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## **Time Saver Course for NEET**

### **XII Appearing & Droppers**

### **Lecture Schedule Phase-II**

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## NEET Time Saver Course Phase-II XII Appearing & Droppers - Lecture Plan

Date	Subject	Chapter Name	Lecture No.	Lecture Name
27-Oct-21	Physics	Unit & Dimension	1	Fundamental Quantities ,Area,Volume Formula,Exponent and Lorithmic Basic
	Physical Chemistry	Mole concept	1	Introduction, Atomic Mass and Relative Atomic Mass, Molar Mass, Calculation of no. of atoms
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	1	Catenation, Hybridisation of Carbon, Classification of Carbon and Hydrogen Atoms, Homocyclic/Heterocyclic Compounds
	Biology	Reproduction in Organisms	1	Introduction,Life Span & Life Expectancy,Difference Between Asexual & Sexual Reproduction,Fission,Budding,Fragmentation, Regeneration,Sporulation
28-Oct-21	Physics	Unit & Dimension	2	Units Dimension Dimension Calculation Formula Dimension Prove
	Inorganic Chemistry	Periodic Table and Basic	1	Introduction, Writing Electronic Configuration, Shielding Effect And Effective Nuclear Charge, Slaters Rule
	Biology	Reproduction in Organisms	2	Vegetative Propagation – Natural
	Biology	Reproduction in Organisms	3	Artificial vegetative propagation,Sexual Reproduction in Organisms Pre-Fertilization,Fertilization
29-Oct-21	Physics	Unit & Dimension	3	Error Measurement Round Differentiation
	Physics	Unit & Dimension	4	Error Analysis for Multiplication Division or Exponent
	Inorganic Chemistry	Periodic Table and Basic	2	Variation of effective Nuclear Charge, Atomic Size Metallic, Covalent and Vander Waals Radius, Variation of Atomic Size , Size of Ions, Size in Isoelectronic Series
	Biology	Reproduction in Organisms	4	Post-Fertilization events Parthenogenesis
30-Oct-21	Physics	Unit & Dimension	5	Vernier Caliper Screw Gauge
	Inorganic Chemistry	Periodic Table and Basic	3	Ionisation, Factors affecting Ionisation Energy, Sucessive Ionisation Energy
	Biology	Human Reproduction	1	Steps of Reproduction, Male Reproductive System- Testes,Epididymis,Vasa Deferens,Glans Penis
	Biology	Human Reproduction	2	Seminiferous Tubules,Sertoli Cells,Leydig Cells,Hormonal Control,Spermatogenesis,Structure of Human Sperm, Disorders of Male Reproductive System
1-Nov-21	Physics	Vector	1	Representation, Addition, Subtraction
	Physical Chemistry	Mole concept	2	Volume of Gas at STP, Average Atomic Mass and Average Molar Mass
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	2	Functional Group Identification, Homologous Series, Degree of Unsaturation (DU)
	Biology	Human Reproduction	3	Female Reproduction System-Ovary,FT,Uterus,Cervix Vagina,External Genitalia,Bartholin,Skene and Mammary Glands
2-Nov-21	Physics	Vector	2	Unit Vector Angle Between Vectors Addition of Vector Resultant of Vector in 3D
	Physical Chemistry	Mole concept	3	Percentage Composition, Laws of Chemical Combination, Emperical and Molecular Formula
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	3	Nomenclature of Hydrocarbons, Alkanes, Alkenes, Complex Side Chains
	Biology	Human Reproduction	4	Follicle Development in Ovary,Oogenesis
3-Nov-21	Physics	Vector	3	Cross Product Dot Product
	Physical Chemistry	Mole concept	4	Stoichiometry, Limiting Reagent
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	4	Alkenes, Alkynes, Cyclic, Functional Group Compounds
	Biology	Human Reproduction	5	Fraternal Twins,Hormonal Control in Females,Menstrual Cycle ,Estrous and Rut Cycle,Egg Membranes,Types of Eggs

8-Nov-21	Physics	Vector	4	Cross Product Dot Product Problems of Cross And Dot Product
	Physical Chemistry	Mole concept	5	Percent Yield, POAC, Series or Sequential Reaction
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	5	Nomenclature of Compounds with Functional Groups
	Biology	Human Reproduction	6	Structure of Human Egg Fertilization Post Fertilization Events- Cleavage, Morula, Blastocyst Types of Cleavage Monozygotic Twins
9-Nov-21	Physics	Kinematics	1	Motion in One Dimension, Constant Accelerated Motion, Non-uniform acceleration
	Physical Chemistry	Mole concept	6	Concentration terms
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	6	Nomenclature of Compounds with Multiple Functional Groups
	Biology	Human Reproduction	7	Implantation Extra-Embryonic Membranes Gastrulation Neurulation Fate of Three Germ Layers Placenta – Introduction & Types
10-Nov-21	Physics	Kinematics	2	Graphs-1
	Physical Chemistry	Mole concept	7	Molarity of Mixing, Molarity of Dilution
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	7	Nomenclature of Multiple Functional Group
	Biology	Human Reproduction	8	Human Placenta Teratogens Umbilical Cord Gestation Period Parturition Lactation Menstrual Hygiene
11-Nov-21	Physics	Kinematics	3	Motion under gravity
	Inorganic Chemistry	Periodic Table and Basic	4	Electron Affinity and Electron Gain Enthalpy, Variation of Electron affinity
	Biology	Reproductive Health	1	Introduction-2011 Census Overpopulation and Its Solution Amniocentesis MTP Infertility
	Biology	Reproductive Health	2	Contraception – Temporary & Permanent Sexually transmitted Infections
12-Nov-21	Physics	Kinematics	4	Projectile Motion , Examples, Maximum Height and Time of Flight, Variation with Q
	Physics	Kinematics	5	Projectile Analysis Example, Incline Projectile
	Inorganic Chemistry	Periodic Table and Basic	5	Electronegativity, Pauling Scale, Mulliken Scale, Allred Rochow Scale, Factors Affecting Electronegativity, Nature of Oxides
	Biology	Sexual Reproduction in Flowering Plants	1	Structure of Flower Androecium Structure of Stamen, Anther, Anther Wall Structure of Microsporangia Microsporogenesis Pollen Grain
13-Nov-21	Physics	Kinematics	6	Projectile From Height, Relative Motion, Min. Distance (Closest+Approach), Rain Man Problem
	Inorganic Chemistry	Periodic Table and Basic	6	Acidic Basic and Amphoteric Oxides, Hydration Energy and its Application, Practice Session-2
	Biology	Sexual Reproduction in Flowering Plants	2	Development of Male Gametophyte Gynoecium, Megasporangium (Ovule) Structure & Its Types Megasporogenesis Development of Female Gametophyte
	Biology	Sexual Reproduction in Flowering Plants	3	Pollination and Its Types, Adaptations for Self and Cross Pollination, Hydrophily Epiphydrophily Agents of Pollination, Mutualism, Pollen-Pistil Interaction, Double Fertilization
15-Nov-21	Physics	Kinematics	7	Flag Fluttering and River Boat Problem
	Physical Chemistry	Mole concept	8	Mixing of Reacting Solutions, Molarity of Ions
	Organic Chemistry	Classification and Nomenclature of Organic Compounds	8	Nomenclature of Aromatic Compounds
	Biology	Sexual Reproduction in Flowering Plants	4	Post-Fertilisation Events Embryo Development in Dicots & Monocots Endosperm Development and Types Seed Structure in Dicots and Monocots Endospermic and Non-Endospermic Seeds
16-Nov-21	Physics	Newton`s Law of Motion(NLM) and Friction	1	Newton's First Law, 2nd Law, 3rd Law, FBD, Atwood Machine, Example Based on Newton's 2nd Law, String Block System (Constrained)
	Physical Chemistry	Mole concept	9	Labelling of H <sub>2</sub> O <sub>2</sub> , Methodes of Atomic & Molecular Mass Determination
	Organic Chemistry	GOC-1	1	Inductive effect
	Biology	Sexual Reproduction in Flowering Plants	5	Seed Germination, Dormancy and Viability Fruit – fleshy, Dry, True, False and Parthenocarpic Parthenocarp Hybrid Seeds Apomixis Polyembryony and its Types

