hyperbola 14. Important highlights 15. Highlights on asymptotes
Vector-6	upto 29-12-2020	LM076	1. General definitions 2. Angle between vectors 3. Section formula 4. Geometrical results with vectors & problems
			5. Vector equation of a line6. Vector equation of the bisectors of the angles between the lines
		LM077	7. Test of collinearity 8. Scalar product (dot product)
		LM078	9. Linear combination 10. Fundamental theorem in plane
		LM79	11. Vector product (cross product) 12. Shortest distance between 2 skew lines
			13. Shortest distance between two parallel lines

		LM80	14. Product of 3 or more vectors
		LM081	15. Necessary & sufficient condition for coplanarity of four points 16. Fundamental theorem in space 17. Real definition of linearly independent
			19. Solving vector equation Discussion
3-D- 4	upto 2-01-2021	LM82	1. Coordinates of a point in space 2. Distance formula 3. Section formula 4. Direction cosines of vector 5. Direction cosines of line 6. Direction ratios of a line 7. Relationship between direction cosine & direction ratios
		LM83	8. Definition of plane 9. Different forms of the equations of planes
			10. Perpendicular distance of a point 'P' from a plane Ax + By + Cz + D = 0 11. Angle between two planes 12. Equation of the bisector planes between the planes 13. Family of planes
		LM84	14. Angle between two planes 15. Condition for line to lie completely in plane16. Symmetrical form of straight line (Cartesian form) 17. Unsymmetrical form of straight line
		LM85	18. Coplanarity of two lines 19. Line of Greatest slope in a plane
Complex Number-4	upto 5-01-2021	LM86	1. General introduction 2. Algebra of complex numbers 3. Equality In Complex Number
			4. Three Important terms : Conjugate/Modulus/ Argument 5. Representation of a complex in different from 6. Important Properties of conjugate
		LM87	7. Important Properties of Modulus 8. Important Properties of Amplitude
			9. Vectorial Representation of a complex number
		LM88	10. Angle between lines 11. Condition for lines to be parallel
		LM89	14. Demoivre's Theorem 15. Cube Root of Unity 16. n^{th} Roots of Unity 17. General locii on complex plane
Permutation & Combination-5	upto 10-01-2021	LM90	1. General introduction & Historical development 2. Fundamental principle of counting 3. Significance / meaning of the title of the chapter
		LM91	4. Useful theorems (For faster execution rate of the problems), Examples
		LM92	5. Formatting of groups, 6. Permutation of alike objects
		LM93	7. Circular Permutation
		LM94	8. Total number of combinations 9. Summation of numbers
			10. Distribution of alike objects

Probability-5	upto 14-01-2021	LM95	1. Introduction 2. Basic definitions 3. Venn diagrams
			4. Addition theorem 5. Conditional probability 6. Multiplication theorem
		LM96	7. Independent Events 8. Law of total probability
		LM97	9. Three events defined on an experimental performance 10. Binomial Probability Distribution
		LM98	11. Probability through Statistical (stochastic) Tree diagram 12. Baye's Theorem 13. Extended Bayes
		LM99	14. Geometrical Probability 15. Mathematical Expectation 16. Probability Distribution (for JEE-Mains)
JEE MAINS Topics-4	upto 17-01-2021	LM100	Sets & Relation
			Height & Distance & PMI
		LM101	Statistics
		LM102	
		LM103	Mathematical Reasoning
Binomial Theorem-3	upto 20-01-2021	LM104	1. Binomial expression 2. Binomial theorem 3. General term 4. Number of terms in expansion 5. Middle term
			6. Numerically greatest term 7. Applications of binomial theorem
		LM105	8. Properties of binomial coefficients 9. Summation of series
		LM106	10. Miscellaneous problems on summation 11. Multinomial theorem 12. Multinomial theorem for negative and fractional index
Determinant & Matrices-6	upto 25-01-2021	LM107	1. Introduction 2. Cofactor and minors of an element 3. Properties of determinants
			4. Special determinants 5. Factor theorem
		LM108	6. Multiplication of two determinants 7. Cramer's rule (System of linear equations) 8. Applications of determinant
		LM109	1. Definition 2. Special type of matrices 3. Algebra of matrices
		LM110	4. Properties of matrix multiplication 5. Positive integral powers of a square matrix 6. Matrix polynomial 7. Characteristic equation 8. Definitions
		LM111	9. The transpose of a matrix : (Changing rows & columns)10. Orthogonal matrices 11. Symmetric & skew symmetric matrix 12. Properties of symmetric and skew matrix
		LM112	13. Adjoint of a square matrix 14. Properties of adjoint 15. Inverse of a matrix (reciprocal matrix) 16. Properties of inverse 17. System of equation & criterion for consistency *18. Finding inverse using elementary row operation
Trigonometric Ratio Identities +	upto	LM115	TRI
		LM116	

Ratio Identities + Trigonometric Equation-5	upto 29-01-2021	LM117	Trigonometric Equation & Inequation
		LM118	
		LM119	Illustration of Trigonometric Equation
Quadratic Equation-7	upto 1-02-2021	LM120	1. Definition of polynomial 2. Quadratic equation 3. Roots of quadratic equation 4. Relation between roots and coefficient of quadratic equation Nature of roots 5. If root of the equation $ax^2 + bx + c = 0$ are a & b then finding equation 6. whose roots are symmetric expressions of a and b
		LM121	7. Quadratic equation V/S Identity 8. Condition of common roots
		LM122	10. Graphs of quadratic expressions, $y = ax^2 + bx + c$ 11. Explanation of above graphs
		LM123	12. Computing the maximum or minimum values of rational function. 13. General and mixed problem
		LM124	14. Finding the condition for which a general two degree expression 15. Theory of equations 16. Pseudo quadratic equations
		LM125	Illustration based on common root and range.
		LM126	Illustration based upon theory of equation and range and theory of location of root
Sequence & Series-7	upto 5-02-2021	LM127	1. Introduction 2. Arithmetic progression 3. Summation of n terms of an A.P. 4. Properties of A.P.
		LM128	5. Arithmetic mean 6. Geometrical progression 7. Summation of n terms of A.G.P. 8. Properties of G.P.
		LM129	9. Geometrical mean 10. Harmonical progression 11. Harmonical mean 12. Arithmetic mean, Geometric mean & Harmonic mean of 'n' numbers 13. Properties related with Arithmetic mean, Geometric mean & Harmonic mean
		LM130	14. Arithmetic geometric progression 15. Special sequences
		LM131	AGP and relation between AM, GM and HM.
		LM132	Illustration based upon AM, GM and HM.
		LM133	Illustration based upon special sequence.