



# Aakash



## > Joint Package Schedule (For Class XI Students 2023-24)

### Study Material

Dispatch	Dispatch Date	Day	Details
1	10-04-2023	Monday	Orientation Study Package (XI Studying) Study Package-1 Class XI (PCBZ)
2	24-04-2023	Monday	Study Package-2 of Class XI (PCBZ)
3	29-05-2023	Monday	Study Package-3 of Class XI (PCBZ)
4	10-07-2023	Monday	Study Package-4 of Class XI (PCBZ)
5	14-08-2023	Monday	Study Package-5 (PCBZ) of Class XI
6	04-09-2023	Monday	Study Package-6 (PC) of Class XI

### Test Schedule (Online) Class XI (1st Year)

Test	Date	Day	TOPIC
UT -1	27-05-2023	Saturday	<b>Physics</b> - Physical World, Units & Measurements, Motion in a Straight Line <b>Chemistry</b> - Some Basic Concepts of Chemistry <b>Botany</b> - Cell: The Unit of Life <b>Zoology</b> - Structural Organisation in Animals - Animal Tissues, Biomolecules
UT -2	10-06-2023	Saturday	<b>Physics</b> - Motion in a Plane, Laws of Motion <b>Chemistry</b> - Structure of Atom, Classification of Elements and Periodicity in Properties <b>Botany</b> - Cell Cycle and Cell Division, The Living World <b>Zoology</b> - Digestion and Absorption, Breathing and Exchange of Gases
PT-1	01-07-2023	Saturday	Test on Topics covered in Unit Test -1 & Unit Test -2
UT -3	19-08-2023	Saturday	<b>Physics</b> - Work, Energy and Power, System of Particles and Rotational Motion <b>Chemistry</b> - Chemical Bonding and Molecular Structure, States of Matter, Thermodynamics <b>Botany</b> - Biological Classification, Morphology of Flowering Plants, Anatomy of Flowering Plants, Plant Kingdom <b>Zoology</b> - Body Fluids and Circulation, Excretory Products and their Elimination, Locomotion and Movement, Neural Control and Coordination
UT -4	09-09-2023	Saturday	<b>Physics</b> - Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids <b>Chemistry</b> - Equilibrium, Redox Reactions <b>Botany</b> - Transport in Plants, Mineral Nutrition, Photosynthesis in Higher Plants <b>Zoology</b> - Chemical Coordination and Integration, Animal Kingdom- General Account and Non-Chordates
PT-2	23-09-2023	Saturday	Test on Topics covered in Unit Test -3 & Unit Test -4



## ➤ Joint Package Schedule (For Class XI Students 2023-24)

### Test Package Section B

Test	Date	Day	TOPIC
CT-1	07-10-2023	Saturday	Test on Topics covered in Unit Test -1 to Unit Test -3
UT-5	26-11-2023	Sunday	<b>Physics</b> - Thermal Properties of Matter, Thermodynamics, Kinetic Theory <b>Chemistry</b> - The p-Block Elements (XI) Group (13 & 14) <b>Botany</b> - Respiration in Plants, Plant Growth and Development <b>Zoology</b> - Animal Kingdom - Chordates, Structural Organisation in Animals - Animal Morphology (Frog, Cockroach, Earthworm)
UT-6	16-12-2023	Saturday	<b>Physics</b> - Oscillations, Waves <b>Chemistry</b> - Organic Chemistry - Some Basic Principles and Techniques, Hydrocarbons <b>Botany</b> - Photosynthesis in Higher Plants, Respiration in Plants, Plant Growth and Development <b>Zoology</b> - Breathing and Exchange of Gases, Body Fluids and Circulation, Excretory Products and their Elimination, Locomotion and Movement, Neural Control and Coordination
PT-3	03-01-2024	Wednesday	<b>Physics</b> - Thermal Properties of Matter, Thermodynamics, Kinetic Theory, Oscillations, Waves <b>Chemistry</b> - The p-Block Elements (XI), Organic Chemistry - Some Basic Principles and Techniques, Hydrocarbons <b>Botany</b> - Respiration in Plants, Plant Growth and Development, Photosynthesis in Higher Plants <b>Zoology</b> - 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
CT-2	06-01-2024	Saturday	<b>Physics</b> - Gravitation, Mechanical Properties of Solids, Mechanical Properties of Fluids, Thermal Properties of Matter, Thermodynamics, Kinetic Theory, Oscillations, Waves <b>Chemistry</b> - Equilibrium, Redox Reactions, The p-Block Elements (XI), Organic Chemistry - Some Basic Principles and Techniques, Hydrocarbons <b>Botany</b> - Photosynthesis in Higher Plants, Respiration in Plants, Plant Growth and Development <b>Zoology</b> - 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
FST-1	13-01-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI)
FST-2	20-01-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI)
FST-3	27-01-2024	Saturday	Updated Complete Syllabus Test - NEET-2024 Pattern (Class XI)