17-Nov-21	Physics	Newton`s Law of Motion(NLM) and Friction	2	String Constraint,Heavy String, Spring, Spring Balance, Weighing Machine, Pseudo Force
	Physical Chemistry	Solid State	1	Crystalline and amorphous solids , types of crystalline solids, Bravais Lattices, Analysis of unit cells
	Organic Chemistry	GOC-1	2	Reaction Intermediate and Stability Comparison
	Biology	Principle of Inheritance and Variation	1	Inheritance , Variations , Genetics Theory of Blending , Inheritance Pre- Mendelism, Some Important Terms in Genetics , Mendelism , Rediscovery of Mendel's Work
18-Nov-21	Physics	Newton`s Law of Motion(NLM) and Friction	3	Friction-Basic Concepts, Static and Kinetic Friction, illustration Based on Friction
	Inorganic Chemistry	Chemical bonding	1	"Introduction, Types of Chemical Bond, Discussion of Ionic Bond, Covalent Bond and Coordinate Bond, Lewis Octet Rule"
	Biology	Principle of Inheritance and Variation	2	Reasons for Non-recognition and Success of Mendel's work , Pisum Sativum as Experimental Model Emasculation and Bagging Technique , List of 7 characters Chosen , Inheritance of One Gene , Monohybrid cross , Law of Dominance
	Biology	Principle of Inheritance and Variation	3	Law of Segregation Monohybrid Test Cross Incomplete dominance Pleiotropy Co-dominance Multiple allelism
19-Nov-21	Physics	Newton`s Law of Motion(NLM) and Friction	4	Minimum Force required to Slide a System, Problem Based on Inclined
	Physics	Newton`s Law of Motion(NLM) and Friction	5	Angle of Repose
	Inorganic Chemistry	Chemical bonding	2	"Exception of LOR, Failure of LOR, Formal Charge, Structure of Compounds having Single Central Atom, Valence Bond Theory (VBT)
	Biology	Principle of Inheritance and Variation	4	Lethal genes , Dihybrid cross , Law of independent assortment , backcross , outcross , test cross, reciprocal cross , Complementary / Duplicate / Additive duplicate/ Supplementary/ Collaborative genes
20-Nov-21	Physics	Newton`s Law of Motion(NLM) and Friction	6	2 Block System
	Inorganic Chemistry	Chemical bonding	3	"Valence Bond Theory Continued - P-P, P-d, d-d Overlap, Comparison of Strength of $\sigma$ and $\pi$ Bond, Difference of $\sigma$ and $\pi$ Bond, Formation of Molecules on the Basis of Valence Bond Theory"
	Biology	Principle of Inheritance and Variation	5	Epistasis-dominant & recessive , Monogenic and Polygenic inheritance , Chromosomal theory of inheritance , Drosophila as experimental model , Types of linkage , Linkage group , Morgans experiments , Recombination frequency , Linkage maps
	Biology	Principle of Inheritance and Variation	6	Sex Determination – Male & Female Heterogamety Sex Determination in Human Haplodiploidy Genic Balance Theory Mutations-Chromosomal and Gene Mutations
22-Nov-21	Physics	Circular Motion	1	Angular Variables, Uniform Circular Motion
	Physical Chemistry	Solid State	2	Analysis of BCC and FCC Unit Cell, Density of Unit Cell, Close Packing of Atoms
	Organic Chemistry	GOC-1	3	Carbene, Nitrene, Benzene, Acidic Strength
	Biology	Principle of Inheritance and Variation	7	Mutagen Barr Body Chromosomal Disorders Mendelian Disorders
23-Nov-21	Physics	Circular Motion	2	Analysis Between Linear and Circular Motion, Relative Angular Velocity, Tangential Acceleration and Centripetal Acceleration, Angular Acceleration
	Physical Chemistry	Solid State	3	Close Packing of Atoms, HCP and FCC Unit Cell
	Organic Chemistry	GOC-1	4	Resonance and applications
	Biology	Principle of Inheritance and Variation	8	Twins, Rh Inheritance, Cytoplasmic Inheritance, Pedigree Analysis, Important Numericals
24-Nov-21	Physics	Circular Motion	3	Uniform and Non uniform Circular motion
	Physical Chemistry	Solid State	4	"Practice Session-1, Close Packing of Atoms, HCP Unit Cell, Tetrahedral and Octahedral Voids"
	Organic Chemistry	GOC-1	5	Aromaticity, bond order and Bond length
	Biology	Molecular Basis of Inheritance	1	Nucleotide Structure of Polynucleotide Chain Double Helix structure of B-DNA Packaging of DNA Helix Types of DNA and RNA

25-Nov-21	Physics	Circular Motion	4	Simple Pendulum and Conical Pendulum, Banked Road
	Inorganic Chemistry	Chemical bonding	4	Hybridisation and Valence Shell Electron Pair Repulsion Theory
	Biology	Molecular Basis of Inheritance	2	Search for Genetic Material Transforming Principle by Griffith Biochemical Characterization of Transforming Principle Transduction Experiment Properties of Genetic Material Central Dogma Reverse Central Dogma RNA World Clover leaf model of t-RNA
	Biology	Molecular Basis of Inheritance	3	Semiconservative Replication of DNA Messelson and Stahl Experiment Mechanism of DNA Replication
26-Nov-21	Physics	Work ,Power and Energy	1	Work Done by Constant Force, Work Done by variable force
	Physics	Work ,Power and Energy	2	Conservative and Non-Conservative Force, Potential Energy, Kinetic Energy,
	Inorganic Chemistry	Chemical bonding	5	Discussion Ex.-1 (1-40), Calculation of Percent Ionic Character, Hydration Energy
	Biology	Molecular Basis of Inheritance	4	Why Transcription Does Not Occur on Both Strands of DNA Transcription Unit Process of Transcription Post Transcriptional Modification Genetic Code Experimental Proof of Triplet Codon Salient Features of Genetic Code
27-Nov-21	Physics	Work ,Power and Energy	3	Central Force, Work Energy Theorem, Conservation of Mechanical Energy, Problem Based on Energy Conservation, UNR Graph
	Inorganic Chemistry	Chemical bonding	6	"Hybridisation in Reaction Intermediate (Carbocation, Carbanion, Carbene, Benzyne) , Hybridization in Allene, Hybridisation in odd Electron Species, Dimerisation of odd Electron Species, Drago's Rule, Calculation of $\pi\pi-\pi\pi$ and $\pi\pi-d\pi$ Bond"
	Biology	Molecular Basis of Inheritance	5	Genetic Code Chart Wobble Hypothesis Mutations and Genetic Code Translation
	Biology	Molecular Basis of Inheritance	6	Regulation of Gene Expression , Lac Operon , Tryptophan Operon,
29-Nov-21	Physics	Work ,Power and Energy	4	Power
	Physical Chemistry	Solid State	5	"Radius Ratio and Lattices of Ionic Solids, Defects in Crystals and Magnetic Properties"
	Organic Chemistry	GOC-1	6	Types of M-Effect
	Biology	Molecular Basis of Inheritance	7	Human Genome Project, DNA Fingerprinting
30-Nov-21	Physics	Work ,Power and Energy	5	Vertical Circular Motion
	Physical Chemistry	Liquid Solution	1	Concentration Terms, Vapour Pressure of Pure Liquid
	Organic Chemistry	GOC-1	7	Stability of resonating structures, Ortho effect and SIR, Resonance Energy Comparison
	Biology	Cell the Unit of Life	1	What is a Cell Cell Theory Types of Cells Structure of a Prokaryotic Cell Difference Between Prokaryotic and Eukaryotic Cell
1-Dec-21	Physics	Center of Mass and collision	1	Calculation of COM
	Physical Chemistry	Liquid Solution	2	Colligative Properties
	Organic Chemistry	GOC-1	8	Hyperconjugation, heat of combustion , heat of hydrogenation
	Biology	Cell the Unit of Life	2	Difference Between Plant and Animal Cell Cell Wall Vacuole Cell Membrane
2-Dec-21	Physics	Center of Mass and collision	2	Motion of COM, Man & Planck's Problem, Gun Problems,
	Inorganic Chemistry	Chemical bonding	7	Bent's Rule and its Application
	Biology	Cell the Unit of Life	3	Endomembrane System Endoplasmic Reticulum Golgi Apparatus Lysosomes Microbodies- Spherosomes , Glyoxysomes , Peroxisomes Mitochondria Plastids
	Biology	Cell the Unit of Life	4	Ribosomes Cytoskeleton Centrosome and Centrioles Cilia and Flagella
3-Dec-21	Physics	Center of Mass and collision	3	Impulsive Force, Collision (Head on Collision), Special Case on Head on Collision
	Physics	Center of Mass and collision	4	Bouncing of Ball , Oblique Collision,
	Inorganic Chemistry	Chemical bonding	8	Molecular Orbital Theory (MOT)
	Biology	Cell the Unit of Life	5	Nucleus Nuclear Envelope Nucleolus Chromatin Chromosome- Structure and Types Giant Chromosomes

