



➤ Online Ranker Test Schedule (For Class XII Students 2023-24)

Ranker Package - Test Schedule (Online)

Test	Date	Day	TOPIC
UT -1	20-05-2023	Saturday	Physics - Physical World, Units & Measurements, Motion in a Straight Line Chemistry - Some Basic Concepts of Chemistry, Botany - Cell: The Unit of Life Zoology - Structural Organisation in Animals - Animal Tissues, Biomolecules
UT -2	27-05-2023	Saturday	Physics - Electric Charges and Field, Electrostatic Potential and Capacitance Chemistry - The Solid State, Solution Botany - Reproduction in Organisms, Sexual Reproduction in Flowering Plants Zoology - Reproduction in Organism, Human Reproduction
UT -3	10-06-2023	Saturday	Physics - Motion in a Plane, Laws of Motion Chemistry - Structure of Atom, Classification of Elements and Periodicity in Properties Botany - Cell Cycle and Cell Division, The Living World Zoology - Digestion and Absorption, Breathing and Exchange of Gases
UT -4	15-07-2023	Saturday	Physics - Current Electricity, Moving Charges & Magnetism Chemistry - Electrochemistry, Chemical Kinetics, Surface Chemistry Botany - Principles of Inheritance and Variation, Molecular Basis of Inheritance Zoology - Reproductive Health, Evolution
PT-1	23-07-2023	Saturday	Test on Topics covered in Unit Test -1 to Unit Test -4
UT -5	29-07-2023	Saturday	Physics - Work, Energy and Power, System of Particles and Rotational Motion Chemistry - Chemical Bonding and Molecular Structure, States of Matter, Thermodynamics Botany - Biological Classification, Morphology of Flowering Plants, Anatomy of Flowering Plants, Plant Kingdom Zoology - Body Fluids and Circulation, Excretory Products and their Elimination, Locomotion and Movement, Neural Control and Coordination
UT-6	16-08-2023	Wednesday	Physics - Magnetism and Matter, Electromagnetic Induction, Alternating Current Chemistry - General Principles & Processes of Isolation of Elements, The p-Block Elements (XII), The d & f-Block Elements Botany - Strategies for Enhancement in Food Production, Microbes in Human Welfare, Organisms and Populations Zoology - Human Health & Disease, Strategies for Enhancement in Food Production - Animal Husbandry
PT-2	29-08-2023	Tuesday	Test on Topics covered in Unit Test -5 & Unit Test -6
CT-1	12-09-2023	Tuesday	Test on Topics covered in Unit Test -1 to Unit Test -6
UT-7	03-10-2023	Tuesday	Physics - Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids Chemistry - Equilibrium, Redox Reactions Botany - Transport in Plants, Mineral Nutrition, Photosynthesis in Higher Plants Zoology - Chemical Coordination and Integration, Animal Kingdom- General Account and Non-Chordates
UT-8	14-10-2023	Saturday	Physics - Thermal Properties of Matter, Thermodynamics, Kinetic Theory Chemistry - Hydrogen, The s-Block Elements, The p-Block Elements (XI) Botany - Respiration in Plants, Plant Growth and Development Zoology - Animal Kingdom - Chordates, Structural Organisation in Animals - Animal Morphology



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Test	Date	Day	TOPIC
UT-9	28-10-2023	Saturday	Physics - Oscillations, Waves Chemistry - Organic Chemistry - Some Basic Principles and Techniques, Hydrocarbons Botany - Photosynthesis in Higher Plants, Respiration in Plants, Plant Growth and Development Zoology - Breathing and Exchange of Gases, Body Fluids and Circulation, Excretory Products and their Elimination, Locomotion and Movement, Neural Control and Coordination
PT-3	04-11-2023	Saturday	Physics - Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids, Thermal Properties of Matter, Thermodynamics, Kinetic Theory,, Oscillations, Waves Chemistry - Equilibrium, Redox Reactions, The p-Block Elements (XI), Organic Chemistry - Some Basic Principles and Techniques, Hydrocarbons Botany - Photosynthesis in Higher Plants, Respiration in Plants, Plant Growth and Development Zoology - Chemical Coordination and Integration, Animal Kingdom- General Account and Non-Chordates, Animal Kingdom - Chordates, Structural Organisation in Animals - Animal Morphology (Frog, Cockroach & Earthworm), Breathing and Exchange of Gases, Body Fluids and Circulation, Excretory Products and their Elimination, Locomotion and Movement, Neural Control and Coordination
UT-10	18-11-2023	Saturday	Physics - Electromagnetic Waves, Ray Optics and Optical Instruments Chemistry - Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers Botany - Ecosystem, Biodiversity and Conservation Zoology - Biotechnology - Principles and Processes, Biotechnology and its Applications
UT-11	02-12-2023	Saturday	Physics - Wave Optics, Dual Nature of Radiation and Matter, Atoms Chemistry - Aldehydes, Ketones and Carboxylic Acids, Amines Botany - Sexual Reproduction in Flowering Plants, Principles of Inheritance and Variation, Molecular Basis of Inheritance Zoology - Human Reproduction, Reproductive Health, Evolution
UT-12	16-12-2023	Saturday	Physics - Nuclei, Semiconductor Electronics : Materials, Devices and Simple Circuits Chemistry - Biomolecules Botany - Microbes in Human Welfare, Organisms and Populations, Ecosystem, Biodiversity and Conservation Zoology - Human Health & Disease, Biotechnology - Principles and Processes, Biotechnology and its Applications
PT-4	02-01-2024	Saturday	Physics - Electromagnetic Waves, Ray Optics and Optical Instruments, Wave Optics, Dual Nature of Radiation and Matter, Atoms, Nuclei, Semiconductor Electronics: Materials, Devices and Simple Circuits Chemistry - Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids, Amines, Biomolecules Botany - Ecosystem, Biodiversity and Conservation, Sexual Reproduction in Flowering Plants, Principles of Inheritance and Variation, Molecular Basis of Inheritance), Microbes in Human Welfare, Organisms and Populations Zoology - Biotechnology - Principles and Processes, Biotechnology and its Applications, Human Reproduction, Reproductive Health, Evolution, Human Health & Disease, Biotechnology - Principles and Processes, Biotechnology and its Applications



➤ Online Ranker Test Schedule (For Class XII Students 2023-24)

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Test	Date	Day	TOPIC
CT-2	20-01-2024	Saturday	Physics - Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids, Thermal Properties of Matter, Thermodynamics, Kinetic Theory, Oscillations, Waves, Electromagnetic Waves, Ray Optics and Optical Instruments, Wave Optics, Dual Nature of Radiation and Matter, Atoms, Nuclei, Semiconductor Electronics: Materials, Devices and Simple Circuits Chemistry - Equilibrium, Redox Reactions, The p-Block Elements (XI), Organic Chemistry - Some Basic Principles and Techniques, Hydrocarbons, Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids, Amines, Biomolecules Botany - Photosynthesis in Higher Plants, Respiration in Plants, Plant Growth and Development, Ecosystem, Biodiversity and Conservation, Sexual Reproduction in Flowering Plants, Principles of Inheritance and Variation, Molecular Basis of Inheritance, Microbes in Human Welfare, Organisms and Populations Zoology - Chemical Coordination and Integration, Animal Kingdom- General Account and Non-Chordates, Animal Kingdom - Chordates, Structural Organisation in Animals - Animal Morphology (Frog, Cockroach & Earthworm), Breathing and Exchange of Gases, Body Fluids and Circulation, Excretory Products and their Elimination, Locomotion and Movement, Neural Control and Coordination, Biotechnology - Principles and Processes, Biotechnology and its Applications, Human Reproduction, Reproductive Health, Evolution, Human Health & Disease
FST-1	16-03-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI)
FST-2	23-03-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XII)
FST-3	30-03-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI & XII)
FST-4	06-04-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI & XII)
FST-5	13-04-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI & XII)
FST-6	20-04-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI & XII)
FST-7	27-04-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI & XII)

7 Tests of NEET in the Month of Mar- April, 2024*

*(The test dates will be intimated in the month of January and schedule will be uploaded)

UT- Unit Test | PT- Part Test | CT- Cumulative Test | FST- Full Syllabus Test

AIATS SCHEDULE FOR CLASS XII (CF + OYM) 2023-24



Test No.	Test Date	Date of Display of Answer Key	Result Date	Subject	Topics
Practice Test Online	23.07.2023	NA	Practice Test Results can be viewed after submission of Test	Phy.	Electric Charges and Fields, Electrostatic Potential and Capacitance, Current Electricity
				Chem.	The Solid State, Solutions, Electrochemistry, Chemical Kinetics
				Bio.	Reproduction in organisms, Sexual Reproduction in Flowering Plants, Reproduction in Organisms, Human Reproduction
1.	30.07.2023	01.08.2023	05.08.2023	Phy.	Electric Charges and Fields, Electrostatic Potential and Capacitance, Current Electricity
				Chem.	The Solid State, Solutions, Electrochemistry, Chemical Kinetics
				Bio.	Reproduction in Organisms, Sexual Reproduction in Flowering plants, Reproduction in organisms, Human Reproduction
2.	29.10.2023	31.10.2023	03.11.2023	Phy.	Moving Charges and Magnetism, Magnetism and Matter, Electromagnetic Induction
				Chem.	The p-block elements (Group-15 to 18), The d- & f-Block Elements,
				Bio.	Principles of Inheritance and Variation, Molecular Basis of Inheritance, Reproductive Health, Evolution
3.	19.11.2023	21.11.2023	24.11.2023	Phy.	Alternating Current, Electromagnetic Wave, Ray Optics & Optical instruments, Wave Optics
				Chem.	Coordination Compounds, Haloalkanes and Haloarenes, Alcohols, Phenols and Ethers
				Bio.	Microbes in Human Welfare, Organisms and Populations, Human Health & Disease
4.	24.12.2023	26.12.2023	29.12.2023	Phy.	Dual Nature of Radiation and Matter, Atoms, Nuclei, Semiconductors
				Chem.	Aldehydes, Ketones and Carboxylic Acids, Amines, Biomolecules
				Bio.	Ecosystem, Biodiversity and conservation, Biotechnology: Principles and Processes, Biotechnology and Its Applications
5.	07.01.2024	09.01.2024	12.01.2024	Phy.	Units & Measurements, Motion in a Straight Line, Motion in a Plane
				Chem.	Some Basic Concept of Chemistry, Structure of Atom, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure.
				Bio.	Cell: The Unit Life, Cell Cycle & Cell division, The Living World, Structural Organisation in Animals: Animal Tissues only, Biomolecules
6.	21.01.2024	23.01.2024	27.01.2024	Phy.	Laws of Motion, Work, Energy and Power, System of Particles & Rotational Motion
				Chem.	Thermodynamics, Equilibrium
				Bio.	Biological Classification, Morphology of Flowering Plants (Including Malvaceae, Cruciferae, Leguminosae, Compositae, Graminae) , Breathing & Exchange of Gases, Body Fluids and Circulation, Excretory Products and Their Elimination

Test No.	Test Date	Date of Display of Answer Key	Result Date	Subject	Topics
7.	11.02.2024	13.02.2024	16.02.2024	Phy.	Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids, Thermal Properties of Matter
				Chem.	Redox Reactions, Some p-block Elements (Group-13 & 14), Equilibrium
				Bio.	Anatomy of Flowering Plants, Plant Kingdom, Locomotion and Movement, Neural Control and Coordination, Chemical Coordination and Integration
8.	18.02.2024	20.02.2024	23.02.2024	Phy.	Thermodynamics, Kinetic Theory, Oscillations and Waves
				Chem.	Organic Chemistry: Some Basic Principles & Techniques, Hydrocarbons
				Bio.	Photosynthesis in higher plants, Respiration in plants, Plant Growth and Development, Animal Kingdom and Structural Organisation of Animals: Animal Morphology (Cockroach, Frog, Earthworm)
9.	24.03.2024	26.03.2024	29.03.2024	PCB	Open Mock Test on Complete Updated Syllabus of NEET-2024
10.	31.03.2024	02.04.2024	05.04.2024	PCB	Open Mock Test on Complete Updated Syllabus of NEET-2024
11.	07.04.2024	09.04.2024	12.04.2024	PCB	Open Mock Test on Complete Updated Syllabus of NEET-2024
12.	14.04.2024	16.04.2024	19.04.2024	PCB	Open Mock Test on Complete Updated Syllabus of NEET-2024
13.	21.04.2024	23.04.2024	26.04.2024	PCB	Open Mock Test on Complete Updated Syllabus of NEET-2024
14.	28.04.2024	30.04.2024	02.05.2024	PCB	Open Mock Test on Complete Updated Syllabus of NEET-2024

Test Duration : 200 Minutes

Students can find Answer Key & Text Solutions in their **AESL** account on **www.aakash.ac.in**.