UT- Unit Test | PT- Part Test | CT- Cumulative Test | FST- Full Syllabus Test  
The Schedule for 2nd Year (Class XII) shall be provided in April, 2024

# AIATS SCHEDULE

## FOR CLASS XI (Phase-01 & 02)

### STUDYING STUDENTS (2023-24)



Version 3.0  
Release Date : 12-10-2023

Test No.	Test Date	Date of Display of Answer Key	Result Date	Subject	Topics
Practice Test-1 Online	13.08.2023	NA	Practice Test Results can be viewed after submission of Test	Phy.	Physical World, Units & Measurements, Motion in a Straight Line
				Chem.	Some Basic Concepts of Chemistry, Structure of Atom
				Bio.	Cell: The Unit of Life, Cell Cycle & Cell Division, Structural Organisation in Animals: Animal tissues only, Biomolecules
1.	20.08.2023	22.08.2023	25.08.2023	Phy.	Physical World, Units & Measurements, Motion in a Straight Line
				Chem.	Some Basic Concepts of Chemistry, Structure of Atom
				Bio.	Cell: The Unit of life, Cell Cycle & Cell division, Structural Organisation in Animals: Animal tissues only, Biomolecules
2.	29.10.2023	31.10.2023	03.11.2023	Phy.	Motion in a Plane
				Chem.	Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure
				Bio.	The Living World, Biological Classification, Breathing & Exchange of Gases
3.	10.12.2023	12.12.2023	15.12.2023	Phy.	Laws of Motion, Work, Energy and Power
				Chem.	Thermodynamics, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure
				Bio.	Morphology of Flowering Plants, Anatomy of Flowering Plants, Body Fluids and Circulation, Excretory Products and Their Elimination
4.	21.01.2024	23.01.2024	27.01.2024	Phy.	System of Particles & Rotational Motion, Gravitation
				Chem.	Equilibrium, Redox Reactions
				Bio.	Plant Kingdom, Locomotion and Movement, Neural Control and Coordination-I (CNS, PNS, ANS)
5.	25.02.2024	27.02.2024	02.03.2024	Phy.	Mechanical Properties of Solids, Mechanical Properties of Fluids, Thermal Properties of Matter
				Chem.	The p-Block Elements (Group 13 & 14), Equilibrium, Redox Reactions
				Bio.	Photosynthesis in Higher Plants, Neural Control & coordination-II (Sense organs), Chemical Coordination and Integration
6.	10.03.2024	12.03.2024	15.03.2024	Phy.	Thermodynamics, Kinetic Theory, Oscillations, Waves
				Chem.	Organic Chemistry-Some Basic Principles & Techniques, Hydrocarbons
				Bio.	Respiration in Plants, Plant Growth & Development, Animal Kingdom and Structural Organisation in Animal: Animal Morphology (Cockroach, Frog & Earthworm)
7.	24.03.2024	26.03.2024	29.04.2024	PCB	Complete Syllabus Test of Class XI (Updated NEET-2024 Syllabus)
8.	07.04.2024	09.04.2024	12.04.2024	PCB	Complete Syllabus Test of Class XI (Updated NEET-2024 Syllabus)