4-Dec-21	Physics	Rotational Motion	1	Rigid Body, Rotational Kinematics, Analogy Between Translation and Rotation
	Inorganic Chemistry	Chemical bonding	9	MOT (continued), Back Bonding and Bridge Bonding
	Biology	Cell Cycle and Cell Division	1	Basis for Cell Division Amitosis Cell Cycle Check Points for Cell Cycle
	Biology	Cell Cycle and Cell Division	2	Mitosis Mitotic Inducers Mitotic Inhibitors
6-Dec-21	Physics	Rotational Motion	2	Moment of Inertia, Cavity problems
	Physical Chemistry	Liquid Solution	3	PRACTISE SESSION 1, OSMOTIC PRESSURE , ABNORMAL COLLIGATIVE PROPERTIES
	Organic Chemistry	GOC-1	9	Stability of ions and radicals, application of Hyperconjugation
	Biology	Cell Cycle and Cell Division	3	Meiosis
7-Dec-21	Physics	Rotational Motion	3	Torque
	Physical Chemistry	Liquid Solution	4	Vapour Pressure of a solution containing 2 volatile liquids
	Organic Chemistry	GOC-1	10	Comparison of acidic strength and basic strength
	Biology	Biomolecules	1	Biomolecules Extraction of Biomolecules Acid Soluble and Acid Insoluble Biomolecules Ash analysis of Inorganic Compounds Primary and Secondary Metabolites Amino Acids Proteins
8-Dec-21	Physics	Rotational Motion	4	Angular Momentum, Conservation of Angular Momentum
	Physical Chemistry	Liquid Solution	5	practice session-2, concept of fractional distillation, ideal and non ideal solution, azeotrope
	Organic Chemistry	Isomerism	1	Structural isomerism upto functional isomerism, Structural isomerism upto metamers and counting of isomers
	Biology	Biomolecules	2	Lipids, Monosaccharides
9-Dec-21	Physics	Rotational Motion	5	CTRM, Rolling
	Inorganic Chemistry	Chemical bonding	10	"Bonding Parameters-Bond Angle, Bond Order, Bond Length (All Important Questions are Covered)"
	Biology	Biomolecules	3	Polysaccharides Nucleotides Nucleic Acid ATP Structure
	Biology	Biomolecules	4	The living State Enzymes
10-Dec-21	Physics	Rotational Motion	6	Rolling on Inclined
	Physics	Rotational Motion	7	Angular Momentum CTRM
	Inorganic Chemistry	Chemical bonding	11	Bond Energy, Dipole Moment
	Biology	Human Health and Disease	1	Classification of Human Disease Germ Theory of Disease Koch's Postulates Bacterial Disease- Plague, Cholera, Diphtheria, Leprosy, Pertussis, Pneumonia, Scarlet Fever, Tetanus, TB, Typhoid, Botulism, Anthrax, Dysentery
11-Dec-21	Physics	Simple Harmonic Motion (SHM)	1	Oscillation Vibration Periodic Motion Differential Equation Of SHM UCM To SHM Phase Equation Of SHM Relation Between V & X And A And X
	Inorganic Chemistry	Chemical bonding	12	intermolecular forces ( van der Waals forces) Hydrogen bonding (formation, extent, strength, number, types ( symmetrical and unsymmetrical, intermolecular and intramolecular, application)
	Biology	Human Health and Disease	2	Viral Diseases (Small Pox, Chicken Pox, Measles, Rubella, Rabies, Influenza, Common Cold, Herpes, Yellow Fever, Dengue, Chikungunya, Mumps, Polio, Hepatitis) Protozoal Disease (Giardiasis, Trypanosomiasis, Leishmaniasis )
	Biology	Human Health and Disease	3	Pyorrhoea, Amoebiasis, Sporozoal, Protozoan Disease, Malaria, Schistosomiasis, Teniasis Cysticercosis Ascariasis, Filariasis
13-Dec-21	Physics	Simple Harmonic Motion (SHM)	2	"Mean Position Shifted From Origin, Time Period of Spring - Mass System, SHM with Spring+String and 2-SHM with"
	Physical Chemistry	Liquid Solution	6	Practice Session-3 , Henry's Law
	Organic Chemistry	Isomerism	2	Tautomerism
	Biology	Human Health and Disease	4	Some other Roundworm Diseases, Fungal Diseases, AIDS, Cancer

14-Dec-21	Physics	Simple Harmonic Motion (SHM)	3	"Graphs, Spring-mass, Combination of Spring, Special Problem,
	Physical Chemistry	Redox Reaction	1	Oxidation Number, Oxidation Reduction, Oxidising Agent ""and"" Reducing Agent
	Organic Chemistry	Isomerism	3	Geometrical Isomerism in different compounds and conditions
	Biology	Human Health and Disease	5	Prevention and control of Disease, Antibiotics, Immunity, Lymphoid Organs, Innate and Acquired Immunity (CMI and AMI), Antibody Structure and Types, Ag-Ab Reaction
15-Dec-21	Physics	Simple Harmonic Motion (SHM)	4	"Energy - KE, PE, TE, Spring with Two Blocks Long Pendulum, Tunnel in Earth SHM"
	Physical Chemistry	Redox Reaction	2	Practice Session-1, Types of Redox Reactions, (i) interMolecular (ii) intraMolecular
	Organic Chemistry	Isomerism	4	Configuration of GI( cis-trans, E/Z and syn-anti system), Physical properties of GI, formula for calculation of total GI
	Biology	Human Health and Disease	6	Primary and secondary immune response , Active and passive immunity, Vaccination , Auto-immunity, Immunodeficiency disease , Hypersensitivity/Allergy , Grafting and implantation of organs
16-Dec-21	Physics	Simple Harmonic Motion (SHM)	5	Damped Harmonic Oscillation
	Inorganic Chemistry	Chemical bonding	13	Covalent Character in Ionic Compound, Fajan""s Rule and its Application
	Biology	Human Health and Disease	7	Mental Health and disease, Adolescence and Drug/Alcohol Abuse, Opiate Narcotics, Coca Alkaloids, Cannabinoids, LSD, alcohol and Tobacco abuse, Anabolic Steroids, Addiction and dependece, effect of Drug/alcohol Abuse, Prevention and control
	Biology	Microbes in Human Welfare	1	Introduction, Microbes in Household Products, Microbes in Industrial Products- Beverages
17-Dec-21	Physics	Waves ( String wave & Sound Wave )	1	Types of Waves, Equation of Wave, Graphical Representation
	Physics	Waves ( String wave & Sound Wave )	2	"Velocity, Acceleration & Displacement of Particle Wave, Quantitative Relation Between Velocity, Acceleration & Displacement "
	Inorganic Chemistry	Chemical bonding	14	Discussion of Practice Session -1
	Biology	Microbes in Human Welfare	2	Microbes in Industrial Products, Microbes as Biofertilisers
18-Dec-21	Physics	Waves ( String wave & Sound Wave )	3	Velocity of Waves in String, Velocity of Waves in Heavy String, Velocity of sound waves
	Inorganic Chemistry	Chemical bonding	15	Discussion of Practice Session -2
	Biology	Microbes in Human Welfare	3	Microbes in Sewage Treatment
	Biology	Microbes in Human Welfare	4	Microbes in Production of Biogas, Microbes as Biocontrol Agents
20-Dec-21	Physics	Waves ( String wave & Sound Wave )	4	"Energy, KE, PE, Energy Density, Power, Intensity, Power, Interference, Reflection
	Physical Chemistry	Redox Reaction	3	Balancing of Redox Reaction, Concept of Equivalent Weight, Equivalent Weight of Acid
	Organic Chemistry	Isomerism	5	Conformational Isomerism in ethane, butane, glycol, cyclohexane and baeyer strain theory
	Biology	Biotechnology-principles and processes	1	"Principles Genetic and Biochemical Engineering Construction of first RDNA Gene Cloning Tools for Genetic engineering Lyasing Enzymes Restriction Endonucleases"
21-Dec-21	Physics	Waves ( String wave & Sound Wave )	5	Pitch ,loudness, quality
	Physical Chemistry	Redox Reaction	4	Equivalent of Base, Salt, ion, Element, Oxiding Agent and Reducing Agent, Normality/No. of Equivalent , Law of Equivalence
	Organic Chemistry	Isomerism	6	Conformation complete, Optical Isomerism start, POS, COS, AOS and AAOS
	Biology	Biotechnology-principles and processes	2	DNA ligase , DNA polymerase , Alkaline phosphatase, Cloning vector (ori , cloning sites , selectable markers), pBR322, Insertional inactivation, Blue white screening, Ti plasmid, Competent host

