Module wise Study Plan

Module	Physics	Chemistry	Maths	Biology
	Average Velocity-Equal Displacements	Laws of Chemical Combinations	Cartesian Product of Sets	Diversity In The Living World
	Kinematic Equations for Uniformly Accelerated Motion	Mole Concept and Molar Masses	Relations	Taxonomic Categories
	Free Fall Motion	Percentage Composition	Functions	Biodiversity
	Dimensional Formulae and Dimensional Equations	Stoichiometry and Stoichiometric Calculations		Biodiversity Conservation
	Position, Path Length and Displacement			
	Velocity Time Graph			
	Position Time Graph			
	Shape of Curves			
	Acceleration Time Graph			
	Relative Velocity			
	Significant Figures			
	Accuracy, Precision of Instruments and Errors in Measurement			
	Dimensional Analysis and its Applications			
Module I	Measurement of Length			
	Unit Vector	Sub-atomic Particles	Types of Relations	Kingdom Monera
	Position Vector	Developments Leading to the Bohr's Model of Atom - Part I	Types of Functions	Kingdom Fungi
	Vector Addition - Analytical Method	Developments Leading to the Bohr's Model of Atom - Part II	Composition of Functions and Invertible Function	Kingdom Protista
	Vector Subtraction - Analytical method	Developments Leading to the Bohr's Model of Atom - Part III	Binary Operations	Viruses, Viroids and Lichens
	Relative velocity in One and Two Dimensions	Bohr's Model for Hydrogen Atom		
	Resolution of Vectors	Towards Quantum Mechanical Model of the Atom		
	Multiplication of Two Vectors	Quantum Mechanical Model of the Atom		
	Crossing River Problems	Bond Parameters		
	Projectile Motion	The Valence Shell Electron Pair Repulsion(VSEPR) Theory		
	Expressions for Time of Flight, Range and Maximum Height	Valence Bond Theory		
	Two Angles Giving The same Range and Connected Relations	Hybridization		
	Equations of Tragectory	Molecular Orbital Theory		
	Kinetic Energy And Angular Momentum of Projectiles	Hydrogen Bonding		
	Centripetal Acceleration And Centripetal Force			
	Banking At Curves			
	Vertical Circular Motion			
	Scalars and Vectors			
	Angular Displacement, Angular Velocity and Angular Acceleration			
Module 2	Uniform Circular Motion			

Module wise Study Plan

	Newton's Second Law of Motion	The Gas Laws	Permutations	Basis of Classification
	Motion of Connected Systems And Bodies in Contact	Ideal Gas Equation	Combinations	Classification of Animals
	Newton's Third Law of Motion	Kinetic Molecular Theory of Gases		
	Equilibrium of Concurrent Forces	Behavior of Real Gases: Deviation from Ideal Gas Behavior		
	Friction	Calculations Involving Unit Cell Dimensions		
	Newton's First Law of Motion	Imperfections in Solids		
	Circular Motion			
Module 3	Conservation of Momentum			
Module 4	Cumulative test based on Module 1,2,3	Cumulative test based on Module 1,2,3	Cumulative test based on Module 1,2,3	Cumulative test based on Module 1,2,3
	Work	Expressing Concentration of Solutions	Binomial Theorem for Positive Integral Indices	Algae
	Work Done by a Variable Force	Solubility	General and Middle Terms	Bryophytes
	Special Cases of Work Done	Vapour Pressure and Liquid Solutions	Arithmetic Progression (A.P)	Pteridophytes
	Power	Ideal and non Ideal Solutions	Geometric Progression (G.P)	Plant Life Cycles and Alternation of Generations
	The Concept of Potential Energy	Colligative Properties and Determination of Molar Mass - Part I	Sum to n Terms of Special Series	Gymnosperms
	The Concept of Kinetic Energy	Colligative Properties and Determination of Molar Mass - Part II		Angiosperms
	Kinetic Energy and Momentum	Abnormal Molar Masses		
	The Work-Energy Theorem			
	The Conservation of Energy			
	The Potential Energy of a Spring			
	Collisions			
Module 5	Conservative and Non Conservative Forces			
	Center of Mass	Thermodynamics - Applications	Slope of a Line	Anatomy of Dicotyledonous and Monocotyledonous Plants
	Torque and Angular Momentum	Measurement of Delta U & Delta H: Calorimetry	Various Forms of the Equation of a Line	The Root
	Equilibrium of Parallel Forces	Enthalpies for Different Types of Reactions	General Equation of a Line	Uptake and Transport of Mineral Nutrients
	Moment of Inertia	Spontaneity	Distance of a Point from a Line	The Stem
	Theorems of Perpendicular and Parallel Axes	Gibbs Energy Change and Equilibrium	Sections of a Cone	The Leaf
	Kinetic Energy, Torque and Angular Momentum of a Rotating Rigid Body		Circle	Transpiration
	Conservation of Angular Momentum		Parabola	Plant - Water Relations
	Rolling Motion, Kinetic Energy Due to Translation and Rotation		Ellipse	Long Distance Transport of Water
Module 6	Kinematics of Rotational Motion about a Fixed Axis		Hyperbola	