Test Duration : 200 Minutes

Students can find Answer Key & Text Solutions in their AESL account on [www.aakash.ac.in](http://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 20th August 2023, then the test shall be made live at 10:00 AM on 20th August and will be available till 10:00 AM on 22nd 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	<b>Physical World:-</b> What is physics, Scope & Excitement of physics, Physics technology and society
Chemistry Daily Test 01	<b>Some Basic Concepts of Chemistry:-</b> 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	<b>Cell: The Unit of Life:-</b> Introduction, What is a cell?, Cell theory, An overview of cell, Prokaryotic cell-structure, Gram staining, Eukaryotic cell structure
Zoology Daily Test 01	<b>Structural Organisation in Animals–Animal Tissues:-</b> Epithelial Tissue: General features, basement membrane, types of Epithelial tissues-Simple.
Physics Daily Test 02	<b>Physical World:-</b> Fundamental forces in nature, Nature of physical laws,
Chemistry Daily Test 02	<b>Some Basic Concepts of Chemistry:-</b> Laws of chemical combination : Law of conservation of mass, Law of definite proportions, Law of multiple proportions
Botany Daily Test 02	<b>Cell: The Unit of Life:-</b> Difference between prokaryotic and eukaryotic cell, difference between plant cell and animal cell, plasma membrane
Zoology Daily Test 02	<b>Structural Organisation in Animals–Animal Tissues:-</b> Compound Epithelium, specialized epithelial tissues, glandular epithelium, Types of simple & compound gland
Physics Daily Test 03	<b>Units &amp; Measurements:-</b> Introduction, International system of units, Measurement of length, Mass, Time.
Chemistry Daily Test 03	<b>Some Basic Concepts of Chemistry:-</b> Gay lussac's law of gaseous volumes, Avogadro law, Dalton's atomic theory.
Botany Daily Test 03	<b>Cell: The Unit of Life:-</b> Cell wall, endomembrane system– endoplasmic reticulum, golgi body
Zoology Daily Test 03	<b>Structural Organisation in Animals–Animal Tissues:-</b> 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	<b>Units &amp; Measurements:-</b> Accuracy, Precision of instruments
Chemistry Daily Test 04	<b>Some Basic Concepts of Chemistry:-</b> Atomic and molecular masses : Atomic mass, Average atomic mass, Molecular mass, Formula mass
Botany Daily Test 04	<b>Cell: The Unit of Life:-</b> Lysosome, Vacuole; Mitochondria, Plastid
Zoology Daily Test 04	<b>Structural Organisation in Animals–Animal Tissues:-</b> 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	<b>Units &amp; Measurements:-</b> Errors in measurements
Chemistry Daily Test 05	<b>Some Basic Concepts of Chemistry:-</b> Mole concept
Botany Daily Test 05	<b>Cell: The Unit of Life:-</b> Ribosome, Cytoskeleton, Centrosome and centrioles, Cilia and flagella
Zoology Daily Test 05	<b>Structural Organisation in Animals–Animal Tissues:-</b> 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	<b>Units &amp; Measurements:-</b> Significant figures
Chemistry Daily Test 06	<b>Some Basic Concepts of Chemistry:-</b> Percentage composition, Empirical formula
Botany Daily Test 06	<b>Cell: The Unit of Life:-</b> Nucleus, Chromosomes, Microbodies.
Zoology Daily Test 06	<b>Structural Organisation in Animals–Animal Tissues:-</b> 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	<b>Units &amp; Measurements:-</b> Dimensions of physical quantities