22-Dec-21	Physics	Waves ( String wave & Sound Wave )	6	Standing Wave, Velocity of Sound Wave, Intensity in Terms of Pressure, Standing Wave-Organ Pipes
	Physical Chemistry	Redox Reaction	5	Practice Session-2,3, Titration (Acid Base, Redox)
	Organic Chemistry	Isomerism	7	Optical Isomers introduction, Polarimeter, Chiral Molecule, Element of symmetry, R-S system, Meso compounds,
	Biology	Biotechnology-principles and processes	3	"Processes of rDNA technology, Agarose gel electrophoresis Polymerase chain reaction, Culture at large scale – Bioreactors, Downstream processing"
23-Dec-21	Physics	Waves ( String wave & Sound Wave )	7	Resonance Column Experimental Beats, Sonometer, Doppler Effect, Echo
	Inorganic Chemistry	Chemical bonding	16	Discussion of Practice Session -3
	Biology	Biotechnology and its Application	1	Introduction, Genetically Engineered Insulin, Gene Therapy, Monoclonal Antibody
	Biology	Biotechnology and its Application	2	PCR, Autoradiography, ELISA, Hirudin production, Golden rice, Bt cotton, RNA interference
24-Dec-21	Physics	Gravitation	1	Newton's Law of Gravitation, Vector Form of Gravitation Law, Binary Star System , Gravitation Field, Effect of g Due to Effect of Shape, Effect of g Due to Effect of Rotation, Variation of g in Radial Direction"
	Physics	Gravitation	2	Potential Energy , Gravitational Potential
	Inorganic Chemistry	p-Block	1	"Boron Family ( Physical and Chemical Properties, Extraction of Boron, Diborane)"
	Biology	Biotechnology and its Application	3	"Pest resistant tobacco, Flavr savr tomatoes, GMOs Transgenic animals, Cloning , Bioethical issues – biopatent , Biopiracy , Bioweapon"
25-Dec-21	Inorganic Chemistry	p-Block	2	Boron Family ( Borax, Boric Acid, Alumina, AlCl <sub>3</sub> , Alums)
27-Dec-21	Physics	Gravitation	3	Escape Velocity, Binding Energy
	Physical Chemistry	Chemical Equilibrium	1	Characteristics of Chemical Equilibrium, Equilibrium Constant and its types Relation between K <sub>p</sub> and K <sub>c</sub> , Characteristics of Equilibrium Constant, Practice Session-1
	Organic Chemistry	Isomerism	8	Racemic mixture, Introduction of Internal and external compensation, enantiomers, diastereomers
	Biology	Organisms and Populations	1	"Levels of Organisation , Habitat and Niche , Major Biomes , Abiotic factors Temperature , Water , Light , Light zones in Aquatic habitats"
28-Dec-21	Physics	Gravitation	4	Kepler's Law, Satellite,
	Physical Chemistry	Chemical Equilibrium	2	Calculation of Equilibrium Constant in Different Cases
	Organic Chemistry	Isomerism	9	Relation between molecules, single chiral and multiple chiral, D, L system
	Biology	Organisms and Populations	2	"Soil , Soil profile , Responses to Abiotic factors (Regulate , Conform , Migrate , Suspend) , Adaptations in Animals and Plants (Xerophytes , Halophytes , Hydrophytes)"
29-Dec-21	Physics	Calorimetry & Heat transfer	1	Calorimetry, Phase change , specific heat
	Physical Chemistry	Chemical Equilibrium	3	Significance of value of Equilibrium Constant, Reaction Quotient and Le chatelier's Principle
	Organic Chemistry	Isomerism	10	Optical isomerism in cyclic compounds, Formula to calculate optical isomers, special cases of allenes, biphenyl and amines
	Biology	Organisms and Populations	3	"Population Attributes , Age Pyramids , Population Growth Models , Life History Variations ,
30-Dec-21	Physics	Calorimetry & Heat transfer	2	mechanical energy conversion
	Inorganic Chemistry	p-Block	3	Carbon Family( Physical and Chemical Properties, Allotropes of Carbon { Diamond, Graphite Fullerene}, CO, CO <sub>2</sub> , C <sub>3</sub> O <sub>2</sub>
	Biology	Organisms and Populations	4	Population Interactions Predation , Parasitism , Commensalism , Ammensalism , Proto-cooperation , Competition , Mutualism
	Biology	Biodiversity and Conservation	1	"Biodiversity at genetic , species and ecosystem level , global and Indian biodiversity , patterns of biodiversity (Latitudinal gradients and Species-Area relation) , importance and loss of biodiversity "



31-Dec-21	Physics	Calorimetry & Heat transfer	3	Conduction/Convection ,
	Physics	Calorimetry & Heat transfer	4	Radiation : Stefan-Boltzmann Law
	Inorganic Chemistry	p-Block	4	Silicates and Silicon
	Biology	Biodiversity and Conservation	2	"Causes of loss of biodiversity (Evil quartet) , biodiversity conservation (why and how) , In-situ and Ex-situ methods of conservation , Earth and World summit "
1-Jan-22	Inorganic Chemistry	p-Block	5	Nitrogen Family ( Physical and Chemical Properties, Nitrogen, Ammonia)
3-Jan-22	Physics	Calorimetry & Heat transfer	5	Newton's Law of Cooling
	Physical Chemistry	Chemical Equilibrium	4	Effect of Temperature Change, Effect of inert gas Addition, Effect of Catalyst, Phase Equilibrium and Triple phase Diagram
	Organic Chemistry	GOC-2	1	Electromeric effect-Types of reagent, types of intermediates
	Biology	Ecosystem	1	"Ecosystem types , components , producers , consumers , decomposers , ecosystem structure , productivity "
4-Jan-22	Physics	Calorimetry & Heat transfer	6	Wien's Displacement Law, Solar Constant
	Physical Chemistry	Ionic Equilibrium	1	"Arrhenius Theory, Bronsted Lowry Concept, Amphiprotic Species, Conjugate Acid Base Pairs, Levelling Effect, Arrhenius Theory of Electrolytic Dissociation, Ostwald's Dilution Law, Practice Session-1"
	Organic Chemistry	GOC-2	2	ESR , activating and deactivating groups, directing effect of CH <sub>3</sub> and CCl <sub>3</sub>
	Biology	Ecosystem	2	"Decomposition , Energy flow , food chain , food web , standing state and standing crop "
5-Jan-22	Physics	Kinetic Theory of Gases & Thermodynamics	1	Kinetic theory of gas , vrms, vav, v most probable
	Physical Chemistry	Ionic Equilibrium	2	"Common Ion Effect, Properties of Water, Ionic Product of Water, pH Scale. pH Calculation for Strong Acids and Bases, Mixture of Acids and Bases, pH due to weak Acid or Base"
	Organic Chemistry	GOC-2	3	EAR: Introduction, Carbocation rearrangement, Reactivity comparison
	Biology	Ecosystem	3	"Ecological pyramids , Ecological succession , Succession of plants – Lithosere and Hydrosere , Nutrient cycling , Carbon and Phosphorus cycle , Ecosystem services "
6-Jan-22	Physics	Kinetic Theory of Gases & Thermodynamics	2	Mean Free Path Relaxation Time 1st Law of Thermodynamics 2nd Law of Thermodynamics
	Inorganic Chemistry	p-Block	6	Ammonia (NH <sub>3</sub> ), Nitric Acid (HNO <sub>3</sub> ), Nitrous Acid (HNO <sub>2</sub> )
	Biology	Environmental Issues	1	"Types of pollution and pollutants , Air pollution , Acid rain , London and Los Angeles Smog , Case study of Delhi , Noise pollution"
	Biology	Environmental Issues	2	"Water pollution , BOD , Biomagnification , Eutrophication , Algal bloom , Ecological sanitation , Heated water , Solid Municipal waste , Case study of Plastic waste , Hospital and Electronic waste"
7-Jan-22	Physics	Kinetic Theory of Gases & Thermodynamics	3	Processes, Boyle's law, Gay lussac's law, Adiabatic process
	Physics	Kinetic Theory of Gases & Thermodynamics	4	2nd Law of Thermodynamics
	Inorganic Chemistry	p-Block	7	Phosphorus and its Compounds
	Biology	Environmental Issues	3	"Agro-chemical waste , Radioactive waste , Greenhouse effect and Global warming , Ozone depletion , Soil erosion and Desertification , Water logging and Soil salinity , Deforestation , Soil pollution"
8-Jan-22	Physics	Kinetic Theory of Gases & Thermodynamics	5	Carnot Cycle, Refrigerator
	Inorganic Chemistry	p-Block	8	Oxygen Family Part -1
	Biology	Digestion and Absorption	1	Nutrition , Nutrients , Important Minerals , Calorific value , PEM , Marasmus , Kwashiorkar , Vitamins
	Biology	Digestion and Absorption	2	Human Digestive System – Buccal Cavity , Palate , Tongue , Teeth , Pharynx , Waldeyer's Ring , Salivary Glands ,