Step-01 : Login to your account with user id & password.

Step-02 : Go to side bar for Answer Key & Text Solutions. Click on '**Answer Key & Text Solutions**'.

The AIATS tests shall be conducted in offline mode. However, if the test is conducted in online mode, then following instructions will be applicable:

The AIATS tests shall be available to attempt online for 48 hours from its scheduled date of test. *e.g.*, If a test is scheduled on 30th July, 2023, then the test shall be made live at 10:00 AM on 30th July and will be available till 10:00 AM on 1st August 2023. Post that students shall not be able to attempt the test to get All India Rank however tests shall be available for attempt later also, wherein students shall be able to get reference ranking only. Test Timings are subject to change hence please check the Timings from the respective Centre / DLP department before the Exam Date. The venue of AIATS is subject to change in short notice in case the exam is scheduled in offline mode.

Note in case of online mode:

- ❖ Parents to ensure students give exam with full honesty and continuity.
- ❖ Students giving test early is recommended and not to wait for 48 hours to finish.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Physics Daily Test 01	Physical World:- What is physics, Scope & Excitement of physics, Physics technology and society
Chemistry Daily Test 01	Some Basic Concepts of Chemistry:- Importance of chemistry, Nature of matter, Properties of matter and their measurement : Mass and weight, volume, density, temperature, Uncertainty in measurement, Scientific notation, Multiplication and division, Addition and subtraction, Significant figures, Dimensional analysis.
Botany Daily Test 01	Cell: The Unit of Life:- Introduction, What is a cell?, Cell theory, An overview of cell, Prokaryotic cell-structure, Gram staining, Eukaryotic cell structure
Zoology Daily Test 01	Structural Organisation in Animals–Animal Tissues:- Epithelial Tissue: General features, basement membrane, types of Epithelial tissues-Simple.
Physics Daily Test 02	Physical World:- Fundamental forces in nature, Nature of physical laws,
Chemistry Daily Test 02	Some Basic Concepts of Chemistry:- Laws of chemical combination : Law of conservation of mass, Law of definite proportions, Law of multiple proportions
Botany Daily Test 02	Cell: The Unit of Life:- Difference between prokaryotic and eukaryotic cell, difference between plant cell and animal cell, plasma membrane
Zoology Daily Test 02	Structural Organisation in Animals–Animal Tissues:- Compound Epithelium, specialized epithelial tissues, glandular epithelium, Types of simple & compound gland
Physics Daily Test 03	Units & Measurements:- Introduction, International system of units, Measurement of length, Mass, Time.
Chemistry Daily Test 03	Some Basic Concepts of Chemistry:- Gay lussac's law of gaseous volumes, Avogadro law, Dalton's atomic theory.
Botany Daily Test 03	Cell: The Unit of Life:- Cell wall, endomembrane system– endoplasmic reticulum, golgi body
Zoology Daily Test 03	Structural Organisation in Animals–Animal Tissues:- Connective Tissue: Connective tissue proper, Loose connective tissue, Dense connective tissues-characters with examples. Supportive connective tissue: Cartilage, Types of cartilage-Hyaline, Elastic, white fibrocartilage & Calcified cartilage
Physics Daily Test 04	Units & Measurements:- Accuracy, Precision of instruments
Chemistry Daily Test 04	Some Basic Concepts of Chemistry:- Atomic and molecular masses : Atomic mass, Average atomic mass, Molecular mass, Formula mass
Botany Daily Test 04	Cell: The Unit of Life:- Lysosome, Vacuole; Mitochondria, Plastid
Zoology Daily Test 04	Structural Organisation in Animals–Animal Tissues:- Supportive Connective Tissue: Bone, its structure & composition, Types of bones: Compact bone, Spongy bone, Differences between cartilage & bone: Dried bone & decalcified bone. Cartilage, Investing bone, Sesamoid bone and Visceral bone
Physics Daily Test 05	Units & Measurements:- Errors in measurements
Chemistry Daily Test 05	Some Basic Concepts of Chemistry:- Mole concept
Botany Daily Test 05	Cell: The Unit of Life:- Ribosome, Cytoskeleton, Centrosome and centrioles, Cilia and flagella
Zoology Daily Test 05	Structural Organisation in Animals–Animal Tissues:- Muscular Tissue: Types of Muscles: Striated and non-striated/Smooth muscles (Single unit & Multiunit smooth muscles; Cardiac muscle)

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Physics Daily Test 06	Units & Measurements:- Significant figures
Chemistry Daily Test 06	Some Basic Concepts of Chemistry:- Percentage composition, Empirical formula
Botany Daily Test 06	Cell: The Unit of Life:- Nucleus, Chromosomes, Microbodies.
Zoology Daily Test 06	Structural Organisation in Animals–Animal Tissues:- Nervous Tissue: Structure of neuron and its parts, Different types of neuron; Myelinated & Nonmyelinated neurons, Neuroglia cells-Types of glial cells
Physics Daily Test 07	Units & Measurements:- Dimensions of physical quantities
Chemistry Daily Test 07	Some Basic Concepts of Chemistry:- Stoichiometry and Stoichiometric calculations.
Botany Daily Test 07	Cell Cycle & Cell Division:- Introduction, Cell cycle–phases of cell cycle, Mitosis–definition
Zoology Daily Test 07	Biomolecules:- Primary and secondary metabolites, Carbohydrates, Saccharides, Monosaccharides, Triose, Pentose, Hexose, Heptose, Derivatives of monosaccharides, Oligosaccharides, Functions of small carbohydrates
Physics Daily Test 08	Units & Measurements:- Dimensional formula & dimensional equations, Dimensional analysis and its applications.
Chemistry Daily Test 08	Some Basic Concepts of Chemistry:- Calculations regarding limiting reagents
Botany Daily Test 08	Cell Cycle & Cell Division:- Karyokinesis, cytokinesis, significance, Meiosis–definition
Zoology Daily Test 08	Biomolecules:- Polysaccharides-homopolysaccharides & heteropolysaccharides storage & structural polysaccharides
Physics Daily Test 09	Motion in a Straight Line :- Introduction, Position, Path length and displacement, Average velocity & average speed.
Chemistry Daily Test 09	Some Basic Concepts of Chemistry:- Reactions in solutions : Mass percentage or weight percentage, Mole-fraction, Molarity, Molality
Botany Daily Test 09	Cell Cycle & Cell Division:- Meiosis-I, Meiosis-II, significance of meiosis
Zoology Daily Test 09	Biomolecules:- Aminoacids: Structure, types, Polar, Non polar, acidic, basic, neutral, alcoholic aromatic, heterocyclic, functions of amino acids. Peptide bond formation, Structure of protein-Primary, secondary, tertiary, quaternary, Properties of protein; Types of proteins and their functions
Physics Daily Test 10	Motion in a Straight Line :- Differential calculus
Chemistry Daily Test 10	Some Basic Concepts of Chemistry:- Molarity, Molality
Botany Daily Test 10	The living world:- Introduction, What is living?, Characteristics of living beings
Zoology Daily Test 10	Biomolecules:- Lipids: Structure and classification of lipids, simple lipids, conjugated lipids, derived lipids, functions of lipids
Physics Daily Test 11	Motion in a Straight Line :- Applications of differential calculus
Chemistry Daily Test 11	Structure of Atom:- Sub-atomic particles : Discovery of electron, Charge to mass ratio of electron, Charge on electron, Discovery of proton and neutron. Thomson model of atom, Rutherford's nuclear model of atom, Atomic and Mass number, Isobars and isotopes.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Botany Daily Test 11	The living world:- Diversity in the living world, Nomenclature, Need for classification, Classification -Taxonomy, Systematics
Zoology Daily Test 11	Biomolecules:- Nitrogenous bases, nucleosides, nucleotides, higher nucleotides, types of nucleotides, functions of nucleotides, Nucleic acid-DNA, RNA structure, types of it and function, Metabolites-primary & secondary
Physics Daily Test 12	Motion in a Straight Line :- Integral calculus
Chemistry Daily Test 12	Structure of Atom:- Particle nature of electromagnetic radiation : Plank's quantum theory, Photoelectric effect, Dual behaviour of electromagnetic radiation.
Botany Daily Test 12	The living world:- Taxonomic categories
Zoology Daily Test 12	Biomolecules:- Enzymes: Importance, activation energy, chemical nature, active site, Classes of enzymes: Oxidoreductase, Transferase, Hydrolase, Lyase, Isomerase, Ligase; Properties of enzymes, Working of enzymes-Lock & Key model, Induce fit theory
Physics Daily Test 13	Motion in a Straight Line :- Applications of Integral calculus
Chemistry Daily Test 13	Structure of Atom:- Emission and absorption spectra, Line spectrum of hydrogen, Bohr's model for hydrogen atom, Explanation of Bohr's model.
Botany Daily Test 13	The living world:- Taxonomic categories, Taxonomical aids- Herbarium,
Zoology Daily Test 13	Biomolecules:- Enzymes: Factors affecting the enzyme activity: substrate concentration, Km value, Product concentration, Temperature, pH; Enzyme inhibition-competitive, Non competitive, Allosteric enzymes, Isoenzymes and proenzymes
Physics Daily Test 14	Motion in a Straight Line :- Graphs (slope, area etc.)
Chemistry Daily Test 14	Structure of Atom:- Dual behaviour of matter, Heisenberg's uncertainty principle, Significance of uncertainty principle, Reason for the failure of the Bohr model.
Botany Daily Test 14	The living world:- Botanical gardens, Museum, Zoological parks, Key, Flora, Manual, Monographs, Catalogues.
Zoology Daily Test 14	Digestion & Absorption:- Structure of alimentary Canal: Tongue, Taste Papillae, Structure of tooth, Dental formula, Waldeyer's ring, Oesophagus, Stomach, Small intestine, Large intestine, Anus, Histology of Alimentary Canal-Serosa, Muscular coat, Submucosa, Mucosa
Physics Daily Test 15	Motion in a Straight Line :- Instantaneous velocity & speed, acceleration
Chemistry Daily Test 15	Structure of Atom:- Quantum mechanics, Hydrogen atom and the Schrodinger equation, Orbitals and Quantum numbers