Chemistry Daily Test 07	<b>Some Basic Concepts of Chemistry:-</b> Stoichiometry and Stoichiometric calculations.
Botany Daily Test 07	<b>Cell Cycle &amp; Cell Division:-</b> Introduction, Cell cycle–phases of cell cycle, Mitosis–definition
Zoology Daily Test 07	<b>Biomolecules:-</b> Primary and secondary metabolites, Carbohydrates, Saccharides, Monosaccharides, Triose, Pentose, Hexose, Heptose, Derivatives of monosaccharides, Oligosaccharides, Functions of small carbohydrates
Physics Daily Test 08	<b>Units &amp; Measurements:-</b> Dimensional formula & dimensional equations, Dimensional analysis and its applications.
Chemistry Daily Test 08	<b>Some Basic Concepts of Chemistry:-</b> Calculations regarding limiting reagents
Botany Daily Test 08	<b>Cell Cycle &amp; Cell Division:-</b> Karyokinesis, cytokinesis, significance, Meiosis–definition
Zoology Daily Test 08	<b>Biomolecules:-</b> Polysaccharides-homopolysaccharides & heteropolysaccharides storage & structural polysaccharides
Physics Daily Test 09	<b>Motion in a Straight Line :-</b> Introduction, Position, Path length and displacement, Average velocity & average speed.
Chemistry Daily Test 09	<b>Some Basic Concepts of Chemistry:-</b> Reactions in solutions : Mass percentage or weight percentage, Mole-fraction, Molarity, Molality
Botany Daily Test 09	<b>Cell Cycle &amp; Cell Division:-</b> Meiosis-I, Meiosis-II, significance of meiosis
Zoology Daily Test 09	<b>Biomolecules:-</b> 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	<b>Motion in a Straight Line :-</b> Differential calculus
Chemistry Daily Test 10	<b>Some Basic Concepts of Chemistry:-</b> Molarity, Molality
Botany Daily Test 10	<b>The living world:-</b> Introduction, What is living?, Characteristics of living beings
Zoology Daily Test 10	<b>Biomolecules:-</b> Lipids: Structure and classification of lipids, simple lipids, conjugated lipids, derived lipids, functions of lipids
Physics Daily Test 11	<b>Motion in a Straight Line :-</b> Applications of differential calculus
Chemistry Daily Test 11	<b>Structure of Atom:-</b> 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	<b>The living world:-</b> Diversity in the living world, Nomenclature, Need for classification, Classification -Taxonomy, Systematics
Zoology Daily Test 11	<b>Biomolecules:-</b> 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	<b>Motion in a Straight Line :-</b> Integral calculus
Chemistry Daily Test 12	<b>Structure of Atom:-</b> Particle nature of electromagnetic radiation : Plank's quantum theory, Photoelectric effect, Dual behaviour of electromagnetic radiation.
Botany Daily Test 12	<b>The living world:-</b> Taxonomic categories
Zoology Daily Test 12	<b>Biomolecules:-</b> 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	<b>Motion in a Straight Line :-</b> Applications of Integral calculus
Chemistry Daily Test 13	<b>Structure of Atom:-</b> Emission and absorption spectra, Line spectrum of hydrogen, Bohr's model for hydrogen atom, Explanation of Bohr's model.
Botany Daily Test 13	<b>The living world:-</b> Taxonomic categories, Taxonomical aids- Herbarium,
Zoology Daily Test 13	<b>Biomolecules:-</b> 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	<b>Motion in a Straight Line :-</b> Graphs (slope, area etc.)
Chemistry Daily Test 14	<b>Structure of Atom:-</b> Dual behaviour of matter, Heisenberg's uncertainty principle, Significance of uncertainty principle, Reason for the failure of the Bohr model.