	Kepler's Laws	Law of Chemical Equilibrium and Equilibrium Constant	Complex Numbers	The Inflorescence
	Universal Law of Gravitation	Applications of Equilibrium Constant	Algebra of Complex Numbers	The Flower
	Acceleration Due to Gravity of the Earth	Factors Affecting Equilibria	The Modulus and the Conjugate of a Complex Number	Pre-fertilization: Structures and Events
	Variation of Acceleration Due to Gravity - Due to Shape, Altitude, Depth and Rotation of Earth	Ionic Equilibrium in Solution	Argand Plane and Polar Representation	Post-fertilization: Structures and Events
	Intensity and Potential in a Gravitational Field	Acids, bases and salts	Quadratic Equations	The Fruit
	Orbital Velocity, Period of a Satellite and Energy of an Orbiting Satellite	Ionization of acids and bases		The Seed
	Gravitational Potential Energy of A System of Particles	Solubility and Solubility Product		Apomixis and Polyembryony
	Escape Speed			
Module 7	Geostationary and Polar Satellites			
Module 8	Cumulative test based on Module 5,6,7	Cumulative test based on Module 5,6,7	Cumulative test based on Module 5,6,7	Cumulative test based on Module 5,6,7
	Stress and Strain	Rate of a chemical reaction	Types of Matrices	Ecosystem - Structure and Function
	Elastic Moduli	Factors Influencing Rate of a Reaction	Operations on Matrices	Pigments Involved in Photosynthesis
	Pressure and Buoyancy	Integrated Rate Equations	Transpose of a Matrix	Light Reaction
	Surface Tension	Temperature Dependence of the Rate of a Reaction	Symmetric and Skew Symmetric Matrices	ATP And NADPH Usage
	Surface Energy, Excess of Pressure	Collision Theory of Chemical Reactions	Invertible Matrices	Electron Transport
	Capillarity		Determinant	The C4 Pathway
	Continuity Equation		Properties of Determinants	Photoperiodism
	Reynolds Number		Area of a Triangle	Productivity
	Bernoulli's Principle		Minors and Cofactors	
	Viscosity		Adjoint and Inverse of a Matrix	
	Stokes Formula and Terminal Velocity		Applications of Determinants and Matrices	
Module 9	Elastic Behaviour Of Solids			
	Measurement of Temperature	Oxidation Number	Angles	Glycolysis
	Thermal Expansion	Redox Reactions and Electrode Processes	Trigonometric Functions	Fermentation
	Specific Heat Capacity	Galvanic Cells	Trigonometric Functions of Sum and Difference of Two angles	Eukaryotic Cells
	Change of State	Nernst Equation	Trigonometric Equations	Aerobic Respiration
	Heat Transfer - Conduction, Convection and Radiation	Conductance of Electrolytic Solutions		Respiratory Quotient
	Newton's Law of Cooling	Electrolytic Cells and Electrolysis		
	Calorimetry	Fuel cells		
Module 10		Corrosion		