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Botany Daily Test 15	Biological Classification:- Introduction, Kingdom system of classification- two kingdom, three kingdom, four kingdom, five kingdom
Zoology Daily Test 15	Digestion & Absorption:- Digestive glands: Salivary glands-Parotid, Submaxillary, Sublingual salivary glands, Gastric glands, Liver, Internal structure, Gall bladder, Bile duct functions of liver
Physics Daily Test 16	Motion in a Straight Line :- Kinematic equations for uniformly accelerated motion.
Chemistry Daily Test 16	Structure of Atom:- Shapes of atomic orbitals, Energies of orbitals, Filling of orbitals in atom : Aufbau principle
Botany Daily Test 16	Biological Classification:- Six kingdom, Domains of life, Kingdom Monera- Characters of monera, Shape of bacteria, Bacterial Life process - Respiration, Nutrition
Zoology Daily Test 16	Digestion & Absorption:- Pancreas: External structure, internal structure, Intestinal glands, Digestion of carbohydrates in the alimentary canal.
Physics Daily Test 17	Motion in a Straight Line :- Motion under gravity
Chemistry Daily Test 17	Structure of Atom:- Pauli exclusion principle, Hund's rule of maximum multiplicity
Botany Daily Test 17	Biological Classification:- Reproduction- Asexual, Sexual recombination
Zoology Daily Test 17	Digestion & Absorption:- Digestion of proteins: Action of gastric juice, pancreatic juice, intestinal juice, Digestion of lipids-emulsification & digestion, Digestion of nucleic acids
Physics Daily Test 18	Motion in a Straight Line :- Relative velocity
Chemistry Daily Test 18	Structure of Atom:- Electronic configuration of atoms, Stability of completely filled and half filled sub-shells.
Botany Daily Test 18	Biological Classification:- Economic importance of bacteria, Archaeobacteria-methanogens, halophiles, thermoacidophiles
Zoology Daily Test 18	Digestion & Absorption:- Absorption of nutrients: Carbohydrates, amino acids, fatty acids & glycerol, water, electrolytes, vitamins, Assimilation of carbohydrates, Amino acids, fats, Egestion, Disorders of digestive system, Jaundice, Vomiting, Diarrhoea, Constipation, Indigestion
Physics Daily Test 19	Motion in a Plane :- Introduction, Scalars & Vectors, Multiplication of vectors by real numbers, Addition & subtraction of vectors-graphical method.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Chemistry Daily Test 19	Classification of Elements and Periodicity in Properties:- Genesis of periodic classification, Modern periodic law and the present form of the periodic table. Nomenclature of elements with atomic numbers > 100, Electronic configurations in periods, Groupwise electronic configuration, s, p, d & f-block elements, Metals, Non-metals and metalloids,
Botany Daily Test 19	Biological Classification:- Eubacteria – Cyanobacteria, Mycoplasma.
Zoology Daily Test 19	Breathing & Exchange of Gases:- Respiratory passage, structure of larynx, sound production, lungs, pleurae, external structure of lungs, Internal structure, alveoli.
Physics Daily Test 20	Motion in a Plane :- Resolution of vectors
Chemistry Daily Test 20	Classification of Elements and Periodicity in Properties:- Trends in physical properties : Atomic radius, Ionic radius, Ionisation enthalpy, Electron gain enthalpy, Electronegativity.
Botany Daily Test 20	Biological Classification:- Protista-General characters, Chrysophytes, Dinoflagellates, Euglenoids
Zoology Daily Test 20	Breathing & Exchange of Gases:- Mechanism of breathing-Inspiration, expiration, thoracic & abdominal breathing, Respiratory/Pulmonary volumes/Respiratory capacities
Physics Daily Test 21	Motion in a Plane :- Vector addition–analytical method.
Chemistry Daily Test 21	Classification of Elements and Periodicity in Properties:- Periodic trends in chemical properties : Oxidation states, Anomalous properties of second period elements. Periodic trends and chemical reactivity.
Botany Daily Test 21	Biological Classification:- Slime moulds, Protozoans-major groups with some salient features
Zoology Daily Test 21	Breathing & Exchange of Gases:- Exchange of gases between alveoli & blood; exchange of gases between blood & tissue cells.
Physics Daily Test 22	Motion in a Plane :- Motion in plane, Motion in a plane with constant acceleration.
Chemistry Daily Test 22	Chemical Bonding and Molecular Structure:- Kossel-Lewis approach to chemical bonding, Octet rule, Covalent bond, Lewis representation of simple molecules, Formal charge
Botany Daily Test 22	Biological Classification:- Fungi-general characters
Zoology Daily Test 22	Breathing & Exchange of Gases:- Transport of oxygen, Bohr's effect; Transport of carbon dioxide, Chloride shift (Hamburger's phenomenon), Haldane effect

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Physics Daily Test 23	Motion in a Plane :- Relative velocity in two dimensions.
Chemistry Daily Test 23	Chemical Bonding and Molecular Structure:- Limitations of octet rule : Incomplete octet of the central atom, odd-electron molecule, The expanded octet.
Botany Daily Test 23	Biological Classification:- Reproduction in fungi
Zoology Daily Test 23	Breathing & Exchange of Gases:- Regulation of respiration: Neural regulation, chemical regulation, Respiratory disorders, Bronchitis, Asthma, Emphysema, Occupational respiratory disorder
Physics Daily Test 24	Motion in a Plane :- Projectile motion – Equation of path of projectile. Relative velocity
Chemistry Daily Test 24	Chemical Bonding and Molecular Structure:- Ionic or electrovalent bond, Lattice enthalpy bond parameters : Bond length, Bond angles, Bond enthalpy
Botany Daily Test 24	Biological Classification:- Characters of different classes of fungi - Phycomycetes, Ascomycetes
Zoology Daily Test 24	Body Fluids & Circulation:- Fluid connective tissue–Blood & composition of blood-blood cells & plasma, blood coagulation, clotting factors, lymph
Physics Daily Test 25	Motion in a Plane :- Projectile motion – Relative velocity, Maximum height of projectile, Horizontal range of projectile.
Chemistry Daily Test 25	Chemical Bonding and Molecular Structure:- Bond-order, Resonance structures
Botany Daily Test 25	Biological Classification:- Basidiomycetes, Salient features of Agaricus & Puccinia, Deuteromycetes
Zoology Daily Test 25	Body Fluids & Circulation:- Circulatory pathways, Human circulatory system-external structure of heart, Internal structure-Atria, Ventricle, Valves, Histology of heart wall, working of heart
Physics Daily Test 26	Motion in a Plane :- Uniform circular motion.
Chemistry Daily Test 26	Chemical Bonding and Molecular Structure:- Polarity of bonds : Dipole moment, Percentage ionic character, The valence shell electron pair repulsion theory.
Botany Daily Test 26	Biological Classification:- Virus–introduction, discovery, structural components, Structure of some viruses (TMV, bacteriophages)
Zoology Daily Test 26	Body Fluids & Circulation:- Cardiac cycle, Heart sounds, conducting system of heart, ECG-Normal ECG & changes as indication of heart diseases

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Physics Daily Test 27	Law of Motion :- Introduction, Aristotle's fallacy, The law of inertia, Newton's first law of motion
Chemistry Daily Test 27	Chemical Bonding and Molecular Structure:- Valence bond theory : Orbital overlap concept, Directional properties of bonds, Overlapping of atomic orbitals
Botany Daily Test 27	Biological Classification:- Reproduction in virus, Diseases, Sub-viral agents – Viroids, Virusoids, Prions; Lichens, Mycorrhiza
Zoology Daily Test 27	Body Fluids & Circulation:- Double circulation, heart beat, regulation of heart beat- Neural regulation, hormonal regulation
Physics Daily Test 28	Law of Motion :- Momentum, Conservation of momentum (Rocket Propulsion)
Chemistry Daily Test 28	Chemical Bonding and Molecular Structure:- Types of overlapping and nature of covalent bonds. Strength of s & p-bonds.
Botany Daily Test 28	Morphology of Flowering Plants:- Introduction, Root–types, function, regions, modifications
Zoology Daily Test 28	Body Fluids & Circulation:- Blood Vessels-Aorta, Arteries, Arterioles, Capillaries, Venules, Veins, Vena Cava, Lymphatic system, Disorders of circulatory system-Hypertension, Coronary artery diseases, Angina, Heart failure
Physics Daily Test 29	Law of Motion :- Newton's 2nd law of motion
Chemistry Daily Test 29	Chemical Bonding and Molecular Structure:- Hybridisation : Features and conditions, Types of hybridisation : sp, sp ² , sp ³ , dsp ² , sp ³ d, sp ³ d ² and hybridisation.
Botany Daily Test 29	Morphology of Flowering Plants:- Introduction of stem, bud, function of stem, modification of stem
Zoology Daily Test 29	Excretory Products & their Elimination:- Mode of excretion- Ammonotelism, Ureotelism, uricotelism (brief account), Different types of excretory structures in various animals, Human excretory system-structure of kidney, ureter, urinary bladder
Physics Daily Test 30	Law of Motion :- Newton's third law of motion, Equilibrium of a particle
Chemistry Daily Test 30	Chemical Bonding and Molecular Structure:- Molecular orbital theory : Features, Linear combination of atomic orbitals, Conditions for the combination of atomic orbitals, Types of molecular orbitals.
Botany Daily Test 30	Morphology of Flowering Plants:- Leaf–introduction, parts, venation, types (simple and compound leaf), Leaf-Phyllotaxy, Modifications