Botany Daily Test 14	<b>The living world:-</b> Botanical gardens, Museum, Zoological parks, Key, Flora, Manual, Monographs, Catalogues.
Zoology Daily Test 14	<b>Digestion &amp; Absorption:-</b> 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	<b>Motion in a Straight Line :-</b> Instantaneous velocity & speed, acceleration
Chemistry Daily Test 15	<b>Structure of Atom:-</b> 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	<b>Biological Classification:-</b> Introduction, Kingdom system of classification- two kingdom, three kingdom, four kingdom, five kingdom
Zoology Daily Test 15	<b>Digestion &amp; Absorption:-</b> 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	<b>Motion in a Straight Line :-</b> Kinematic equations for uniformly accelerated motion.
Chemistry Daily Test 16	<b>Structure of Atom:-</b> Shapes of atomic orbitals, Energies of orbitals, Filling of orbitals in atom : Aufbau principle
Botany Daily Test 16	<b>Biological Classification:-</b> Six kingdom, Domains of life, Kingdom Monera- Characters of monera, Shape of bacteria, Bacterial Life process - Respiration, Nutrition
Zoology Daily Test 16	<b>Digestion &amp; Absorption:-</b> Pancreas: External structure, internal structure, Intestinal glands, Digestion of carbohydrates in the alimentary canal.
Physics Daily Test 17	<b>Motion in a Straight Line :-</b> Motion under gravity
Chemistry Daily Test 17	<b>Structure of Atom:-</b> Pauli exclusion principle, Hund's rule of maximum multiplicity
Botany Daily Test 17	<b>Biological Classification:-</b> Reproduction- Asexual, Sexual recombination
Zoology Daily Test 17	<b>Digestion &amp; Absorption:-</b> Digestion of proteins: Action of gastric juice, pancreatic juice, intestinal juice, Digestion of lipids-emulsification & digestion, Digestion of nucleic acids
Physics Daily Test 18	<b>Motion in a Straight Line :-</b> Relative velocity
Chemistry Daily Test 18	<b>Structure of Atom:-</b> Electronic configuration of atoms, Stability of completely filled and half filled sub-shells.
Botany Daily Test 18	<b>Biological Classification:-</b> Economic importance of bacteria, Archaeobacteria-methanogens, halophiles, thermoacidophiles
Zoology Daily Test 18	<b>Digestion &amp; Absorption:-</b> 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	<b>Motion in a Plane :-</b> 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	<b>Classification of Elements and Periodicity in Properties:-</b> 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	<b>Biological Classification:-</b> Eubacteria – Cyanobacteria, Mycoplasma.
Zoology Daily Test 19	<b>Breathing &amp; Exchange of Gases:-</b> Respiratory passage, structure of larynx, sound production, lungs, pleurae, external structure of lungs, Internal structure, alveoli.
Physics Daily Test 20	<b>Motion in a Plane :-</b> Resolution of vectors
Chemistry Daily Test 20	<b>Classification of Elements and Periodicity in Properties:-</b> Trends in physical properties : Atomic radius, Ionic radius, Ionisation enthalpy, Electron gain enthalpy, Electronegativity.
Botany Daily Test 20	<b>Biological Classification:-</b> Protista-General characters, Chrysophytes, Dinoflagellates, Euglenoids
Zoology Daily Test 20	<b>Breathing &amp; Exchange of Gases:-</b> Mechanism of breathing-Inspiration, expiration, thoracic & abdominal breathing, Respiratory/Pulmonary volumes/Respiratory capacities
Physics Daily Test 21	<b>Motion in a Plane :-</b> Vector addition–analytical method.