	First Law of Thermodynamics	Adsorption	Measures of Central tendency	Cell Theory
	Thermodynamic Processes	Catalysis	Measures of Dispersion - Range and Mean Deviation	Prokaryotic Cells
	Heat Engines	Colloids	Measures of Dispersion - Variance and Standard Deviation	Eukaryotic Cells
	Carnot Engine	Atmospheric pollution	Analysis of Frequency Distributions	Biomacromolecules
	Refrigerators and Heat Pumps		Random Experiments	Metabolic Basis for Living
	Behaviour of Gases and Gas Equations		Events	Enzymes
	Kinetic Theory of an Ideal Gas and Expression for Pressure		Axiomatic Approach to Probability	
	RMS Velocity			
	Mean Free Path			
	Thermal Equilibrium			
	Zeroth Law of Thermodynamics			
	Heat, Internal Energy and Work			
Module 11	Specific Heat Capacity of Gases			
Module 12	Cumulative Test based on Module 9,10,11	Cumulative Test based on Module 9,10,11	Cumulative Test based on Module 9,10,11	Cumulative Test based on Module 9,10,11
	Simple Harmonic Motion	Electronic Configurations and Types of Elements: s, p, d, f - Blocks	Conditional Probability	Animal Tissues
	Velocity and Acceleration in Simple Harmonic Motion	Periodic Trends in Properties of Elements	Multiplication Theorem on Probability and Independent events	Basis of Classification
	Energy in Simple Harmonic Motion	Occurrence of Metals	Random Variables and its Probability Distributions	
	Some Systems Executing Simple Harmonic Motion	Concentration of Ores	Bernoulli Trials and Binomial Distribution	
	Simple Pendulum	Extraction of Crude Metal from Concentrated Ore		
	Damped Simple Harmonic Motion	Thermodynamic Principles of Metallurgy		
	Transverse and Longitudinal Waves	Electrochemical Principles of Metallurgy		
	The Speed of a Travelling Wave	Oxidation- Reduction		
	Velocity of Sound in Air and Variation with Pressure, Temperature and Humidity	Refining		
	Displacement Relation in a Progressive Wave			
	Stationary Wave, Fundamental Frequency and Harmonics			
	Vibrations of Stretched Strings			
	Vibrations of Air Columns			
	Beats			
	Doppler Effect			
Module 13	Reflection of Waves			

	Basic Properties of Electric Charge	Occurrence and Isotopes of Hydrogen	Limits	Animal Tissues
	Charging by Induction	Hydrogen - Preparation	Limits of Trigonometric Functions	Frogs
	Coulomb's Law	Hydrogen - Properties	Derivatives	Earthworm
	Forces Between Multiple Charges	Hydrides		Cockroach
	Electric Field - Intensity And Potential	Water		
	Electric Flux	Hydrogen Peroxide		
	Electric Dipole	Heavy Water		
	Dipole in a Uniform and Non-Uniform External Field	Group 1 Elements: Alkali Metals		
	Gauss's Law	Group 2 elements: Alkaline Earth Metals		
	Applications of Gauss's Law			
	Electrostatic Potential and Potential Difference			
	Relation Between Intensity and Potential			
	Work Done in Moving Charge in an Electric Field			
	Potential Due to a Point Charge, Dipole and System of Charges			
	Potential Due to a Spherical Shell			
	Potential Energy of a System of Charges			
	Dielectrics			
	Capacitance and Capacitors			
	Capacitance of Isolated Spherical Conductors and Parallel Plate Capacitor			
	More About a Parallel Plate Capacitor			
	Capacitance in Series			
	Capacitors in Parallel			
	Energy Of a Charged Capacitor			
	Common Potential and Loss of Energy Due to Sharing			
	Coalition of Charged Identical Drops			
	Calculation of Equivalent Capacitance, Charge and Potential in Condensers in an Electrical Network			
	Electric Charges			
	Conductors and Insulators			
	Electric Field Lines			
	Equipotential Surface			
Module 14	Effect of Changing the Capacitance With and Without Battery Connection			
	Electric Current	Group 13 elements: The Boron Family	Continuity	Origin of Life
	Electric Currents in Conductors	Group 14 elements: The Carbon family	Differentiability	Evidence for Evolution
	Thermal velocity and Drift velocity	Group 15 Elements - The Nitrogen Family	Derivatives of Composite Functions	Biological Evolution