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Zoology Daily Test 30	Excretory Products & their Elimination:- Nephron: Structure including glomerulus, Bowman's capsule, PCT, Loop of Henle & DCT; and its types i.e., cortical and juxtamedullary nephrons.
Physics Daily Test 31	Law of Motion:- Common forces in mechanics
Chemistry Daily Test 31	Chemical Bonding and Molecular Structure:- Energy level diagram for molecular orbitals, Electronic configuration and molecular behaviour, Bonding in some homonuclear diatomic molecules, Hydrogen bonding.
Botany Daily Test 31	Morphology of Flowering Plants:- Inflorescence – racemose and cymose, Flowers-terminology, symmetry
Zoology Daily Test 31	Excretory Products & their Elimination:- Urine formation : Glomerular filtration- Structure of Malpighian body, Ultra filtration mechanism, glomerular filtration rate, filtration fraction, autoregulation of glomerular filtration, Tubular reabsorption & secretion, countercurrent mechanism.
Physics Daily Test 32	Law of Motion :- Friction
Chemistry Daily Test 32	States of Matter:- Intermolecular forces : London forces, Dipole-dipole forces, Dipole-induced dipole forces, Intermolecular forces vs thermal interactions
Botany Daily Test 32	Morphology of Flowering Plants:- Position of floral parts on thalamus, parts of flower (calyx and corolla), aestivation
Zoology Daily Test 32	Excretory Products & their Elimination:- Regulation of kidney function: Osmoregulation, control by juxta glomerular apparatus, Renin-angiotensin aldosterone system (RAAS) Atrial Natriuretic factor, ADH and Diabetes insipidus.
Physics Daily Test 33	Law of Motion :- Circular motion.
Chemistry Daily Test 33	States of Matter:- The gaseous state : Boyle's law, Charle's law, Gay Lussac' law, Avogadro law
Botany Daily Test 33	Morphology of Flowering Plants:- Androecium- adhesion, cohesion; Gynoecium, Placentation
Zoology Daily Test 33	Excretory Products & their Elimination:- Urine: Its composition, micturition mechanism, role of other organs like, kidney, lungs, liver and skin in excretion. Disorders-uremia, renal failure, renal calculi, nephritis. Dialysis and artificial kidneys & kidney transplantation.
Physics Daily Test 34	Law of Motion :- Solving problems in mechanics.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Chemistry Daily Test 34	States of Matter:- Ideal gas equation, Dalton's law of partial pressures, Graham's law of diffusion
Botany Daily Test 34	Morphology of Flowering Plants:- Fruits–parts, types, edible parts
Zoology Daily Test 34	Locomotion & Movement:- Types of movements: Ciliary, protoplasmic streaming, flagellar, muscular; Types of muscles and their structures. Muscle contraction-structure of contractile proteins-actin, myosin, troponin and tropomyosin. Mechanism of muscle contraction-Sliding filament theory, role of calcium and regulatory proteins, power stroke, role of ATP, various stages in cross bridge formation & break down.
Physics Daily Test 35	Work, Energy & Power:- Introduction, Scalar Product. Notions of work & kinetic energy, The work-energy theorem, Work, Kinetic energy
Chemistry Daily Test 35	States of Matter:- Kinetic molecular theory of gases : Maxwell-Boltzmann distribution of molecular speeds, Root mean square, Most probable and average speeds.
Botany Daily Test 35	Morphology of Flowering Plants:- Structure of dicotyledonous and monocotyledonous seed, Families– brassicaceae, fabaceae, solanaceae, liliaceae.
Zoology Daily Test 35	Locomotion & Movement:- Properties of muscle contraction: All or none principle, single muscle twitch, energy source of muscle contraction, Cori's cycle, Rigor mortis, red and white muscle fibres, Isometric and isotonic contraction. Treppe or staircase phenomenon, disorders of muscles-Myasthenia gravis, muscular dystrophy, tetany
Physics Daily Test 36	Work, Energy & Power:- Work done by a variable force, The work energy theorem for variable force.
Chemistry Daily Test 36	States of Matter:- Deviation from ideal gas behaviour : Pressure correction and volume correction, Compressibility factor, Critical constants and liquifaction of gases, Liquid state.
Botany Daily Test 36	Anatomy of Flowering Plants:- Tissue, meristematic tissue - characters, types, shoot and root apex organisation
Zoology Daily Test 36	Locomotion & Movement:- Axial skeleton: Skull-cranial bones, facial bones, Hyoid, Ear ossicles malleus, incus, stapes, Vertebral column-cervical, thoracic, lumbar, sacral, coccyx vertebrae, curves of the vertebral column. Ribs-vertebrosternal/True ribs, vertebrochondral/False ribs, Vertebral/Floating ribs, rib cage, sternum
Physics Daily Test 37	Work, Energy & Power:- The concept of potential energy, Various forms of energy, The potential energy of a spring.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Chemistry Daily Test 37	Thermodynamics:- Thermodynamic terms : System and surroundings, Types of system, The state of the system, The internal energy as a state function : Work & Heat, First law of thermodynamics
Botany Daily Test 37	Anatomy of Flowering Plants:- Primary permanent tissues i.e., parenchyma, collenchyma and sclerenchyma w.r.t. nature, distribution, cell wall and cell structure and functions, Complex permanent tissue- Xylem - components of xylem and their structures
Zoology Daily Test 37	Locomotion & Movement:- Appendicular skeleton: Pectoral girdle, bones of upper limb (Humerus, radius, ulna, carpals, metacarpals and phalanges), pelvic girdle, bones of lower limb (femur, patella, tibia, fibula, tarsals, metatarsals, phalanges). Joints-fibrous, cartilaginous and synovial (Ball and socket, hinge, pivot, gliding and saddle joint), Bone & Joint disorders-Arthritis, Osteoporosis, Gout etc.
Physics Daily Test 38	Work, Energy & Power:- The conservation of mechanical energy, (Motion in a Vertical Circle) The law of conservation of energy
Chemistry Daily Test 38	Thermodynamics:- Isothermal and free expansion of an ideal gas. Extensive and intensive properties.
Botany Daily Test 38	Anatomy of Flowering Plants:- Primary and secondary xylem, primary xylem– protoxylem and metaxylem Phloem- components, types of phloem (on the basis of position and origin), Tissue system - epidermal, ground and vascular; Types of vascular bundles
Zoology Daily Test 38	Neural Control & Coordination:- Human neural system: Central and peripheral neural system, neuron as structural and functional unit of neural system, different types of neurons and their location. Nerve impulse, generation and its transmission-Resting membrane potential, spike potential, action potential, depolarization, repolarization, hyperpolarization.
Physics Daily Test 39	Work, Energy & Power:- Power
Chemistry Daily Test 39	Thermodynamics:- Heat capacity, Relation between C_v & C_p for an ideal gas; Calorimetry, enthalpy and thermo chemical equation. Hess's law of constant heat summation.
Botany Daily Test 39	Anatomy of Flowering Plants:- Internal structures of root, stem and leaf, Definition of secondary growth, types of tissues involved
Zoology Daily Test 39	Neural Control & Coordination:- Synapses: Electrical and Chemical, synaptic transmission, mechanism of transmission of nerve impulse through electrical and chemical synapse. Neurotransmitters; excitatory and inhibitory.
Physics Daily Test 40	Work, Energy & Power:- Collisions – elastic and inelastic collision, Collision in one dimension.
Chemistry Daily Test 40	Thermodynamics:- Enthalpy of combustion, Atomization, Bond-dissociation, Solution, Lattice and neutralisation.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Botany Daily Test 40	Anatomy of Flowering Plants:- Secondary growth in dicot stem-formation and activity of vascular cambium in stelar region, Secondary structures in stelar region - annual rings, heartwood and sapwood, Formation and activity of cork cambium in extra stelar region, periderm, bark, lenticels, Secondary growth in dicot root - origin and activity of vascular cambium in stelar region and cork cambium from pericycle.
Zoology Daily Test 40	Neural Control & Coordination:- Structure of Brain: Forebrain, cerebrum, thalamus, hypothalamus, limbic system and their functions, mid brain (corpora quadrigemina and crura cerebri), hind brain (cerebellum, pons, medulla) ventricles of brain and cerebrospinal fluid.
Physics Daily Test 41	Work, Energy & Power:- Collision in two dimensions.
Chemistry Daily Test 41	Thermodynamics:- Spontaneity and entropy, Second law of thermodynamics, Free energy change and criteria for spontaneity, Third law of thermodynamics.
Botany Daily Test 41	Plant Kingdom:- Introduction of plant kingdom, Classification systems– artificial, natural and phylogenetic, Branches of taxonomy
Zoology Daily Test 41	Neural Control & Coordination:- Spinal cord & Peripheral nervous system: Cranial nerves (name, origin, distribution, nature and their functions), Spinal nerves-branches, (posterior, anterior, meningeal and visceral) plexuses (cervical, brachial, lumbar, sacral and coccygeal). Autonomic nervous System- sympathetic and parasympathetic nervous system and their functions.
Physics Daily Test 42	System of Particles & Rotational Motion:- Introduction, Centre of mass,
Chemistry Daily Test 42	Equilibrium:- Chemical equilibrium : Liquid-vapour, Solid-liquid and solid-vapour equilibria, General characteristics of equilibria involving physical and chemical process, Law of chemical equilibrium and equilibrium constant, Homogeneous and heterogeneous equilibria, Application of equilibrium constants. Predicting the extent and the direction of reactions. Calculating equilibrium concentrations.
Botany Daily Test 42	Plant Kingdom:- Algae-general characters
Zoology Daily Test 42	Neural Control & Coordination:- Reflex action: Reflex arc, characteristics of reflexes, types of reflexes-unconditioned, conditioned, monosynaptic and polysynaptic reflex and their examples. Detail of knee jerk reflex, importance of reflex action.
Physics Daily Test 43	System of Particles & Rotational Motion:- Motion of centre of mass, Linear momentum of system of particles.
Chemistry Daily Test 43	Equilibrium:- Relationship between equilibrium constant, Reaction quotient and Gibb's energy
Botany Daily Test 43	Plant Kingdom:- Economic importance of algae, Characters of different classes of algae- chlorophyceae
Zoology Daily Test 43	Neural Control & Coordination:- Sensory perception and processing: Human eye, coats of eye, part of eye, content of eye ball (lens, aqueous humour, vitreous humour), extra ocular eye muscle and their nerve supply. Mechanism of vision, accommodation, protective structures of eye, eyebrows, eyelids.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Physics Daily Test 44	System of Particles & Rotational Motion:- Vector product of two vectors, Angular velocity & its relation with linear velocity,
Chemistry Daily Test 44	Equilibrium:- Factors affecting equilibria: Change in concentration, pressure, temperature and effect of catalyst and effect of addition of inert gas.
Botany Daily Test 44	Plant Kingdom:- Phaeophyceae, rhodophyceae
Zoology Daily Test 44	Neural Control & Coordination:- Defects of eyes: Myopia, hypermetropia, presbyopia, astigmatism, cataract and glaucoma. Nose: Olfactory receptors, its structure and mechanism/working. Tongue: Different types of papillae & taste buds, its structure and working. Different types of receptors in skin- Tangoreceptor, algesireceptor, thermoreceptor.
Physics Daily Test 45	System of Particles & Rotational Motion:- Torque & angular momentum.
Chemistry Daily Test 45	Equilibrium:- Acids bases : Arrhenius, Bronsted-Lowry and Lewis concepts, Ionisation of acids and bases, Ionisation constant of water and its ionic product.
Botany Daily Test 45	Plant Kingdom:- Bryophytes–general characters
Zoology Daily Test 45	Neural Control & Coordination:- Elementary Structure, and functions of sense organs - Ear
Physics Daily Test 46	System of Particles & Rotational Motion:- Equilibrium of rigid body, Moment of inertia, Theorems of perpendicular of parallel axis.
Chemistry Daily Test 46	Equilibrium:- The pH scale, ionisation constants of weak acids and weak bases, Relation between K_a and K_b . Di and Polybasic acid and bases.
Botany Daily Test 46	Plant Kingdom:- Bryophytes & Pteridophytes
Zoology Daily Test 46	Chemical Coordination & Integration:- Endocrine Glands and hormones, hypothalamus, pituitary and thyroid gland.
Physics Daily Test 47	System of Particles & Rotational Motion:- Kinematics of rotational motion about a fixed, Dynamics of rotational motion about a fixed axis, Angular momentum in case of rotation about a fixed axis.
Chemistry Daily Test 47	Equilibrium:- Factors affecting acid and bases - Strength, Common ion effect in the ionisation of acids and bases,
Botany Daily Test 47	Plant Kingdom:- Pteridophytes– general characters, classes