Chemistry Daily Test 21	<b>Classification of Elements and Periodicity in Properties:-</b> Periodic trends in chemical properties : Oxidation states, Anomalous properties of second period elements. Periodic trends and chemical reactivity.
Botany Daily Test 21	<b>Biological Classification:-</b> Slime moulds, Protozoans-major groups with some salient features
Zoology Daily Test 21	<b>Breathing &amp; Exchange of Gases:-</b> Exchange of gases between alveoli & blood; exchange of gases between blood & tissue cells.
Physics Daily Test 22	<b>Motion in a Plane :-</b> Motion in plane, Motion in a plane with constant acceleration.
Chemistry Daily Test 22	<b>Chemical Bonding and Molecular Structure:-</b> Kossel-Lewis approach to chemical bonding, Octet rule, Covalent bond, Lewis representation of simple molecules, Formal charge
Botany Daily Test 22	<b>Biological Classification:-</b> Fungi-general characters
Zoology Daily Test 22	<b>Breathing &amp; Exchange of Gases:-</b> 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	<b>Motion in a Plane :-</b> Relative velocity in two dimensions.
Chemistry Daily Test 23	<b>Chemical Bonding and Molecular Structure:-</b> Limitations of octet rule : Incomplete octet of the central atom, odd-electron molecule, The expanded octet.
Botany Daily Test 23	<b>Biological Classification:-</b> Reproduction in fungi
Zoology Daily Test 23	<b>Breathing &amp; Exchange of Gases:-</b> Regulation of respiration: Neural regulation, chemical regulation, Respiratory disorders, Bronchitis, Asthma, Emphysema, Occupational respiratory disorder
Physics Daily Test 24	<b>Motion in a Plane :-</b> Projectile motion – Equation of path of projectile. Relative velocity
Chemistry Daily Test 24	<b>Chemical Bonding and Molecular Structure:-</b> Ionic or electrovalent bond, Lattice enthalpy bond parameters : Bond length, Bond angles, Bond enthalpy
Botany Daily Test 24	<b>Biological Classification:-</b> Characters of different classes of fungi - Phycomycetes, Ascomycetes
Zoology Daily Test 24	<b>Body Fluids &amp; Circulation:-</b> Fluid connective tissue–Blood & composition of blood-blood cells & plasma, blood coagulation, clotting factors, lymph
Physics Daily Test 25	<b>Motion in a Plane :-</b> Projectile motion – Relative velocity, Maximum height of projectile, Horizontal range of projectile.
Chemistry Daily Test 25	<b>Chemical Bonding and Molecular Structure:-</b> Bond-order, Resonance structures
Botany Daily Test 25	<b>Biological Classification:-</b> Basidiomycetes, Salient features of Agaricus & Puccinia, Deuteromycetes
Zoology Daily Test 25	<b>Body Fluids &amp; Circulation:-</b> 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	<b>Motion in a Plane :-</b> Uniform circular motion.
Chemistry Daily Test 26	<b>Chemical Bonding and Molecular Structure:-</b> Polarity of bonds : Dipole moment, Percentage ionic character, The valence shell electron pair repulsion theory.
Botany Daily Test 26	<b>Biological Classification:-</b> Virus–introduction, discovery, structural components, Structure of some viruses (TMV, bacteriophages)
Zoology Daily Test 26	<b>Body Fluids &amp; Circulation:-</b> 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	<b>Law of Motion :-</b> Introduction, Aristotle's fallacy, The law of inertia, Newton's first law of motion
Chemistry Daily Test 27	<b>Chemical Bonding and Molecular Structure:-</b> Valence bond theory : Orbital overlap concept, Directional properties of bonds, Overlapping of atomic orbitals