	Ohm's Law	Group 15 Nitrogen And Its Compounds	Derivatives of Implicit Functions	Adaptive Radiation
	Resistivity of Various Materials	Group 15 Phosphorus And Its Compounds		Hardy - Weinberg Principle
	Temperature Dependence of Resistivity	Group 16 Elements - The Oxygen Family		Evolution and Origin of Man
	Combination of Resistors-Series and Parallel	Group 16 Oxygen And Ozone		Ecological Succession
	Cells, Emf, Internal Resistance	Group 16 Sulphur And Its Compounds		
	Cells in Series and in Parallel	Group 17 Elements - The Halogens		
	Kirchhoff 's Laws	Group 17 Chlorine,Oxoacids of Halogens And Interhalogen Compound		
	Wheatstone's Bridge	Group 18 Elements - The Noble Gases		
	Metre Bridge			
	Potentiometer			
	Electrical Energy and Power			
	Resistance			
	Limitations of Ohm's Law			
Module 15	Current and Voltage Distribution in Electrical Circuits			
Module 16	Cumulative Test based on Module 13, 14, 15	Cumulative Test based on Module 13, 14, 15	Cumulative Test based on Module 13, 14, 15	Cumulative Test based on Module 13, 14, 15
	Biot- Savart's Law	General Properties of the Transition Elements(d-block)-Part 1	Properties of Inverse Trigonometric Functions	Digestive System
	Ampere's Circuital Law	General Properties of the Transition Elements(d-block)-Part 2		Respiratory Organs
	Magnetic Field Due to Straight Conductor, Circular Coil, Solenoid and Toroid	Some Important Compounds of Transition Elements		Exchange of Gases
	Force on a Moving Charge in a Magnetic Field+	f-Block Elements(Lanthanoids and Actinoids)		Digestion of Food
	Cyclotron	Definitions of Some Important Terms Pertaining to Coordination Compounds		Absorption of Digested Products
	Motion of Charged Particle in a Crossed Electric and Magnetic Field	Nomenclature of coordination compounds		Transport of Gases
	Force on a Current Carrying Conductor	Isomerism in co-ordination compounds		Disorders of Digestive System
	Force between Two Current Carrying Conductors	Bonding in co-ordination compounds Part -1		Disorders of Respiratory System
	Current Loop and Dipole Moment	Bonding in co-ordination compounds Part - 2		
	Torque on a Magnetic Dipole	Bonding in Metal Carbonyls		
	Moving Coil Galvanometer	Stability of Coordination Compounds		
	Conversion of Moving Coil Galvanometer to Ammeter and Voltmeter	Importance of coordination compounds		