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Zoology Daily Test 47	Chemical Coordination & Integration:- Parathyroid glands: Structure, location, hormone and mechanism of regulation of calcium homeostasis, disorders. Adrenal gland: Structure, location, hormones and their functions, disorders-Addison's disease, Cushing syndrome, aldosteronism, adrenal virilism. Pineal and its hormone, Thymus and its hormone. Pancreas-structure, location, hormone with their principal actions and disorders-hypoglycemia, diabetes mellitus.
Physics Daily Test 48	System of Particles & Rotational Motion:- Rolling motion.
Chemistry Daily Test 48	Equilibrium:- Buffer solution, Salt hydrolysis and solubility product.
Botany Daily Test 48	Plant Kingdom:- Salient features of Selaginella & Pteris, Economic importance
Zoology Daily Test 48	Chemical Coordination & Integration: Gonads(Ovary and testis-structure, location, hormones, principal action and disorders: hypogonadism, precocious puberty eunuchoidism, gynecomastia) hormones of heart, kidney and gastrointestinal tract, mechanism of hormone action (protein and steroid hormone) role of hormones as messengers and regulations, amplification of signals, synergistic and antagonistic effects, hormone receptor complex
Physics Daily Test 49	Gravitation:- Introduction, Kepler's laws, Universal law of Gravitation, Gravitational constant, Acceleration due to gravity of the earth, Acceleration due to gravity below & above the surface of the earth.
Chemistry Daily Test 49	Redox Reactions:- Classification idea of redox reactions, Redox reactions in terms of electron transfer reactions, Competitive electron transfer reactions
Botany Daily Test 49	Plant Kingdom:- Gymnosperms – general characters
Physics Daily Test 50	Gravitation:- Gravitational potential energy,
Chemistry Daily Test 50	Redox Reactions:- Oxidation number and its calculation, Fractional oxidation number, Types of redox reactions : Combination, decomposition, Displacement and disproportionation reactions, Balancing of redox reactions.
Botany Daily Test 50	Plant Kingdom:- Salient Features of Cycas & Pinus, Economic importance
Physics Daily Test 51	Gravitation:- Escape speed, Earth's satellite, Energy of an orbiting satellite, Geostationary & polar satellite, Weightlessness.
Chemistry Daily Test 51	Redox Reactions:- Redox reactions as the basis for titrations, Limitations of concept of oxidation number, Redox reactions and electrode potentials, Redox couple, Working of Daniell cell, Electrochemical series.
Botany Daily Test 51	Plant Kingdom:- Angiosperms - general characters, Economic importance of angiosperms, Life cycle patterns.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Physics Daily Test 52	Mechanical Properties of Solids:- Introduction, Plastic behavior of solids, Stress & strain, Hooke's law, Stress-strain curve
Botany Daily Test 52	Transport in Plants:- Introduction, Means of transport
Physics Daily Test 53	Mechanical Properties of Solids:- Elastic Potential Energy, Elastic moduli, Applications of elastic behaviour of materials.
Botany Daily Test 53	Transport in Plants:- Plant water relations–water potential, osmosis, DPD, TP
Physics Daily Test 54	Mechanical Properties of Fluids:- Introduction, Pressure, Pascal's Law
Botany Daily Test 54	Transport in Plants:- Plasmolysis, imbibition, Long distance transport of water – absorption of water (apoplast pathway, symplast pathway)
Physics Daily Test 55	Mechanical Properties of Fluids:- Archimedes Principle
Botany Daily Test 55	Transport in Plants:- Mechanism of absorption, Ascent of sap– root pressure (including guttation), Transpiration pull
Physics Daily Test 56	Mechanical Properties of Fluids:- Streamline flowBernoulli's principle,
Botany Daily Test 56	Transport in Plants:- Transpiration – structure of stomata, mechanism of opening and closing of stomata, factors affecting transpiration, significance, Transpiration and photosynthesis – a compromise
Physics Daily Test 57	Mechanical Properties of Fluids:- Viscosity, Reynolds number
Botany Daily Test 57	Transport in Plants:- Uptake and transport of mineral, Nutrients, Phloem transport–pressure flow or mass flow hypothesis, Demonstration of translocation of food by phloem by girdling experiment.
Physics Daily Test 58	Mechanical Properties of Fluids:- Surface tension.
Botany Daily Test 58	Mineral Nutrition:- Introduction, Methods to study the mineral requirement of plants, Essential mineral elements, Criteria for essentiality, Classification of essential elements
Botany Daily Test 59	Mineral Nutrition:- Role of macro and micronutrients, Mechanism of absorption of elements, Translocation of mineral solutes, Soil as reservoir of essential elements

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 1 – April)

Test Name	Test Syllabus
Botany Daily Test 60	Mineral Nutrition:- Metabolism of nitrogen– nitrogen cycle, biological nitrogen fixation, fate of ammonia.
Botany Daily Test 61	Photosynthesis in Higher Plants:- Introduction, Importance, What do we know?, Historical account, Where does photosynthesis take place? Photosynthetic pigments,
Botany Daily Test 62	Photosynthesis in Higher Plants:- Absorption spectrum and action spectrum, What is light reaction?, Electron transport system
Botany Daily Test 63	Photosynthesis in Higher Plants:- Splitting of water, Cyclic and non-cyclic photophosphorylation
Botany Daily Test 64	Photosynthesis in Higher Plants:- Chemiosmotic theory, Dark reaction– C3
Botany Daily Test 65	Photosynthesis in Higher Plants:- C4 cycles, Difference between C3 & C4-plants

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 2 – September)

Zoology Daily Test 49	Animal Kingdom–General Account & Non chordates :- Basis of classification, Levels of organisation, Symmetry, Body-plan, Protostomous, Deuterostomous
Zoology Daily Test 50	Animal Kingdom–General Account & Non chordates :- Coelom-its types, Open/closed vascular system, Segmentation, Notochord, Broad classification of Kingdom Animalia based on common fundamental features
Zoology Daily Test 51	Animal Kingdom–General Account & Non chordates :- Porifera: General characters, Body wall, Types of cells, Skeleton: Spicules and spongin fibres, Canal system-(General outline), Reproduction: Larva stages with examples
Chemistry Daily Test 52	Hydrogen:- Position, Occurrence, Isotopes, Preparation, Properties and uses of hydrogen hydrides.
Zoology Daily Test 52	Animal Kingdom–General Account & Non chordates :- Cnidaria: General characters, Body wall, Nematoblasts-Structures, Hydra-General characters, Polymorphism, Types of Zooids, Polyps, Medusa, Metagenesis, Corals.
Chemistry Daily Test 53	Hydrogen:- Hardness of H ₂ O and its removal, H ₂ O ₂ : Preparation and properties, D ₂ O, Dihydrogen as fuel.
Zoology Daily Test 53	Animal Kingdom–General Account & Non chordates :- Ctenophora; General characters, Comb plates, examples, Platyhelminthes: General characters, Symmetry, Parenchyma, Flame cells, Ladder like nervous part, Reproduction
Chemistry Daily Test 54	The s-Block Elements:- Alkali metals : Physical and chemical properties, Salt of oxo acids, Anomalous properties of Lithium, Similarity between Li and Mg, Compounds of Na : Na ₂ CO ₃ .10H ₂ O, NaCl, NaOH, NaHCO ₃ , Biological importance of Na & K,
Zoology Daily Test 54	Animal Kingdom–General Account & Non chordates :- Lifecycle of Fasciola hepatica (outline), Life cycle of Taenia solium with general features, Pseudosegmentation, Strobilation, Apolysis, Taenia saginata

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 2 – September)

Test Name	Test Syllabus
Chemistry Daily Test 55	The s-Block Elements:- Alkaline earth metals : Physical and chemical properties, Salts of oxoacids, Anomalous behaviour of beryllium, Diagonal relationship between Be & Al
Zoology Daily Test 55	Animal Kingdom–General Account & Non chordates :- Aschelminthes / Nematode: General characters, Renette cells, Reproduction with examples, Life cycle of the Ascaris (outline), other nematodes-Ancylostoma, Wuchereria, Enterobius, etc.
Chemistry Daily Test 56	The s-Block Elements:- Compounds of Ca : CaO, Ca(OH) ₂ , CaCO ₃ , CaSO ₄ .1/2H ₂ O. Biological importance of Mg and Ca.
Zoology Daily Test 56	Animal Kingdom–General Account & Non chordates :- Annelida: General characters, Reproduction, Larval form, Nereis–Heteronereis, Pheretima, Hirudinaria, Pontobdella, Botryoidal tissue in leech
Chemistry Daily Test 57	The p-Block Elements:- General electronic configuration and oxidation states of p-block elements, Inert pair effect, The boron family : Physical and chemical properties, Compounds of boron : Borax, Orthoboric acid and diborane, Uses of B, Al and their compounds.
Zoology Daily Test 57	Animal Kingdom–General Account & Non chordates :- Arthropoda: General characters of arthropods, Chitinous exoskeleton, Types of respiration, excretory structures, reproduction, Types of mouthparts in insects
Chemistry Daily Test 58	The p-Block Elements:- The carbon family : Physical properties. ; Chemical properties of group 14 elements, Allotropes of carbon, Compounds of C and Si : CO, CO ₂ , SiO ₂ , silicones, silicates and geolites.
Zoology Daily Test 58	Animal Kingdom–General Account & Non chordates :- Types of metamorphosis in Insects, Economic importance-Mosquito, Housefly, silkworm, Termites, Lac insect, Mollusca: General characters with examples, Larval form, Pearl formation.
Physics Daily Test 59	Thermal Properties of Matter:- Introduction, Temperature & Heat, measurement of temperature, Ideal gas equation & Absolute temperature, Thermal expansion.
Chemistry Daily Test 59	Organic Chemistry : Some Basic Principle & Techniques:- Tetravalence of carbon, Structure of organic compounds, Classification of organic compounds
Zoology Daily Test 59	Animal Kingdom–General Account & Non chordates :- Echinodermata: General characters, Water ambulacral system. Hemichordata: General characters, stomochord, examples., Chordates: General characters, 3 subphyla-Urochordata, Cephalochordata, Vertebrata. Urochordata-General characters with examples. Cephalochordates-General characters with examples.
Physics Daily Test 60	Thermal Properties of Matter:- Specific heat capacity, Calorimetry, Change of state
Chemistry Daily Test 60	Organic Chemistry : Some Basic Principle & Techniques:- Nomenclature of organic compounds (excluding functional group).
Zoology Daily Test 60	Animal Kingdom-Chordates:- Vertebrata: Agnatha & Gnathostomata: Cyclostomata-General characters with examples Petromyzon, Myxine
Physics Daily Test 61	Thermal Properties of Matter:- Heat transfer–Conduction, Convection.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 2 – September)

Test Name	Test Syllabus
Chemistry Daily Test 61	Organic Chemistry : Some Basic Principle & Techniques:- IUPAC nomenclature of organic compounds including mono and bi functional groups.
Zoology Daily Test 61	Animal Kingdom-Chordates:- Pisces: General characters, Classes-Placodermi, Chondrichthyes, Osteichthyes: Differences between cartilaginous & bony fishes, Scoliodon, Chimaera, Exocoetus, Labeo, Lateral line system, Neuromast organs, Types of scales
Physics Daily Test 62	Thermal Properties of Matter:- Heat transfer – Radiation, Stefan's Law, Newton's law of cooling, Wien's law.
Chemistry Daily Test 62	Organic Chemistry : Some Basic Principle & Techniques:- Isomerism : Structural isomerism including tautomerism, Stereoisomerism (Definition).
Zoology Daily Test 62	Animal Kingdom-Chordates:- Amphibia: General characters, Parental care and examples.
Physics Daily Test 63	Thermodynamics:- Introduction, Thermal equilibrium, Zeroth law of thermodynamics, Heat internal energy and work, First law of thermodynamics, Specific heat capacity. Thermodynamic state variables & equation of state,
Chemistry Daily Test 63	Organic Chemistry : Some Basic Principle & Techniques:- Fundamental concepts in organic reaction, Mechanism : Bond fission, Nucleophile and electrophile
Zoology Daily Test 63	Animal Kingdom-Chordates:- Reptilia: True land vertebrates, General characters, Rhynchocephalia
Physics Daily Test 64	Thermodynamics:- Thermodynamic processes,
Chemistry Daily Test 64	Organic Chemistry : Some Basic Principle & Techniques:- Inductive and electromeric effect, Resonance effect.
Zoology Daily Test 64	Animal Kingdom-Chordates:- Squamata, Crocodilia, Chelonia, Poisonous & non poisonous, Snakes
Physics Daily Test 65	Thermodynamics:- Heat engines, Refrigerators & heat pumps, Second law of thermodynamics, Reversible and irreversible process, Carnot's Engine.
Chemistry Daily Test 65	Organic Chemistry : Some Basic Principle & Techniques:- Hyperconjugation, Aromaticity and anti-aromaticity.
Zoology Daily Test 65	Animal Kingdom-Chordates:- Aves: General characters
Physics Daily Test 66	Kinetic Theory:- Introduction, Molecular nature of matter, Behaviour of gases, Kinetic theory of an ideal gas, Law of equipartition of energy, Specific heat capacity, Mean free path.
Chemistry Daily Test 66	Organic Chemistry : Some Basic Principle & Techniques:- Reaction intermediates : Carbocation, Carbanion, Carbon free radicals, Carbene.