10-Jan-22	Physics	Geometrical Optics	1	Plane Mirror -Law of Reflection,Real and Virtual Object,Velocity of Image & Object Relation
	Physical Chemistry	Ionic Equilibrium	3	"pH for Weak Acid and Weak Base,pH of Mixture of Strong Acid and Weak Acid, pH of Mixture of Two Weak Acids,Practice Session 2"
	Organic Chemistry	GOC-2	4	EAR: Introduction, Carbocation rearrangement, Reactivity comparison
	Biology	Digestion and Absorption	3	Histology of Alimentary Canal,Oesophagus , Stomach , Small and Large Intestine , Liver ,Gall Bladder , Pancreas ,
11-Jan-22	Physics	Geometrical Optics	2	Spherical Mirror,Image Formation
	Physical Chemistry	Ionic Equilibrium	4	Salt Hydrolysis
	Organic Chemistry	GOC-2	5	Examples of EAR: addition of HX, dil H <sub>2</sub> SO <sub>4</sub> , conc. H <sub>2</sub> SO <sub>4</sub>
	Biology	Digestion and Absorption	4	Digestive Juices,Physiology of Digestion , Absorption of Food , Assimilation ,
12-Jan-22	Physics	Geometrical Optics	3	Spherical Mirror,Refraction, Snell's Law
	Physical Chemistry	Ionic Equilibrium	5	Salt Hydrolysis,Buffer Solutions
	Organic Chemistry	GOC-2	6	Addition of X <sub>2</sub> /CCl <sub>4</sub> , HOX, ICL
	Biology	Digestion and Absorption	5	Egestion , GIT Hormones , Disorders of GIT
13-Jan-22	Physics	Geometrical Optics	4	TIR,Optical Fibre,Near Normal Observation (Happ Depth)
	Inorganic Chemistry	p-Block	9	Oxygen Family Part -2
	Biology	Breathing and Exchange of Gases	1	Breathing and Respiration Aerobic and Anaerobic Respiration Nasal Cavity Larynx Trachea , Bronchial and Respiratory tree Lungs Thoracic Cage
	Biology	Breathing and Exchange of Gases	2	Steps in Respiration Breathing – Inhalation and Exhalation Exchange of Gases at Alveolar and Tissue Surface
14-Jan-22	Physics	Geometrical Optics	5	Shifting by Glass Slab,Lateral Shift
	Physics	Geometrical Optics	6	Refraction on Plane Surface
	Inorganic Chemistry	p-Block	10	Halogen Family Part -1
	Biology	Breathing and Exchange of Gases	3	Transport of Oxygen Oxyhaemoglobin-Dissociation Curve Transport of CO <sub>2</sub>
15-Jan-22	Physics	Geometrical Optics	7	Prism,Minimum Deviation, Dispersion
	Inorganic Chemistry	p-Block	11	Halogen Family Part -2
	Biology	Breathing and Exchange of Gases	4	Regulation of Breathing Respiratory Disorders Positive and Negative Pressure Ventilation Lung Floatation Test Intra-pleural Pressure
	Biology	Body Fluids and Circulation	1	Abo and RH Blood Erythroblastosis Fetalis Open and Closed Circulatory System Artery Vein and Capillaries
17-Jan-22	Physics	Geometrical Optics	8	Refraction by Curved Surface
	Physical Chemistry	Ionic Equilibrium	6	Acid Base Titration`
	Organic Chemistry	GOC-2	7	Addition of NOCL, OMDM, HBO, Kucherov reaction
	Biology	Body Fluids and Circulation	2	Evolution of Vertebrate Heart Human Heart – External and Internal Heart
18-Jan-22	Physics	Geometrical Optics	9	Refraction by Curved Surface,Lens
	Physical Chemistry	Ionic Equilibrium	7	Theory of Indicators,Solubility and Solubility Product,Solubility in Different Cases
	Organic Chemistry	GOC-2	8	NAR - reaction with RMgX, HCN, NaHSO <sub>3</sub> , ROH, RSH, NH <sub>3</sub> and its derivatives
	Biology	Body Fluids and Circulation	3	Special Nodal Tissue Regulation of Heart Rate SV , EDV , ESV , EF, CO Cardiac Cycle ECG
19-Jan-22	Physics	Geometrical Optics	10	Lens and Mirror,Power of Lens,Polishing of Lens,Cutting of Lens
	Physical Chemistry	Thermodynamics	1	Introduction and all Basic Theory
	Organic Chemistry	GOC-2	9	FRA- peroxide effect, FRSR halogenation , NBS and Reeds reaction
	Biology	Body Fluids and Circulation	4	Double Circulation , Coronary and Portal Circulation Disorders of Cardiovascular System Lymph and Lymphatic System
20-Jan-22	Physics	Geometrical Optics	11	Optical Instrument
	Inorganic Chemistry	p-Block	12	Noble Gases
	Biology	Excretory Products and Their Elimination	1	Excretory Products, Excretory Organs in Animals, Human Excretory System, Ureter, Urinary Bladder, Urethra, Internal Structure of Kidney
	Biology	Excretory Products and Their Elimination	2	Nephron Structure and Types , Steps of Urine Formation

21-Jan-22	Physics	Geometrical Optics	12	Displacement Method
	Physics	Electrostatics	1	Properties of Charge, Coulomb's Law, Equilibrium Problems
	Inorganic Chemistry	p-Block	13	Discussion of Practice Session -1
	Biology	Excretory Products and Their Elimination	3	Counter-Current Mechanism, Urine Composition, Abnormal Constituents of Urine, Osmoregulatory Role Of Kidneys
22-Jan-22	Physics	Electrostatics	2	Electric Field Due to Point Charge, Line, Ring
	Inorganic Chemistry	p-Block	14	Discussion of Practice Session -2
	Biology	Excretory Products and Their Elimination	4	Diuresis, Urea Cycle, Disorders of Renal System, Hemodialysis, Peritoneal Dialysis
	Biology	Locomotion and Movement	1	Types of Movement, Structure of Skeletal muscle, Muscle Fibre, Myofilaments- Myosin and Actin, Sarcomere, Sliding Filament Theory, Muscle Relaxation, Composition of Muscle
24-Jan-22	Physics	Electrostatics	3	Electric Field Lines, Electric Flux, Gauss's Theorem, Electric Field and Flux
	Physical Chemistry	Thermodynamics	2	Heat, Work
	Organic Chemistry	GOC-2	10	Nucleophilic Substitution-SN ---SN1 and SN2 introduction, Mechanism, Stereochemistry of reaction. Examples of SN on alkyl halides
	Biology	Locomotion and Movement	2	Cori Cycle, Red and White Muscle Fibres, Muscle Twitch, Muscle Fatigue, Rigor Mortis, Disorders of Muscular System
25-Jan-22	Physics	Electrostatics	4	Application of Gauss's law Relation Between E and V, Problem Based on Flux, Potential Energy
	Physical Chemistry	Thermodynamics	3	internal energy, enthalpy, FLOW, calculation of $\Delta H$ , $\Delta U$ , $q$ & $w$ for (i) phase change (ii) chemical reaction (iii) change of state of ideal gas- isothermal process
	Organic Chemistry	GOC-2	11	Examples of SN on alcohols and ethers
	Biology	Locomotion and Movement	3	Human Skeleton System, Axial and Appendicular, Joints, Disorders of Skeletal System
26-Jan-22	Physical Chemistry	Thermodynamics	4	Isothermal, Adiabatic, Isobaric and Isochoric Process
	Organic Chemistry	GOC-2	12	SN reactions on acid and acid derivatives and aryl halides
27-Jan-22	Physics	Electrostatics	5	Electrostatic Potential, Equipotential Surface, Conductors & Properties
	Inorganic Chemistry	p-Block	15	Discussion of Practice Session -3
	Biology	Neural Control and Coordination	1	Generation and Conduction of Nerve Impulse, Synapse, Human Nervous System Classification
	Biology	Neural Control and Coordination	2	Meninges, CSF, Hollow Neural System, Grey and White Matter, Brain, Fore, Mid and Hind brain
28-Jan-22	Physics	Electrostatics	6	Sphere
	Physics	Electrostatics	7	Dipole, Electric Field Due to Dipole in Axial line & Equatorial Line, Potential Due to Dipole,
	Inorganic Chemistry	Coordination Compounds	1	Introduction, Basic Terms used, Classification of Ligands, Classical and non-classical Ligands, Effective Atomic Number
	Biology	Neural Control and Coordination	3	Spinal Cord, Spinal and Cranial Nerves, Reflex Action and Reflex Arc, Autonomic Nervous System (Sympathetic and Parasympathetic)
29-Jan-22	Physics	Electrostatics	8	Torque on Dipole in uniform E, PE of Dipole in Uniform Electric Field, Self energy
	Inorganic Chemistry	Coordination Compounds	2	Nomenclature of Coordination Compounds, Werners Coordination Theory
	Biology	Neural Control and Coordination	4	Sense Organs - Human Eye
	Biology	Neural Control and Coordination	5	Disorders of Human Eye Human Ear
31-Jan-22	Physics	Current Electricity	1	Current, Current Density, Concept drift velocity
	Physical Chemistry	Thermodynamics	5	"Discussion of Practise Session-1, Polytropic Process, Free Expansion, Comparison of Isothermal and Adiabatic Process"
	Organic Chemistry	GOC-2	13	Elimination reaction E1 and E2-Introduction, Mechanism and stereochemistry, dehydration
	Biology	Chemical Coordination and Integration	1	Endocrine Glands, Properties, Classification and Mechanism of Action of Hormones, Pituitary Gland, Hypothalamic Control Over Pituitary, Disorders of Pituitary, Pineal Gland