Botany Daily Test 27	<b>Biological Classification:-</b> Reproduction in virus, Diseases, Sub-viral agents – Viroids, Virusoids, Prions; Lichens, Mycorrhiza
Zoology Daily Test 27	<b>Body Fluids &amp; Circulation:-</b> Double circulation, heart beat, regulation of heart beat- Neural regulation, hormonal regulation
Physics Daily Test 28	<b>Law of Motion :-</b> Momentum, Conservation of momentum (Rocket Propulsion)
Chemistry Daily Test 28	<b>Chemical Bonding and Molecular Structure:-</b> Types of overlapping and nature of covalent bonds. Strength of s & p-bonds.
Botany Daily Test 28	<b>Morphology of Flowering Plants:-</b> Introduction, Root–types, function, regions, modifications
Zoology Daily Test 28	<b>Body Fluids &amp; Circulation:-</b> 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	<b>Law of Motion :-</b> Newton's 2nd law of motion
Chemistry Daily Test 29	<b>Chemical Bonding and Molecular Structure:-</b> Hybridisation : Features and conditions, Types of hybridisation : sp, sp <sup>2</sup> , sp <sup>3</sup> , dsp <sup>2</sup> , sp <sup>3</sup> d, sp <sup>3</sup> d <sup>2</sup> and hybridisation.
Botany Daily Test 29	<b>Morphology of Flowering Plants:-</b> Introduction of stem, bud, function of stem, modification of stem
Zoology Daily Test 29	<b>Excretory Products &amp; their Elimination:-</b> 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	<b>Law of Motion :-</b> Newton's third law of motion, Equilibrium of a particle
Chemistry Daily Test 30	<b>Chemical Bonding and Molecular Structure:-</b> Molecular orbital theory : Features, Linear combination of atomic orbitals, Conditions for the combination of atomic orbitals, Types of molecular orbitals.
Botany Daily Test 30	<b>Morphology of Flowering Plants:-</b> 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	<b>Excretory Products &amp; their Elimination:-</b> 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	<b>Law of Motion:-</b> Common forces in mechanics
Chemistry Daily Test 31	<b>Chemical Bonding and Molecular Structure:-</b> Energy level diagram for molecular orbitals, Electronic configuration and molecular behaviour, Bonding in some homonuclear diatomic molecules, Hydrogen bonding.
Botany Daily Test 31	<b>Morphology of Flowering Plants:-</b> Inflorescence – racemose and cymose, Flowers-terminology, symmetry
Zoology Daily Test 31	<b>Excretory Products &amp; their Elimination:-</b> 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	<b>Law of Motion :-</b> Friction
Chemistry Daily Test 32	<b>States of Matter:-</b> Intermolecular forces : London forces, Dipole-dipole forces, Dipole-induced dipole forces, Intermolecular forces vs thermal interactions
Botany Daily Test 32	<b>Morphology of Flowering Plants:-</b> Position of floral parts on thalamus, parts of flower (calyx and corolla), aestivation
Zoology Daily Test 32	<b>Excretory Products &amp; their Elimination:-</b> 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	<b>Law of Motion :-</b> Circular motion.
Chemistry Daily Test 33	<b>States of Matter:-</b> The gaseous state : Boyle's law, Charle's law, Gay Lussac' law, Avogadro law
Botany Daily Test 33	<b>Morphology of Flowering Plants:-</b> Androecium- adhesion, cohesion; Gynoecium, Placentation
Zoology Daily Test 33	<b>Excretory Products &amp; their Elimination:-</b> 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	<b>Law of Motion :-</b> Solving problems in mechanics.