	Magnetic Effect of Current	Important inorganic structures		
Module 17	Special Cases of Magnetic Field due to Current Carrying Conductors			
	The Bar Magnet	Structural representations of organic compounds	Derivatives of Inverse Trigonometric Function	Circulatory Pathways
	Magnetism and Magnetic Intensity	Classication of organic compounds	Exponential and Logarithmic Functions	Double Circulation and Regulation of Cardiac Activity
	Torque and P.E of a Magnet in a Magnetic Field	Nomenclature of organic compounds	Logarithmic Differentiation	Urine Formation
	The Earth's Magnetism	Isomerism in Organic Compounds	Derivatives of Functions in Parametric Forms	Function of the Tubules
	Magnetic Properties of Materials	Methods of Purification of Organic Compounds	Second Order Derivative	Role of Other Organs in Excretion
	Magnetic Field and Dipole Moment Due to Revolving Charge	Qualitative and Quantitative Analysis of Organic Compounds		Mechanism of Concentration of the Filtrate
	Permanent Magnets and Electromagnets	Fundamental Concepts in Organic Reaction Mechanism		Disorders of Circulatory System
Module 18	Magnetism and Gauss's Laws			Disorders of Excretory System
	Magnetic Flux	Alkanes	Mean Value Theorem	Muscle
	Faraday's Law of Induction	Alkenes	Rate of Change of Quantities	Neuron as Structural and Functional Unit of Neural System
	Lenz's law and Conservation of Energy	Alkynes	Increasing and Decreasing Functions	Disorders of Muscular and Skeletal System
	Motional Electromotive Force	Aromatic Hydrocarbons	Tangents and Normals	Sensory Reception and Processing
	Self Induction		Approximations	Joints
	Mutual Induction		Maxima and Minima	
	Energy Stored in an Inductor			
Module 19	Eddy Currents			
Module 20	Cumulative Test based on Module 17, 18, 19	Cumulative Test based on Module 17, 18, 19	Cumulative Test based on Module 17, 18, 19	Cumulative Test based on Module 17, 18, 19
	AC Current and AC Voltage, Mean Value, RMS Value	Classification & Nomenclature of Haloalkanes and Haloarenes	Methods of Integration	Endocrine Glands and Hormones
	AC Voltage Applied to a Resistor	Nature of C-X bond	Integrals of Some Particular Functions	Male Reproductive System
	AC Voltage Applied to an Inductor	Methods of Preparation of Haloalkanes and Haloarenes	Integration by Partial Fractions	Female Reproductive System
	AC Voltage Applied to a Capacitor	Physical Properties of Haloalkanes and Haloarenes	Integration by Parts	Gametogenesis
	AC Voltage Applied to a Series LCR Circuit	Chemical Reactions of Haloalkanes and Haloarenes		Fertilization and Implantation
	Resonance in AC Circuits	Poly halogen compounds		Parturition and Lactation

	Power in AC circuit:The Power Factor			
	Transformers			
	AC Generator			
Module 21	LC Oscillations			
	Electromagnetic Waves	Classification & Nomenclature of Alcohols, Phenols and Ethers	Definite Integral	Infertility
	Properties of Electromagnetic Waves	Structures of functional groups	Fundamental Theorem of Calculus	Medical Termination of Pregnancy
	Equations for Electric and Magnetic Vectors in an Electromagnetic Wave	Alcohols	Some Properties of Definite Integrals	Populations
	Displacement Current	Phenols	Area under Simple Curves	Population Explosion and Birth Control
	Coherent and Incoherent Addition of Waves	Ethers	Area between Two Curves	Sex Determination
	Interference of Light Waves and Young's Experiment			Genetic Disorders
	Diffraction			
	Polarisation			
	Electromagnetic Spectrum			
Module 22	Huygens' Principle			
	Reflection of Light by Spherical Mirrors	Nomenclature and Structure of Carbonyl Group	Differential Equations Basic Concepts	Microbes in Household Products
	Refraction	Preparation of Aldehydes and Ketones	General and Particular Solutions of a Differential Equation	Microbes in Industrial Products
	Total Internal Reflection	Physical Properties of Aldehydes and Ketones	Formation of a Differential Equation whose General Solution is Given	Water Pollution and its Control
	Refraction at Spherical Surfaces and Lenses	Chemical Reactions of Aldehydes and Ketones	Methods of Solving First Order, First Degree Differential Equations	Solid Wastes
	Refraction Through a Prism	Uses of Aldehydes And Ketones		Sexually Transmitted Diseases
	Dispersion	Nomenclature And Structure of Carboxylic Acids		
	Scattering of Light, Blue Color of Sky and Rainbow	Methods of Preparation of Carboxylic Acids		
	Optical Instruments - Human Eye, Simple Magnifier, Compound Microscope, Telescope	Physical Properties of Carboxylic Acids		
	Power of a Lens	Chemical Reactions of Carboxylic Acids		
Module 23		Uses of Carboxylic Acids		
Module 24	Cumulative Test based on Module 21, 22, 23	Cumulative Test based on Module 21, 22, 23	Cumulative Test based on Module 21, 22, 23	Cumulative Test based on Module 21, 22, 23
	Particle Nature of Light: The Photon	Classification of Amines	Types of Vectors	Cell Cycle
	Photoelectric Effect	Nomenclature of Amines	Addition of Vectors	M Phase
	Einstein's Photoelectric Equation	Preparation of Amines	Multiplication of a Vector by a Scalar	Cancer