1-Feb-22	Physics	Current Electricity	2	Resistance, dependency of resistance, Kirchhoff's 1st Law, Kirchhoff's 2nd Law
	Physical Chemistry	Thermodynamics	6	SLOT, Entropy
	Organic Chemistry	GOC-2	14	Dehydrohalogenation, pyrolysis of ester, Copes reaction, quaternary ammonium salt
	Biology	Chemical Coordination and Integration	2	Thyroid Gland, Parathyroid Gland, Thymus, Pancreas
2-Feb-22	Physics	Current Electricity	3	Circuit Theory (Nodal Analysis), Battery, Combination of Resistance, Wheatstone bridge
	Physical Chemistry	Thermodynamics	7	Calculation of Entropy
	Organic Chemistry	GOC-2	15	ESR-Introduction, Mechanism, Halogenation, Nitration, Sulphonation, FCR, Gattermann Koch and Gatterman Aldehyde reactions
	Biology	Chemical Coordination and Integration	3	Adrenal Gland, Testis and Ovary, Antagonistic and Synergistic Hormones, Feedback Control, Hormones of Heart, Liver, Kidney and GIT
3-Feb-22	Physics	Current Electricity	4	Combination of Battery,
	Inorganic Chemistry	Coordination Compounds	3	"Valence Bond Theory, Crystal Field Theory, Splitting in Octahedral, Tetrahedral and Square Planar Field, Filling of Electrons and CFSE"
	Biology	The Living World	1	What is living, Diversity in Living World, Nomenclature, Taxonomic Hierarchy, Taxonomical Aids, Biological Concept of Species
	Biology	Biological Classification	1	2/3/4/5/6- Kingdom Classification Kingdom, Monera Nutrition and respiration in Bacteria
4-Feb-22	Physics	Current Electricity	5	Heating Effect, Maximum Power Transfer, Combination of Bulb
	Physics	Current Electricity	6	Galvanometer, Voltmeter, Ammeter, Meter Bridge, Potentiometer
	Inorganic Chemistry	Coordination Compounds	4	Practice Session-4, Stability and Colors of Complexes
	Biology	Biological Classification	2	Reproduction in Bacteria Eubacteria Cyanobacteria Mycoplasma Archaeobacteria Economic Importance of Bacteria
5-Feb-22	Physics	Capacitor	1	Spherical Capacitor, Parallel Plate Capacitor, Energy Stored in Parallel Plate Capacitor
	Inorganic Chemistry	Coordination Compounds	5	"Bonding in Metal Carbonyls and Organometallics, Structural and Geometrical Isomerism"
	Biology	Biological Classification	3	Kingdom Protista, Dinoflagellates, Chrysophyta, Euglenoids, Slime Moulds, Protozoa
7-Feb-22	Physics	Capacitor	2	Force Between Parallel Plates of Capacitor, Work Done by Battery, Dielectric Medium, Energy Density
	Physical Chemistry	Thermodynamics	8	Third Law of Thermodynamics, COMPARISON OF ENTROPY, Gibbs energy
	Organic Chemistry	GOC-2	16	GMP of alkanes-hydrogenation, Wurtz reaction and similar reactions, Kolbe's electrolysis
	Biology	Biological Classification	4	Kingdom Fungi, Plantae, Animalia Mycorrhiza, Lichens Viruses, Viroids, Prions
8-Feb-22	Physics	Capacitor	3	Insertion of Dielectric, Practical Capacitor, Breakdown Voltage, RC Circuits
	Physical Chemistry	Thermodynamics	9	discussion of practise session 2, calculation of $\Delta G$
	Organic Chemistry	Hydrocarbons	1	GMP cont.... Chemical Properties of alkanes
	Biology	Plant Kingdom	1	Artificial, Natural, Phylogenetic Classification Systems, Branches of Taxonomy, Algae – Green, Brown, Red Algae Artificial, Natural, Phylogenetic Classification Systems, Branches of Taxonomy, Algae – Green, Brown, Red Algae
9-Feb-22	Physics	Capacitor	4	Charge Distribution, Cylindrical Capacitor
	Physical Chemistry	Thermodynamics	10	practise session 3, $\Delta G$ and equilibrium constant, physical significance of $\Delta G$
	Organic Chemistry	Hydrocarbons	2	Alkenes-GMP and chemical Properties
	Biology	Plant Kingdom	2	Life Cycle of Algae, Bryophytes-Mosses and Livermorts
10-Feb-22	Physics	Magnetic Effect of Current	1	Introduction, Biot Savart Law
	Inorganic Chemistry	Coordination Compounds	6	Optical Isomerism, Uses of Coordination compound, Practice Session-6
	Biology	Plant Kingdom	3	Pteridophyta
	Biology	Plant Kingdom	4	Gymnosperms

11-Feb-22	Physics	Magnetic Effect of Current	2	Practice Problems on Magnetic Field ,Arc ,Straight Line ,Spiral
	Physics	Magnetic Effect of Current	3	Graph,Magnetic Field Due to Polygon,Magnetic Field Due to Moving Charge
	Inorganic Chemistry	Metallurgy	1	Metallurgy, types of ores, methods of concentration - gravity separation, magnetic separation, froth flotation method
	Biology	Plant Kingdom	5	"Angiosperms, Life Cycle Patterns and Alternation of Generations in Plants "
12-Feb-22	Physics	Magnetic Effect of Current	4	Ampere's law and Its Applications on (Long Wire,Thick Wire,Thin Pipe,Thin Sheet,Solenoid), Ampere's Law Application Practice
	Inorganic Chemistry	Metallurgy	2	Chemical Method (Leaching), Roasting
	Biology	Animal Kingdom	1	euglenoids, protozoa, basis of classification of animals
14-Feb-22	Physics	Magnetic Effect of Current	5	Force on Moving Charge in Magnetic Field, Circular Path, Helical Path
	Physical Chemistry	Thermochemistry	1	Introduction,Hess"'s Law,Lavoisier and Laplace Law Enthalpy of Reaction Thermochemical Equation ,Enthalpy of Formation
	Organic Chemistry	Hydrocarbons	3	Alkynes-GMP and Chemical Properties
	Biology	Animal Kingdom	2	Phyla Porifera ,Cnidaria ,Ctenophora ,Platyhelminthes ,Aschelminthes ,Annelida
15-Feb-22	Physics	Magnetic Effect of Current	6	Cyclotron, Force on Charged Particle When Electric Field And Magnetic Field Both Are Available,
	Physical Chemistry	Thermochemistry	2	Heat of Formation, Heat of Combustion, Application, Practice Session -1
	Organic Chemistry	Halogen Derivatives	1	Halogen Derivatives- GMP and Chemical Properties
	Biology	Animal Kingdom	3	Phyla Arthropoda , Mollusca , Echinodermata , Hemichordata , Chordata general characters , Urochordata , Cephalochordata , Cyclostomata class
16-Feb-22	Physics	Magnetic Effect of Current	7	Force on Current Carrying Wire, Torque on Current Carrying Loop, Magnetic Moment of Loop
	Physical Chemistry	Thermochemistry	3	Enthalpy of Neutralisation,Ionisation,Sublimation ,Fusion Vaporization Hydration Solutions,Lattice Enthalpy Bond Enthalpy , Born-Tiabas Cycle
	Organic Chemistry	Halogen Derivatives	2	Halogen Derivatives- GMP
	Biology	Animal Kingdom	4	Chondrichthyes , Osteichthyes , Amphibia , Reptilia , Aves , Mammalia , Some important connecting links
17-Feb-22	Physics	Magnetic Effect of Current	8	Magnetism Moment, Torque Due to Magnetic Field, Potential Energy, Moving Coil Galvanometer
	Inorganic Chemistry	Metallurgy	3	Reduction of Oxide to Metal and Refining of Metals
	Biology	Mineral Nutrition	1	Hydroponics , Essential mineral elements , Criteria for Essentiality , Functions of essential elements , Deficiency symptoms , Toxicity of Micronutrients , Role of macro and micronutrients
	Biology	Mineral Nutrition	2	Mechanism of Absorption of Elements,Translocation of Solutes ,Soil as Reservoir of Essential Elements ,Nitrogen Cycle ,Biological Nitrogen Fixation .Root Nodule Formation ,Fate of Ammonia
18-Feb-22	Physics	Magnetic Effect of Current	9	Earth Magnetism,Tangent Galvanometer, Magnetic Properties Dia, Para, Ferro Magnetism Hysterisis
	Physics	Electro-Magnetic Induction (EMI)	1	Faradays Law, Introduction Lenz law
	Inorganic Chemistry	Metallurgy	4	Thermodynamics of Metallurgy, ellingham Diagram, Extraction of Fe
	Biology	Plant Growth and Development	1	Growth , Growth is measurable , Phases of growth , Conditions for growth , Arithmetic and Geometric growth , Absolute and Relative growth rate ,
19-Feb-22	Physics	Electro-Magnetic Induction (EMI)	2	"EMF in Direction of Induced Current, Graph Between Flux vs Time and EMF vs Time,
	Inorganic Chemistry	Metallurgy	5	Extraction of Cu, Extraction of Al
	Biology	Plant Growth and Development	2	Auxins , Gibberellins , Cytokinins , Ethylene , Abscissic acid
21-Feb-22	Physics	Electro-Magnetic Induction (EMI)	3	Induced Electric Field, Inductor, Motional EMF
	Physical Chemistry	Thermochemistry	4	Enthalpy of Atomisation, Practice Session-2, Practice Session-3
	Organic Chemistry	Halogen Derivatives	3	Chemical Properties
	Biology	Plant Growth and Development	3	Photoperiodism , Vernalisation , Seed dormancy