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 2 – September)

Test Name	Test Syllabus
Botany Daily Test 66	Photosynthesis in Higher Plants:- Photorespiration, factors affecting photosynthesis.
Zoology Daily Test 66	Animal Kingdom-Chordates:- Mammalia: General characters, Subclasses-Prototheria, Metatheria, Eutheria
Physics Daily Test 67	Oscillations:- Introduction, Periodic & oscillatory motions, Simple harmonic motion and uniform circular motion,
Chemistry Daily Test 67	Organic Chemistry : Some Basic Principle & Techniques:- Types of organic reactions and mechanism : Substitution reactions
Botany Daily Test 67	Respiration in Plants:- Introduction, Respiratory substrates, Do plant breath?, Glycolysis (mechanism)
Zoology Daily Test 67	Structure Organisation in Animals – Animal Morphology:- Earthworm
Physics Daily Test 68	Oscillations:- Velocity and acceleration in simple harmonic motion, Force law for simple harmonic motion, Energy in simple harmonic motion.
Chemistry Daily Test 68	Organic Chemistry : Some Basic Principle & Techniques:- Purification of organic compounds, Qualitative analysis, Quantitative analysis
Botany Daily Test 68	Respiration in Plants:- Fermentation, Aerobic respiration– link reaction, Krebs cycle
Zoology Daily Test 68	Structural Organisation in Animals– Animal Morphology:- Earthworm : Circulatory System, Excretory System, Nervous System, Reproductive System, Economic Importance.
Physics Daily Test 69	Oscillations:- Some systems executing SHM, Damped simple harmonic motion
Chemistry Daily Test 69	Hydrocarbons:- Alkanes : Nomenclature and isomerism, Preparation and Properties.
Botany Daily Test 69	Respiration in Plants:- Electron transport system and oxidative phosphorylation, Respiratory balance sheet, Amphibolic pathway, Respiratory quotient.
Zoology Daily Test 69	Structural Organisation in Animals– Animal Morphology :- Salient features of the Periplaneta, Habitat, External features, exoskeleton, Head-mouthparts, thorax-thoracic appendages, Abdomen
Physics Daily Test 70	Oscillations:- Forced oscillations & resonance.
Chemistry Daily Test 70	Hydrocarbons:- Alkenes : Nomenclature and isomerism, Preparation

DAILY PRACTICE TEST SCHEDULE & SYLLABUS (VOLUME 2 – September)

Test Name	Test Syllabus
Botany Daily Test 70	Plant Growth and Development:- Growth, differentiation and development. Growth - characteristics, phases of growth, growth curve, growth rates - arithmetic growth and geometric growth, Absolute growth rate and relative growth rate. Differentiation, Dedifferentiation and Redifferentiation, Definition with examples, Development - Definition, factors regulating it, plasticity
Zoology Daily Test 70	Structural Organisation in Animals– Animal Morphology:- Digestive system of Cockroach-peritrophic membrane, Respiratory system and mechanism respiration, Circulating system: Heart, blood sinuses and circulation
Physics Daily Test 71	Waves:- Introduction, Transverse & Longitudinal waves
Chemistry Daily Test 71	Hydrocarbons:- Properties of Alkene
Botany Daily Test 71	Plant Growth and Development:- Growth hormones : Auxins, Gibberellins
Zoology Daily Test 71	Structural Organisation in Animals–Animal Morphology:- Malpighian tubules, Nerve cord, Sense organs of cockroach, Reproductive system of Cockroach-male & female system, fertilization, Development, Moulting
Physics Daily Test 72	Waves:- Displacement relation in a progressive wave, The speed of a travelling wave.
Chemistry Daily Test 72	Hydrocarbons:- Alkynes : Nomenclature and isomerism, Preparation, Properties of Alkyne
Botany Daily Test 72	Plant Growth and Development:- Cytokinin, w.r.t. their discovery, nature, types, biosynthesis, transport, functions, Growth hormones - Ethylene, abscisic acid w.r.t. all above features
Zoology Daily Test 72	Structural Organisation in Animals– Animal Morphology:- Frog : Morphology, Anatomy, Digestive System, Respiratory System, Circulatory System, Excretory System, Nervous System, Reproductive System, Economic Importance.
Physics Daily Test 73	Waves:- The principle of super position of waves, Reflection of waves.
Chemistry Daily Test 73	Hydrocarbons:- Aromatic hydrocarbons : Nomenclature, Preparation
Botany Daily Test 73	Plant Growth and Development :- Dormancy - cause of dormancy, breaking of dormancy, seed germination, vivipary, Photoperiodism : Definition and discovery, photoperceptive site and pigments (phytochrome) LDP, SDP and DNP Vernalisation - introduction, discovery, site, requirements, features/characters, examples

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Physics Daily Test 01	Electric Charges & Field:-Introduction, Electric charges, Conductors and insulators
Chemistry Daily Test 01	Solid State: General characteristics of solid-state, Amorphous and crystalline solids. Classification of crystalline solids : Molecular, ionic, metallic and covalent solids
Botany Daily Test 01	Reproduction in Organisms:-Life span, Basic features of reproduction, Asexual reproduction-Features, Methods (Binary fission, Budding, Sporulation).
Zoology Daily Test 01	Reproduction in Organisms:-Average & maximum life span, Life expectancy, population growth, Types of Reproduction-Asexual reproduction: Fission (binary & multiple), Budding (internal & external), Fragmentation Regeneration.
Physics Daily Test 02	Electric Charges & Field:-Charging by induction, Basic properties of electric charges
Chemistry Daily Test 02	Solid State: Crystal lattices and unit cells : Primitive and centered unit cells, Number of atoms in simple cubic, body centered and face centered cubic unit cell
Botany Daily Test 02	Reproduction in Organisms:-Vegetative propagation - Natural and artificial (cutting)
Zoology Daily Test 02	Reproduction in Organisms:-Sexual reproduction: Outline of reproductive system of cockroach and earthworm; Prefertilization events (Gametogenesis, oestrous cycle), Syngamy.
Physics Daily Test 03	Electric Charges & Field:-Coulomb's law, Force between multiple charges
Chemistry Daily Test 03	Solid State: Close packed structures in 2D and 3D ccp and hcp arrangements, Formula of a compound and number of voids filled
Botany Daily Test 03	Reproduction in Organisms:-Artificial (Layering & grafting), Sexual reproduction - Features, Phases of life cycle
Zoology Daily Test 03	Reproduction in Organisms:-Post fertilization events: Embryogenesis, oviparous and viviparous animals; Parthenogenesis.
Physics Daily Test 04	Electric Charges & Field:-Electric Field, Electric field due to system of charges
Chemistry Daily Test 04	Solid State: Locating tetrahedral and octahedral voids
Botany Daily Test 04	Reproduction in Organisms:-Events i.e. Pre-fertilisation, Fertilization and Post-fertilization.
Zoology Daily Test 04	Human Reproduction:-Sex organs, Male reproductive system: Testes, Epididymis, Vas deferens, Penis, Accessory glands of male reproductive system, Seminal plasma and semen

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Physics Daily Test 05	Electric Charges & Field:-Electric field lines, Electric Dipole
Chemistry Daily Test 05	Solid State: Packing efficiency in simple cubic, hcp/ccp and bcc lattices
Botany Daily Test 05	Sexual Reproduction in Organisms:-Introduction, Flower - A fascinating organ of angiosperms, Pre-fertilization - structures and events - Stamen, Microsporangium, Microsporogenesis.
Zoology Daily Test 05	Human Reproduction:-Structure of female reproductive system, Fallopian tubes, uterus, Vagina, Female External genitalia and Accessory genital glands
Physics Daily Test 06	Electric Charges & Field:-Dipole in a uniform external field, Electric flux
Chemistry Daily Test 06	Solid State: Calculation involving unit cell dimensions
Botany Daily Test 06	Sexual Reproduction in Organisms:-Pollen grain, Development of male gametophyte, The pistil, Megaspore (ovule), Types of ovules
Zoology Daily Test 06	Human Reproduction:-Structure of Mammary glands, Spermatogenesis and its hormonal control, Structure of mature sperm
Physics Daily Test 07	Electric Charges & Field:-Continuous charge distribution
Chemistry Daily Test 07	Solid State: Structure of Ionic solids
Botany Daily Test 07	Sexual Reproduction in Organisms:-Megaspore formation, Embryo sac/Female gametophyte development
Zoology Daily Test 07	Human Reproduction:- Oogenesis and structure of ovum & ovary
Physics Daily Test 08	Electric Charges & Field:-Gauss's Law, Application of Gauss's law
Chemistry Daily Test 08	Solid State: Imperfections in solids : Types of point defects electrical and magnetic properties
Botany Daily Test 08	Sexual Reproduction in Organisms:-Pollination : Objective, Kinds - Autogamy, Geitonogamy, Xenogamy, Agents of pollination - Wind, Water, Insects
Zoology Daily Test 08	Human Reproduction:-Menstrual cycle: Various events and its hormonal control

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Physics Daily Test 09	Electrostatic Potential and Capacitance:-Introduction, electrostatic potential, potential due to a point charge
Chemistry Daily Test 09	Solutions-Types of solutions, Expressing concentration of solutions. Solubility of a solid in a liquid and gas in a liquid (Henry-law)
Botany Daily Test 09	Sexual Reproduction in Organisms:-Outbreeding devices, Pollen-pistil interaction
Zoology Daily Test 09	Human Reproduction:-Capacitation and acrosomal reactions, Fertilisation fast block and slow block to prevent polyspermy, Embryonic development cleavage, morula, blastula and implantation
Physics Daily Test 10	Electrostatic Potential and Capacitance:-potential due to Different charge system
Chemistry Daily Test 10	Solutions-Vapour pressure of liquid solutions, Raoult's law for binary solutions. Ideal and non-ideal solutions
Botany Daily Test 10	Sexual Reproduction in Organisms:-Double fertilization, Post-fertilization structures and events - Endosperm
Zoology Daily Test 10	Human Reproduction:-Gastrulation, fate of three germinal layers, Pregnancy and embryonic development
Physics Daily Test 11	Electrostatic Potential and Capacitance:-potential due to a system of charges
Chemistry Daily Test 11	Solutions-Colligative properties and determination of molar mass : Relative lowering of vapour pressure, Elevation of boiling point, depression of freezing point, Osmosis and osmotic pressure, reverse osmosis
Botany Daily Test 11	Sexual Reproduction in Organisms:-Embryo development, Post fertilization, structure and events - Seed
Zoology Daily Test 11	Human Reproduction:-Major features, function and types of placenta
Physics Daily Test 12	Electrostatic Potential and Capacitance:-Equipotential surfaces
Chemistry Daily Test 12	Solutions-Abnormal molar masses and van't Hoff factor