	Wave Nature of Matter and de Broglie Wavelength	Physical Properties of Amines	Product of Two Vectors	Meiosis
	Alpha-Particle Scattering and Rutherford's Nuclear Model of Atom	Chemical Reactions of Amines		Radioactive Wastes
	Bohr's Model of the Hydrogen Atom	Diazonium Salts		Ozone Depletion in the Stratosphere
	The Line Spectra of the Hydrogen atom	Carbohydrates		
	Atomic Masses and Composition of Nucleus	Proteins		
	Size of the Nucleus	Enzymes		
	Mass - Energy Relation and Nuclear Binding Energy	Vitamins		
	Radioactivity	Nucleic Acids		
	Nuclear Force			
Module 25	Nuclear energy and Nuclear fission and fusion			
	Classification of Metals, Conductors and Semiconductors	Classification of polymers	Direction Cosines and Direction Ratios of a Line	Sexually Transmitted Diseases
	Intrinsic Semiconductor	Types of polymerization	Equation of a Line in Space	Blood
	Extrinsic Semiconductor	Bio Degradable Polymers	Angle between Two Lines	Lymph
	Application of Junction Diode as a Rectifier	Drugs	Coplanarity of Two Lines	Immunity
	Special Purpose p-n Junction Diodes	Chemicals in food	Plane	AIDS
	Junction Transistors andTransistor Configuration and Current Amplification Factors	Cleansing agents	Angle between Two Planes	Biotechnological Applications in Medicine
	Transistor as an Amplifier and Oscillator	Important organic named reactions	Distance of a Point from a Plane	Ethical Issues
	Digital Electronics and Logic Gates	Reaction Mechanisms	Angle between a Line and Plane	Transgenic Animals
	Propagation of Radio Waves	Distinction Tests		
	Modulation and its Necesisity			
	Amplitude Modulation			
	Elements of a Communication System			
	Basic Terminology Used in Electronic Communication Systems			
	Bandwidth of Signals			
Module 26	p-n junction			
Module 27	Cumulative Test based on Module 25, 26	Cumulative Test based on Module 25, 26	Cumulative Test based on Module 25, 26	Cumulative Test based on Module 25, 26 + below given topics
				Inheritance of One Gene
				Inheritance of Two Genes
				Principles of Biotechnology
				Tools of Recombinant DNA Technology
				Processes of Recombinant DNA Technology
				Plant Breeding
				Biotechnological Applications in Agriculture
				Tissue Culture

Module wise Study Plan

				Animal Husbandry
Module 28	Revision Test 1	Revision Test 1	Revision Test 1	Revision Test 1
Module 29	Revision Test 2	Revision Test 2	Revision Test 2	Revision Test 2
Module 30	Revision Test 3	Revision Test 3	Revision Test 3	Revision Test 3
Module 31	Revision Test 4	Revision Test 4	Revision Test 4	Revision Test 4
Module 32	Revision Test 5	Revision Test 5	Revision Test 5	Revision Test 5
Module 33	Revision Test 6	Revision Test 6	Revision Test 6	Revision Test 6
Module 34	Revision Test 7	Revision Test 7	Revision Test 7	Revision Test 7
Module 35	Revision Test 8	Revision Test 8	Revision Test 8	Revision Test 8
Module 36	Revision Test 9	Revision Test 9	Revision Test 9	Revision Test 9
Module 37	Revision Test 10	Revision Test 10	Revision Test 10	Revision Test 10