22-Feb-22	Physics	Electro-Magnetic Induction (EMI)	4	L.R Circuit, A.C Motor, D.C Motor, Mutual Inductance
	Physical Chemistry	Electrochemistry	1	Electrochemical cells and their types, Construction of galvanic cell, Electrode potential values and their significance
	Organic Chemistry	Alcohol, phenol and Ether	1	GMP and chemical properties, Esterification, Oxidation, tests of alcohols, Ethers and remaining reactions
	Biology	Photosynthesis in Higher Plants	1	Photosynthesis , Early experiments , Site of photosynthesis , Photosynthetic pigments , Absorption and Action spectrum , Red drop , Photosynthetic unit
23-Feb-22	Physics	Alternating Current (AC)	1	RMS, Mean square Value, Average Value, Phasor Analysis, Pure Resistive Circuit, Pure Inductive, Pure Capacitive Circuit, Mix Circuit
	Physical Chemistry	Electrochemistry	2	EMF of Cell, Standard Hydrogen Electrode, Gibbs free energy and EMF of cell, NERNST Equation and its application
	Organic Chemistry	Alcohol, phenol and Ether	2	GMP and chemical properties, Esterification, Oxidation,
	Biology	Photosynthesis in Higher Plants	2	Photosystems I and II , Light and Dark reaction , Splitting of Water , Cyclic and Non-cyclic photophosphorylation
24-Feb-22	Physics	Alternating Current (AC)	2	"Series Circuit, Parallel Circuit, Power in A.C,
	Inorganic Chemistry	Metallurgy	6	Extraction of Ag and Au
	Biology	Photosynthesis in Higher Plants	3	Chemiosmotic hypothesis of ATP formation , Calvin cycle , C4 pathway
	Biology	Photosynthesis in Higher Plants	4	CAM Pathway , Photorespiration , Bacterial photosynthesis , Factors affecting Photosynthesis
25-Feb-22	Physics	Alternating Current (AC)	3	Power Factor, Wattless Current, Transformer
	Physics	Alternating Current (AC)	4	L.C Oscillations, Resonance
	Inorganic Chemistry	d-Block & f-Block Elements	1	"Introduction, Electronic Configuration, Melting and Boiling Point of Transition Elements, Oxidation States and Colour"
	Biology	Respiration in Plants	1	Respiration , Do plants breath, anaerobic and aerobic respiration, Glycolysis
26-Feb-22	Physics	Modern Physics	1	Energy, Momentum of Photon, Radiation pressure
	Inorganic Chemistry	d-Block & f-Block Elements	2	Catalytic properties, Trends in electrode potential values , Alloy formation , interstitial compound , preparation and properties of K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>
	Biology	Respiration in Plants	2	Fermentation, Respiratory quotient, Scheme of Aerobic respiration, Link reaction
28-Feb-22	Physics	Modern Physics	2	Photoelectric Effect
	Physical Chemistry	Electrochemistry	3	Concentration Cells, Different type of Half cells, Combining two half cells , Thermodynamics of galvanic cell
	Organic Chemistry	Alcohol, phenol and Ether	3	Tests of alcohols, Ethers and remaining reactions
	Biology	Respiration in Plants	3	Krebs cycle , Respiratory balance sheet , Compare fermentation and aerobic respiration , Amphibolic pathway , Factors affecting respiration
1-Mar-22	Physics	Modern Physics	3	Stopping Potential, Saturation Current Graphs
	Physics	Modern Physics	4	Atomic Structure, JJ Thomson, Rutherford Model
	Physical Chemistry	Electrochemistry	4	Electrolysis and electrolytic cell , Qualitative Electrolysis, Quantitative electrolysis(Faraday's Laws)
	Organic Chemistry	Alcohol, phenol and Ether	4	GMP and chemical reactions, Carbenes and Nitrenes, Reimer Tiemann reaction
	Biology	Respiration in Plants	4	Electron transport system , Oxidative phosphorylation , Glycerol phosphate and Malate aspartate Shuttles , Pentose phosphate pathway , Respiratory efficiency
2-Mar-22	Physics	Modern Physics	5	Bohr Atomic Model, Energy Level of Hydrogen
	Physical Chemistry	Electrochemistry	5	"Conductance and Conductivity Cell, Molar and Equivalent conductivity, Variation of molar conductivity with dilution Kohlrausch's law & Its application "
	Organic Chemistry	Carbonyl Compounds	1	GMP and remaining reactions Aldol , Cannizaro, iodoform Oxidation and reduction
	Biology	Transport in Plants	1	Short and long distance transport , Means of transport , plant water relations , osmosis , osmotic pressure , solute potential , plasmolysis , pressure potential

3-Mar-22	Physics	Modern Physics	6	Emission Spectrum, Lyman , Balmer, Paschen, Brackett, P-Fund (Series)
	Inorganic Chemistry	d-Block & f-Block Elements	3	KMnO <sub>4</sub> and its properties, Important compounds of Iron and their properties
	Biology	Transport in Plants	2	Water potential , Diffusion pressure deficit , Imbibition , Long distance transport of water , How do plants absorb water , Symplast and Apoplast pathways , Mycorrhiza
	Biology	Transport in Plants	3	Water movement up a plant , Root pressure , Transpiration pull theory , Stomatal apparatus , Opening and closing of stomata , Factors affecting transpiration , Anti-transpirants , Transpiration and photosynthesis- a compromise
4-Mar-22	Physics	Modern Physics	7	Matter waves, De-Broglie Hypothesis
	Inorganic Chemistry	d-Block & f-Block Elements	4	Electronic Configuration and Oxidation States, Properties of Lanthanides & Actinides
	Biology	Transport in Plants	4	Uptake and transport of mineral nutrients , Translocation of minerals ions , Phloem transport from source to sink , The pressure or mass flow hypothesis
5-Mar-22	Physics	Modern Physics	8	Davission-Germer Experiment
	Inorganic Chemistry	s-block	1	Discussion of physical and chemical properties
	Biology	Morphology of Flowering Plants	1	The Root ( Root system types ,Regions ,Functions and Modifications of root) ,The Stem ( Functions and Modifications) ,The Leaf Parts and Functions
7-Mar-22	Physics	Nuclear Physics	1	Size of Nucleus,Density of Nucleus,Neutron Proton Graph for Stable Nuclei,Nature of Nuclear Force,Mass Defect and Binding Energy
	Physical Chemistry	Electrochemistry	6	Primary and Secondary Batteries
	Organic Chemistry	Carbonyl Compounds	2	GMP and remaining reactions Aldol
	Biology	Morphology of Flowering Plants	2	Venation ,types of leaves ,phyllotaxy ,modification of leaves ,inflorescence and it's types
8-Mar-22	Physics	Nuclear Physics	2	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
	Physical Chemistry	Chemical Kinetics	1	"Rate of Reaction,Rate of Appearance and Disappearance,Rate of Reaction in Terms of Pressure, Rate Law,Elementary and Complex Reactions,Order and Molecularity,Practice Session-1"
	Organic Chemistry	Carbonyl Compounds	3	Cannizaro, iodoform Oxidation and reduction
	Biology	Morphology of Flowering Plants	3	"Flower and it's Parts ,Calyx ,Corolla, Forms of Corolla, Aestivation, Androecium, Adhesion, Cohesion, Gynoecium"
9-Mar-22	Physics	Nuclear Physics	3	Fission Reaction u <sup>235</sup> ,Chain Reaction,Natural Uranium,Reproduction Factor,Nuclear Reaction,Nuclear Fusion
	Physical Chemistry	Chemical Kinetics	2	"Chemical Kinetics, Significance of Order of Reaction, Unit of Rate Constant,Analysis of Zero Order Reaction"
	Organic Chemistry	Carbonyl Compounds	4	Summary of methods of preparation and properties
	Biology	Morphology of Flowering Plants	4	"Placentation, Fruit, Seed, Structure of Dicot and Monocot Seed, Semi Technical Description of Typical Flowering Plant"
10-Mar-22	Physics	Nuclear Physics	4	Decay of Alpha ,Beta ,Gamma Particles,Radio Activity
	Inorganic Chemistry	s-block	2	Compounds of alkali metal
	Biology	Morphology of Flowering Plants	5	Fabaceae,Solanaceae,Liliaceae ,Brassicaceae
	Biology	Anatomy of Flowering Plants	1	Meristematic Tissue, Simple and Complex Permanent Tissue
11-Mar-22	Physics	Nuclear Physics	5	Successive Decay,K Capture
	Physics	wave Optics	1	Newton's Corpuscular Theory, Huygen's Theory , YDSE-Experiment
	Inorganic Chemistry	s-block	3	Compounds of Alkaline Earth Metal
	Biology	Anatomy of Flowering Plants	2	Tissue system- Epidermal , Ground and Vascular ; Anatomy of Dicot and Monocot Leaf
12-Mar-22	Physics	wave Optics	2	Optical Path Length Problem YDSE in Medium Non Coherent Sources
	Inorganic Chemistry	s-block	4	Discussion of Practise Session-1
	Biology	Anatomy of Flowering Plants	3	Anatomy of Dicot and Monocot Root, Dicot and Monocot Stem