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Botany Daily Test 12	Sexual Reproduction in Organisms:-Fruit; Apomixis and Polyembryony.
Zoology Daily Test 12	Human Reproduction:-Parturition and lactation
Physics Daily Test 13	Electrostatic Potential and Capacitance:-Potential energy of a system of charges, Potential energy in an external field
Chemistry Daily Test 13	Electrochemistry-Electrochemical cells, Galvanic cells : S.H.E and measurement of electrode potential, Nernst equation
Botany Daily Test 13	Principles of Inheritance & Variation:-Mendel's laws of inheritance - Dominance, Segregation
Zoology Daily Test 13	Reproductive Health:-Reproductive Health, Problems & Strategies, Population explosion, Human population growth
Physics Daily Test 14	Electrostatic Potential and Capacitance:-Electrostatics of conductors, dielectrics and polarization
Chemistry Daily Test 14	Electrochemistry-Equilibrium constant from Nernst equation, Gibbs free energy and electrochemical cell and Gibb's energy of the reaction
Botany Daily Test 14	Principles of Inheritance & Variation:-Explanation of the concept of dominance, Incomplete and co-dominance
Zoology Daily Test 14	Reproductive Health:-Methods of Birth control, Medical termination of pregnancy (MTP)
Physics Daily Test 15	Electrostatic Potential and Capacitance:-Capacitors and capacitance, The parallel plate capacitor
Chemistry Daily Test 15	Electrochemistry-Conductance of electrolytic solutions, measurement of the conductivity of ionic solutions
Botany Daily Test 15	Principle of inheritance and variation
Zoology Daily Test 15	Reproductive Health:-STD (Venereal Diseases), Infertility, ART (Assisted reproductive technology)
Physics Daily Test 16	Electrostatic Potential and Capacitance:-Effect of dielectrics on capacitance

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Chemistry Daily Test 16	Electrochemistry-Variation of conductivity and molar conductivity with dilution in case of strong electrolyte and weak electrolyte. Kohlrausch law
Botany Daily Test 16	Principles of Inheritance & Variation:-Multiple alleles, Pleiotropy, Inheritance of two genes, Law of independent assortment
Zoology Daily Test 16	Evolution: Theories & Evidences:-Origin of universe (Big bang theory) Solar system, Theories of origin of life: Panspermia theory, Abiogenesis theory, Theory of biogenesis
Physics Daily Test 17	Electrostatic Potential and Capacitance:-Combination of capacitors
Chemistry Daily Test 17	Electrochemistry-Electrolytic cells and electrolysis : Faraday laws of electrolysis. Products of electrolysis
Botany Daily test 17	Principles of Inheritance & Variation:-Complementary genes, Duplicate genes, Epistasis
Zoology Daily Test 17	Evolution: Theories & Evidences:-Chemical origin of life, Stanley Miller's experiment, Prebiotic system coacervate and microsphere, Geological time scale
Physics Daily Test 18	Electrostatic Potential and Capacitance:- Energy stored in a capacitor, Van de Graff Generator.
Chemistry Daily Test 18	Electrochemistry-Batteries : Primary and secondary batteries fuel cells. Corrosion
Botany Daily Test 18	Principles of Inheritance & Variation:-Polygenic inheritance, Chromosomal theory of inheritance
Zoology Daily Test 18	Evolution: Theories & Evidences:-Evidences of evolution – Palaentological, evolution of horse
Physics Daily Test 19	Current Electricity:-Introduction, Electric current, Electric currents in conductors. Ohm's law, Drift of electrons and the origin of resistivity
Chemistry Daily Test 19	Chemical Kinetics-Rate of a chemical reaction. Factors influencing rate of reactions. Rate expression and rate constant
Botany Daily Test 19	Principles of Inheritance & Variation:-Linkage and recombination
Zoology Daily Test 19	Evolution: Theories & Evidences:-Morphological and anatomical evidences of evolution-Homologous, analogous, Vestigial organs
Physics Daily Test 20	Current Electricity:-Limitations of Ohm's law, Resistivity of various material, Temperature dependence of resistivity, Electrical energy power
Chemistry Daily Test 20	Chemical Kinetics-Order and molecularity of a reaction, Integrated rate equations for zero and first order reactions. Half-life of a reaction

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Botany Daily Test 20	Principles of Inheritance & Variation:-Sex determination, Mutations - Gene mutation
Zoology Daily Test 20	Evolution: Theories & Evidences:-Evidences from: Connecting links, Embryological evidences, Biogeographical evidences, Adaptive radiation
Physics Daily Test 21	Current Electricity:-Combination of resistors, series and parallel
Chemistry Daily Test 21	Chemical Kinetics-Pseudo first order reaction. Temperature dependence of the rate of a reaction
Botany Daily Test 21	Principles of Inheritance & Variation:-Mutations - Chromosomal aberrations, Genomatic mutation
Zoology Daily Test 21	Evolution: Theories & Evidences:-Lamarck's theory, Darwin's theory-Darwin novelty
Physics Daily Test 22	Current Electricity:-Cells, emf. Internal resistance, cells in series and in parallel
Chemistry Daily Test 22	Chemical Kinetics-Effect of catalyst, Collision theory of chemical reactions & Assignments
Botany Daily Test 22	Principles of Inheritance & Variation:-Pedigree analysis, Cytoplasmic inheritance
Zoology Daily Test 22	Evolution: Theories & Evidences:-Mutation theory, Hardy Weinberg principle: Gene flow, Gene migration, Genetic drift, Mutation, genetic Recombination, Natural selection
Physics Daily Test 23	Current Electricity:-Kirchhoff's laws and its application
Chemistry Daily Test 23	Surface Chemistry-Adsorption vs Absorption, Mechanism of adsorption, Types of adsorption, Freundlich adsorption isotherm, Adsorption isobar
Botany Daily Test 23	Principles of Inheritance & Variation:-Genetic disorders - Mendelian and Chromosomal disorders.
Zoology Daily Test 23	Evolution: Theories & Evidences:-Speciation: Allo patric and sympatru, Brief account of evolution: Evolution of plant forms, Evolutionary history of vertebrates through geological period
Physics Daily Test 24	Current Electricity:-Wheatstone bridge, Meter Bridge
Chemistry Daily Test 24	Surface Chemistry-Homogeneous vs Heterogeneous catalysis, Different classification of colloids and their preparation methods

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Botany Daily Test 24	Molecular Basis of Inheritance:-Introduction, The DNA-structure of polynucleotide chain, Derivation of DNA structure, DNA packaging in prokaryotes
Zoology Daily Test 24	Evolution: Theories & Evidences:-Human evolution, Prior to Ape man, Ape man to prehistoric man, Prehistoric to modern man
Physics Daily Test 25	Current Electricity:-Potentiometer.
Chemistry Daily Test 25	Mechanical, Electrical and Optical properties of colloids, Emulsions
Botany Daily Test 25	Molecular Basis of Inheritance:-Packaging in eukaryotes, The search for genetic material, Transforming principle, Evidence from experiments with bacteriophage, Properties of genetic material,
Zoology Daily Test 25	Human Health & Disease:-Health-Variety types of diseases in Human-Bacterial, Viral
Physics Daily Test 26	Moving Charges and Magnetism:-Introduction, Magnetic force
Chemistry Daily Test 26	General Principles and Processes of Isolation of Elements-Occurrence of metals, Concentration of an ore (Physical and Chemical methods), Hydraulic washing, Magnetic separation, Froth floatation process
Botany Daily Test 26	Molecular Basis of Inheritance:-RNA world, Replication of DNA - The experimental proof, The machinery and enzymes.
Zoology Daily Test 26	Human Health & Disease:-Fungal: Ringworms, Helminthic: Ascariasis, Elephantiasis
Physics Daily Test 27	Moving Charges and Magnetism:-Motion in a magnetic field, Motion in combined Electric and Magnetic fields
Chemistry Daily Test 27	General Principles and Processes of Isolation of Elements-Leaching, Thermodynamic aspects of Metallurgy (Ellingham diagram), Extractive metallurgy
Botany Daily Test 27	Molecular Basis of Inheritance:-Transcription - Transcription unit, Types of RNAs
Zoology Daily Test 27	Human Health & Disease:-Protozoan: Life cycle of Plasmodium vivax and Entamoeba histolytica
Physics Daily Test 28	Moving Charges and Magnetism:-Biot-savart's law, Magnetic field on the axis of a circular current loop

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Chemistry Daily Test 28	General Principles and Processes of Isolation of Elements-Refining of metals, Extractive metallurgy, uses of Al, Cu, Zn and Fe
Botany Daily Test 28	Molecular Basis of Inheritance:-Process of Transcription in prokaryotes, Transcription in Eukaryotes
Zoology Daily Test 28	Human Health & Disease:-Types of Immunity-Innate and acquired, Humoral mediated Immunity
Physics Daily Test 29	Moving Charges and Magnetism:-Cyclotron, Magnetic field due to a current element
Chemistry Daily Test 29	p-Block Elements-Group-15 : N ₂ , NH ₃ , Oxides of Nitrogen, HNO ₃ , P-Allotropic forms, PH ₃ ,
Botany Daily Test 29	Molecular Basis of Inheritance:-Genetic code - Salient features
Zoology Daily Test 29	Human Health & Disease:-Cell Mediated Immunity, Active & Passive Immunity, Vaccination and Immunisation
Physics Daily Test 30	Moving Charges and Magnetism:-Ampere' Circuital Law, The solenoid and the toroid ,Force between two parallel currents, the ampere
Chemistry Daily Test 30	p-Block Elements-Ozone, Sulphur-Allotropic forms, Phosphorus halides, oxoacids of phosphorus, Group 16: O ₂ , simple oxides, compounds of sulphur
Botany Daily Test 30	Molecular Basis of Inheritance:-t-RNA - The adapter molecule, Translation.
Zoology Daily Test 30	Human Health & Disease:-Allergies, Auto immunity, Immune system of the body, Lymphoid organs: Primary and Secondary
Physics Daily Test 31	Moving Charges and Magnetism:-Torque on current loop, Magnetic dipole, Moving coil Galvanometer.
Chemistry Daily Test 31	p-Block Elements-Group 17 elements: Compounds of chlorine, oxoacids of halogens, interhalogen compounds. Group-18 : Physical properties of Inert gases, Xenon compounds
Botany Daily Test 31	Molecular Basis of Inheritance:-Regulation of gene expression, Operon concept
Zoology Daily Test 31	Human Health & Disease:-AIDS-Cause, Detection, Symptoms, Prevention
Physics Daily Test 32	Magnetism and Matter:-Introduction, The bar magnet, Magnetism and Gauss's Law