14-Mar-22	Physics	Wave Optics	3	YDSE- Oblique Incidence, Thin Film Interference
	Physical Chemistry	Chemical Kinetics	3	"Kinetics of First Order Reaction and their Characteristics, Second Order Reaction and Characteristics"
	Organic Chemistry	Reagent Chemistry	1	Reducing Agents (LiAlH <sub>4</sub> , NaBH <sub>4</sub> , HI/Red P, BH <sub>3</sub> /THF, H <sub>2</sub> , Ni)
	Biology	Anatomy of Flowering Plants	4	Secondary growth in Dicot Stem, Spring and Autumn wood, Heart and Sap wood, Bark, Lenticels, Secondary growth in Dicot Root
15-Mar-22	Physics	wave Optics	4	Diffraction, Polarization, Complete Revision Polarization by Reflection and Scattering
	Physical Chemistry	Chemical Kinetics	4	"Determination of First Order Rate Constant Role of Stoichiometric Coefficients, Practice Session"
	Organic Chemistry	Reagent Chemistry	2	Reducing Agents (Birch reduction, Rosenmund reduction, Clemmenson reduction, Wolfkishner reduction, Mozingo reduction)
	Biology	Evolution	1	Origin of Universe and Earth Theories of Origin of Life on Earth Theory of Abiogenesis, Biogenesis and Chemical Evolution Experimental Proof of Chemical Evolution - Spark Discharge Experiment Protobionts
16-Mar-22	Physics	EMW	1	"Basic Ideas, Gauss's Law, Modified Ampere's Law, Displacement Current, Energy Density, Intensity"
	Physical Chemistry	Chemical Kinetics	5	Pseudo First Order Reaction, Collision Theory, Arrhenius Equation and its Application
	Organic Chemistry	Reagent Chemistry	3	Oxidising agents (PCC, PDC, KMnO <sub>4</sub> , K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> , SeO <sub>2</sub> ), Oxidising agents (Ozonolysis-Oxidative and reductive), Hydroxylation of alkenes
	Biology	Evolution	2	Evidences for Evolution Morphological and Anatomical – Homologous, Analogous, Vestigial, Atavism, Connecting Links Biochemical, Embryological, Biogeographical Evidence Paleontological Evidence, Carbon Dating, Geological Time Scale
17-Mar-22	Physics	Semiconductor	1	"Energy Band, Doping, P-N Diode -Forward Biasing / Reverse Biasing Zener Breakdown, Avalanche Breakdown"
	Inorganic Chemistry	Hydrogen & its compounds	1	Hydrogen Compounds Part-1
	Biology	Evolution	3	Geological Time Scale Theories for Biological Evolution Lamarckism Weismann Theory of Continuity of Germplasm Darwinism Mutation/Saltation Theory
18-Mar-22	Physics	Semiconductor	2	Rectifier-Half Wave/Full Wave/Bridge, Resistivity and Conductivity
	Biology	Evolution	4	Modern Synthetic Theory Genetic Drift Speciation – Allopatric and Sympatric Reproductive Isolation Hardy Weinberg Equilibrium Natural Selection – Examples and Types Mimicry
21-Mar-22	Physics	Semiconductor	3	Photodiode, LED, Solar Cell
	Physical Chemistry	Gaseous State	1	Gaseous State Part -1
	Organic Chemistry	Carboxylic acids and Derivatives	1	GMP and remaining reactions
	Biology	Evolution	5	Evolution of Horse Human Evolution
22-Mar-22	Physics	Semiconductor	4	Transistor
	Physical Chemistry	Gaseous State	2	Gaseous State Part -2
	Organic Chemistry	Carboxylic acids and Derivatives	2	GMP and Heating effect on carboxylic acids
	Biology	Strategies for Enhancement in Food Production	1	Animal Husbandry, Method of Animal Breeding, Controlled Breeding Technique (AI-MOET), Dairy and Poultry Farming, Apiculture, Sericulture, Lac Culture, Aquaculture, Pisciculture
23-Mar-22	Physics	Semiconductor	5	Logic Gates
	Physical Chemistry	Gaseous State	3	Gaseous State Part -3
	Organic Chemistry	Carboxylic acids and Derivatives	3	Remaining reactions, HVZ reaction
	Biology	Strategies for Enhancement in Food Production	2	"Plant Breeding, Main Steps of Plant Breeding Experiments, Types of Hybridization Heterosis, Inbreeding Depression, Mutation Breeding Green Revolution – Semi Dwarf Wheat, Rice, Sugarcane, Millets"



24-Mar-22	Physics	Fluid, Surface tension & Viscosity	1	Pressure, Variation of Pressure in Accelerated Container, Force on Wall, Mercury Barometer, Open Tube Manometer Hydraulic Lift(Pascal's Law)
	Inorganic Chemistry	Hydrogen & its compounds	2	Hydrogen Compounds Part-2
	Biology	Strategies for Enhancement in Food Production	3	"Plant Breeding for Disease Resistance,Plant Breeding for Insect Pest Resistance Biofortification,Single Cell Protein,Polyploidy - Triticale"
	Biology	Strategies for Enhancement in Food Production	4	Plant Tissue Culture,Nutrient Media ,Sterilisation,Callus and Suspension Culture,Meristem / Embryo / Haploid Culture,Protoplast Fusion,Green Manure ,Energy Crops ,Petroleum Plants
25-Mar-22	Physics	Fluid, Surface tension & Viscosity	2	Archimede's Principle
	Physics	Fluid, Surface tension & Viscosity	3	Continuity Equation, Bernoulli's Equation
	Inorganic Chemistry	Hydrogen & its compounds	3	Hydrogen Compounds Part-3
	Biology	Structural organisation in animals	1	Animal tissue classification , Epithelial tissue ( Simple , Glandular and Compound)
26-Mar-22	Physics	Fluid, Surface tension & Viscosity	4	Venturimeter, magnus effect, Atomiser, Siphon
	Inorganic Chemistry	Hydrogen & its compounds	4	Discussion of Practice Session -1
	Biology	Structural organisation in animals	2	Loose and Dense Connective tissue,Skeletal connective tissue ( Bones and Cartilages)
28-Mar-22	Physics	Fluid, Surface tension & Viscosity	5	"Surface Tension- (1)Cohesive Adhesive (2)Contact Angle (3)Surface Energy (4)Atomization (5)Excess Pressure inside Curved Surface"
	Physical Chemistry	Gaseous State	4	"VGE, Explanation of Z from VGE, Boyle's Temperature, Liquefaction of Gases, Critical Pressure, Critical Temperature, Critical Volume"
	Organic Chemistry	Aliphatic and Aromatic Amines	1	GMP and Chemical properties
	Biology	Structural organisation in animals	3	Vascular connective tissue ( Blood and Lymph) , Muscular tissue , Neural tissue
29-Mar-22	Physics	Fluid, Surface tension & Viscosity	6	Capillary-Cylindrical-Conical, Viscosity
	Physical Chemistry	Gaseous State	5	Practice Session -1
	Organic Chemistry	Aliphatic and Aromatic Amines	2	GMP and Chemical properties
	Biology	Structural organisation in animals	4	Earthworm
30-Mar-22	Physics	Fluid, Surface tension & Viscosity	7	Viscosity Stokes Law Reynolds Number Poiseuille's Equation
	Physical Chemistry	Gaseous State	6	Practice Session -2
	Organic Chemistry	Aliphatic and Aromatic Amines	3	Diazonium salts
	Biology	Structural organisation in animals	5	Cockroach
31-Mar-22	Physics	Elasticity ,Thermal expansion & Calorimetry	1	"Deforming Force, Longitudinal(Stress/Strain), Young Modulus of Elasticity, Elastic Potential Energy, Heavy Rod"
	Inorganic Chemistry	Hydrogen & its compounds	5	Discussion of Practice Session -2
	Biology	Structural organisation in animals	6	Frog
1-Apr-22	Physics	Elasticity ,Thermal expansion & Calorimetry	2	Modulus of Rigidity, Bulk Modulus, Stress-Strain curve
	Physics	Elasticity ,Thermal expansion & Calorimetry	3	Poisson Ratio, Effect of Temp, & impurity, Temperature, Heat, $\alpha$ (Alpha), $\beta$ (Beta), $\gamma$ (Gamma)
	Physical Chemistry	Atomic Structure	1	Cathode and Anode Rays, Rutherford's Atomic Model, Planck Quantum Theory, Photo Electric Effect
2-Apr-22	Physics	Elasticity ,Thermal expansion & Calorimetry	4	"Relation Between $\alpha$ (Alpha), $\beta$ (Beta), $\gamma$ (Gamma), Metal Scale, Bi-Metallic Strip, Pendulum Clock, Thermal Stress"
	Organic Chemistry	Biomolecules	1	Carbohydrates, Proteins, Nucleic Acids
4-Apr-22	Physical Chemistry	Atomic Structure	2	Bohr's Model, Formula Related to Bohr's Model, Hydrogen Spectrum
	Organic Chemistry	Biomolecules	2	Carbohydrates, Proteins, Nucleic Acids
5-Apr-22	Physical Chemistry	Atomic Structure	3	Discuss Practice Session 2 and 3
	Organic Chemistry	Biomolecules	3	Carbohydrates, Proteins, Nucleic Acids
6-Apr-22	Physical Chemistry	Atomic Structure	4	Rules for Writing Electronic Configuration, Schrodinger's Wave Equation
	Organic Chemistry	Polymers	1	Classification, names identification and formation

7-Apr-22	Physical Chemistry	Surface Chemistry	1	Absorbtion
8-Apr-22	Organic Chemistry	Polymers	2	Classification, names identification and formation
9-Apr-22	Physical Chemistry	Surface Chemistry	2	Catalysis
11-Apr-22	Organic Chemistry	Practical Organic Chemistry	1	Test of alcohols, phenolic OH, terminal alkyne, aldehydes , Ketone, unsaturation, amines, carboxylic acid, aromatic compounds. Lassign test (elemental analysis) , binary mixture separation , solubility test
	Physical Chemistry	Surface Chemistry	3	Collides Part-1
12-Apr-22	Organic Chemistry	Practical Organic Chemistry	2	Test of alcohols, phenolic OH, terminal alkyne, aldehydes , Ketone, unsaturation, amines, carboxylic acid, aromatic compounds. Lassign test (elemental analysis) , binary mixture separation , solubility test
	Physical Chemistry	Surface Chemistry	4	Collides Part-2
13-Apr-22	Organic Chemistry	Chemistry In Everyday Life	1	Drugs and Medicines & its classification , Drug target intraction; Theropeutic action of drug (tranquilizers, analgesics, antibiotics,antiseptic, disinfectants, antifertillity drugs,) Chemical & foods (artificial sweeting agent, Food preservatives) Soaps, Saponification, degergents
	Physical Chemistry	Surface Chemistry	5	Discussion of Practice Session -1

**Note-** This Lecture Plan is an estimated plan by Faculty, actual Lectures may vary according to Chapters taught by Faculty. Lectures may increase or decrease in Chapters when taught by Faculty.