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Chemistry Daily Test 32	d & f-Block Elements-General properties of d-block elements, Preparation and properties and uses of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$
Botany Daily Test 32	Molecular Basis of Inheritance:-Human genome project - Goals, Methodologies, Salient features, Applications and Future challenges, DNA fingerprinting.
Zoology Daily Test 32	Human Health & Disease:-Cancer–Causes, detection & diagnosis, Treatment
Physics Daily Test 33	Magnetism and Matter:-The Earth's magnetism
Chemistry Daily Test 33	d & f-Block Elements-f-Block elements (General characteristic) and Lanthanoids contraction, The actinoids and some application of d and f block elements
Botany Daily Test 33	Strategies for Enhancement in Food Production:-Introduction, Plant breeding – Definition, Main steps
Zoology Daily Test 33	Human Health & Disease:-Alcohol and Tobacco Opioids, Cannabinoids, Sedatives, Hallucinogens, Stimulants, Primary and Secondary
Physics Daily Test 34	Magnetism and Matter:-Tangent Law and its applications
Chemistry Daily Test 34	Coordination Compounds-Werner's theory of coordination compounds, Definition of some important terms pertaining to coordination compounds, Nomenclature of coordination compounds, Isomerism in coordination compounds
Botany Daily Test 34	Strategies for Enhancement in Food Production:-Green revolution, Plant breeding for disease resistance, Plant breeding for resistance to insect pests, Improved food quality, Anti nutritional factors, Single cell protein, Green manure, Energy crops, Petroleum plants,
Zoology Daily Test 34	Human Health & Disease:-Adolescence, Addiction & dependence, Effects of drugs & alcohol abuse, Prevention & control
Physics Daily Test 35	Magnetism and Matter:-Magnetization and magnetic intensity, Magnetic properties of materials, Permanent magnets and electromagnets
Chemistry Daily Test 35	Coordination Compounds-Valence bond theory of complex compounds, Crystal field theory colour of coordination complexes
Botany Daily Test 35	Strategies for Enhancement in Food Production:-Tissue culture – Definition, Environmental conditions, Types, Applications
Zoology Daily Test 35	Animal Husbandry:-Dairy farm management, Poultry farm management, Indigenous & exotic breeds, Bacterial, Viral & Fungal disease

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

Test Name	Test Syllabus
Physics Daily Test 36	Electromagnetic induction:-Introduction, the experiments of Faraday and Henry, Magnetic Flux, Faraday's laws of induction, Lenz's law and conservation of energy, Motional electromotive force
Chemistry Daily Test 36	Coordination Compounds-Bonding in metal carbonyls & organometallics, Stability of coordination compounds, Importance & Application of coordination compounds
Botany Daily Test 36	Microbes in Human Welfare:-Introduction, Microbes in household products, Industrial products.
Zoology Daily Test 36	Animal Husbandry:-Live stocks, Animal Breeding, Inbreeding, Outbreeding, Out crossing, Cross breeding, Interspecific hybridisation, MOET, Artificial Insemination
Physics Daily Test 37	Electromagnetic induction:-Energy consideration, A quantitative study Eddy currents, Electromagnetic induction:-Inductance,
Botany Daily Test 37	Microbes in Human Welfare:-Microbes in sewage treatment, Biogas production,
Zoology Daily Test 37	Animal Husbandry:-Bee keeping, Sericulture, Aqua culture (Fisheries)
Physics Daily Test 38	Alternating Current:-Introduction AC voltage applied to a resistor representation of AC current and voltage by rotating vectors -phasors, AC voltage applied to an inductor, AC voltage applied to a capacitor
Botany Daily Test 38	Microbes in Human Welfare:-Biocontrol agents, Biofertilizers.
Zoology Daily Test 38	Biotechnology-Principles and Processes:-Biotechnology-Principles, Tools of recombinant DNA technology
Physics Daily Test 39	Alternating Current:-AC voltage applied to a series LCR circuit, Power in AC circuit, The power factor, LC Oscillations, transformers.
Botany Daily Test 39	Organisms and Populations:-Introduction, Levels of organisation, Major biomes.
Zoology Daily Test 39	Biotechnology-Principles and Processes:-Separation and Isolation of DNA fragments Cloning vectors, Competent host
Botany Daily Test 40	Organisms and Populations:-Abiotic Factors - Temperature, Light, Water, Soil
Zoology Daily Test 40	Biotechnology-Principles and Processes:- Processes of recombinant DNA technology
Botany Daily Test 41	Organisms and Populations:-Response to abiotic factors, Adaptations

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 1 – APRIL)

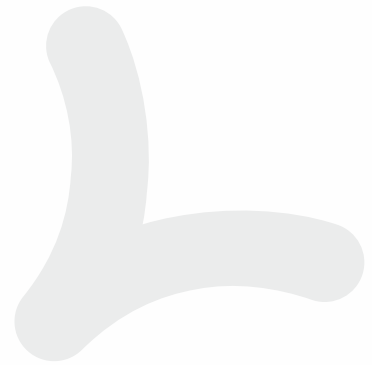
Test Name	Test Syllabus
Zoology Daily Test 41	Biotechnology and its Applications:-Biotechnological applications in agriculture–Bt cotton, Pest resistant plants
Botany Daily Test 42	Organisms and Populations:-Population – characteristics, growth, growth models
Zoology Daily Test 42	Biotechnology and its Applications:-Biotechnological applications in medicine–Genetically engineered insulin, Gene Therapy, Molecular Diagnosis
Botany Daily Test 43	Organisms and Populations:-Population interactions.
Zoology Daily Test 43	Biotechnology and its Applications:-Transgenic Animals, Ethical Issues, Biopiracy
Botany Daily Test 44	Ecosystem:-Introduction, Types of ecosystem, Components of ecosystem, Ecosystem structure, Productivity and decomposition.
Zoology Daily Test 44	Revision Test
Botany Daily Test 45	Ecosystem:-Energy flow, Ecological pyramids, Nutrient cycling
Botany Daily Test 46	Ecosystem:-Ecological succession, Ecosystem services.
Botany Daily Test 47	Biodiversity and Conservation:-Introduction, Levels of biodiversity, How many species are there on earth and how many in India?, Patterns of biodiversity, Importance of biodiversity to the ecosystem.
Botany Daily Test 48	Biodiversity and Conservation:-Loss of biodiversity and its conservation.
Botany Daily Test 49	Environmental Issues:-Introduction, Air pollution and its control
Botany Daily Test 50	Environmental Issues:-Noise pollution, Water pollution and its control, Solid waste., Agrochemicals and their effects, Radioactive pollution
Botany Daily Test 51	Environmental Issues:-Greenhouse effect and global warming, Ozone depletion, Degradation by improper resource utilization and maintenance, Deforestation.

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 2 – SEPTEMBER)

Test Name	Test Syllabus
Chemistry Daily Test 37	Haloalkanes and Haloarenes-Classification of Halogen compounds, Nomenclature of Halogen compounds, Nature of C-X bond and methods of preparation of Haloalkanes & Haloarenes
Chemistry Daily Test 38	Haloalkanes and Haloarenes-Physical properties of Haloalkanes, optical activity, Nucleophilic substitution reactions of haloalkanes
Chemistry Daily Test 39	Haloalkanes and Haloarenes-Elimination reactions in haloalkanes, Elimination versus substitution, Reactions of R-X with Na
Physics Daily Test 40	Electromagnetic Waves:-Introduction, Displacement currents, Electromagnetic waves, Electromagnetic spectrum,
Chemistry Daily Test 40	Haloalkanes and Haloarenes-Aromatic nucleophilic substitution, Elimination addition Reaction, Electrophilic substitution of ArX, Polyhalogen compounds
Physics Daily Test 41	Ray Optics & Optical Instruments:- Introduction, Reflection of light spherical mirrors, Refraction
Chemistry Daily Test 41	Alcohols, Phenols and Ethers-Common and IUPAC names of alcohols and ethers, Preparation of aliphatic alcohols
Physics Daily Test 42	Ray Optics & Optical Instruments:-Total internal reflection, Refraction at spherical surface, Refraction through lenses
Chemistry Daily Test 42	Alcohols, Phenols and Ethers-Preparation of aromatic alcohols and Physical properties, Chemical reactions of alcohols, phenols
Physics Daily Test 43	Ray Optics & Optical Instruments:-Refraction through a prism, Dispersion by prism, some natural phenomena due to sunlight, Optical instruments – The eye, microscope
Chemistry Daily Test 43	Alcohols, Phenols and Ethers-Preparation of ethers, Physical properties of ethers, Chemical properties of ethers, Some commercially important alcohols and ethers
Physics Daily Test 44	Ray Optics & Optical Instruments:- Optical instruments – Telescope, microscope
Chemistry Daily Test 44	Aldehydes, Ketones and Carboxylic Acids-Nomenclature of Aldehydes and Ketones. Structure of carbonyl group, Preparation of Aldehydes & Ketones
Physics Daily Test 45	Wave Optics:-Introduction, Huygens Principle, Refraction and Reflection of plane waves using Huygens principle, Coherent and incoherent addition of waves, Interference of light waves
Chemistry Daily Test 45	Aldehydes, Ketones and Carboxylic Acids-Physical properties of aldehydes and ketones. Nucleophilic addition reactions

DAILY TEST SCHEDULE & SYLLABUS (VOLUME 2 – SEPTEMBER)

Test Name	Test Syllabus
Physics Daily Test 46	Wave Optics:- Young's experiment, Diffraction, Polarization.
Chemistry Daily Test 46	Aldehydes, Ketones and Carboxylic Acids-Nucleophilic addition reaction followed by elimination, Reduction & oxidation reactions of aldehydes & ketones
Physics Daily Test 47	Dual Nature of Radiation and Matter:-Introduction, electron emission, photoelectric effect, experimental study of photoelectric effect, photoelectric effect and wave theory of light Einstein's photoelectric equation, energy quantum of radiation, particle nature of light the photons
Chemistry Daily Test 47	Aldehydes, Ketones and Carboxylic Acids-, Halogenation & Reaction with alkalies, Nomenclature of carboxylic acids, Preparation of carboxylic acids, Physical & Chemical properties of Carboxylic acids
Physics Daily Test 48	Dual Nature of Radiation and Matter:-Wave nature of matter, Davisson and Germer Experiment.
Chemistry Daily Test 48	Amines-Amines : Structure, Nomenclature and preparation of amines
Physics Daily Test 49	Atoms:-Introduction, alpha particle scattering and Rutherford's nuclear model of atom, Atomic spectra, Bohr model of the hydrogen atom, the line spectra of the hydrogen atom, de Broglie's explanation of Bohr's second postulate quantization
Chemistry Daily Test 49	Amines- Chemical reactions of aliphatic and aromatic amines; Diazonium salts
Physics Daily Test 50	Nuclei:-Introduction, Atomic masses and composition of nucleus, size of the nucleus, Mass energy and nuclear binding energy, Nuclear force, Radioactivity, Nuclear energy.
Chemistry Daily Test 50	Biomolecules-Carbohydrates, Amino acids
Physics Daily Test 51	Semiconductor:-Introduction, Classification of metals conductors and semiconductors, Intrinsic semiconductor, Extrinsic semiconductors P – N, semiconductor diode, Application of junction diode as a rectifier special purpose P–N junction diodes
Chemistry Daily Test 51	Polymers-Types of polymerisation, classification and monomers of different polymers
Chemistry Daily Test 52	Polymers-Biodegradable polymer and polymers of commercial importance
Chemistry Daily Test 53	Chemistry in Everyday Life-Chemistry in Everyday Life



Summary for Class XI & XII

RANKER PACKAGE	
Year Syllabus	Class XI & XII
AIATS	15
Unit Tests	12
Part Tests	4
Cumulative Tests	2
Full Syllabus Tests	7
Daily Practice Tests	490