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

Test Name	Test Syllabus
Chemistry Daily Test 34	<b>States of Matter:-</b> Ideal gas equation, Dalton's law of partial pressures, Graham's law of diffusion
Botany Daily Test 34	<b>Morphology of Flowering Plants:-</b> Fruits–parts, types, edible parts
Zoology Daily Test 34	<b>Locomotion &amp; Movement:-</b> 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	<b>Work, Energy &amp; Power:-</b> Introduction, Scalar Product. Notions of work & kinetic energy, The work-energy theorem, Work, Kinetic energy
Chemistry Daily Test 35	<b>States of Matter:-</b> Kinetic molecular theory of gases : Maxwell-Boltzmann distribution of molecular speeds, Root mean square, Most probable and average speeds.
Botany Daily Test 35	<b>Morphology of Flowering Plants:-</b> Structure of dicotyledonous and monocotyledonous seed, Families– brassicaceae, fabaceae, solanaceae, liliaceae.
Zoology Daily Test 35	<b>Locomotion &amp; Movement:-</b> 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	<b>Work, Energy &amp; Power:-</b> Work done by a variable force, The work energy theorem for variable force.
Chemistry Daily Test 36	<b>States of Matter:-</b> Deviation from ideal gas behaviour : Pressure correction and volume correction, Compressibility factor, Critical constants and liquifaction of gases, Liquid state.
Botany Daily Test 36	<b>Anatomy of Flowering Plants:-</b> Tissue, meristematic tissue - characters, types, shoot and root apex organisation
Zoology Daily Test 36	<b>Locomotion &amp; Movement:-</b> 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	<b>Work, Energy &amp; Power:-</b> 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	<b>Thermodynamics:-</b> 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	<b>Anatomy of Flowering Plants:-</b> 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	<b>Locomotion &amp; Movement:-</b> 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	<b>Work, Energy &amp; Power:-</b> The conservation of mechanical energy, (Motion in a Vertical Circle) The law of conservation of energy
Chemistry Daily Test 38	<b>Thermodynamics:-</b> Isothermal and free expansion of an ideal gas. Extensive and intensive properties.
Botany Daily Test 38	<b>Anatomy of Flowering Plants:-</b> 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	<b>Neural Control &amp; Coordination:-</b> 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	<b>Work, Energy &amp; Power:-</b> Power
Chemistry Daily Test 39	<b>Thermodynamics:-</b> 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	<b>Anatomy of Flowering Plants:-</b> Internal structures of root, stem and leaf, Definition of secondary growth, types of tissues involved
Zoology Daily Test 39	<b>Neural Control &amp; Coordination:-</b> 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	<b>Work, Energy &amp; Power:-</b> Collisions – elastic and inelastic collision, Collision in one dimension.
Chemistry Daily Test 40	<b>Thermodynamics:-</b> 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	<b>Anatomy of Flowering Plants:-</b> 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	<b>Neural Control &amp; Coordination:-</b> 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	<b>Work, Energy &amp; Power:-</b> Collision in two dimensions.
Chemistry Daily Test 41	<b>Thermodynamics:-</b> Spontaneity and entropy, Second law of thermodynamics, Free energy change and criteria for spontaneity, Third law of thermodynamics.
Botany Daily Test 41	<b>Plant Kingdom:-</b> Introduction of plant kingdom, Classification systems– artificial, natural and phylogenetic, Branches of taxonomy
Zoology Daily Test 41	<b>Neural Control &amp; Coordination:-</b> 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	<b>System of Particles &amp; Rotational Motion:-</b> Introduction, Centre of mass,
Chemistry Daily Test 42	<b>Equilibrium:-</b> 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	<b>Plant Kingdom:-</b> Algae-general characters
Zoology Daily Test 42	<b>Neural Control &amp; Coordination:-</b> 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	<b>System of Particles &amp; Rotational Motion:-</b> Motion of centre of mass, Linear momentum of system of particles.
Chemistry Daily Test 43	<b>Equilibrium:-</b> Relationship between equilibrium constant, Reaction quotient and Gibb's energy
Botany Daily Test 43	<b>Plant Kingdom:-</b> Economic importance of algae, Characters of different classes of algae- chlorophyceae
Zoology Daily Test 43	<b>Neural Control &amp; Coordination:-</b> 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	<b>System of Particles &amp; Rotational Motion:-</b> Vector product of two vectors, Angular velocity & its relation with linear velocity,
Chemistry Daily Test 44	<b>Equilibrium:-</b> Factors affecting equilibria: Change in concentration, pressure, temperature and effect of catalyst and effect of addition of inert gas.
Botany Daily Test 44	<b>Plant Kingdom:-</b> Phaeophyceae, rhodophyceae
Zoology Daily Test 44	<b>Neural Control &amp; Coordination:-</b> 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, algosireceptor, thermoreceptor.
Physics Daily Test 45	<b>System of Particles &amp; Rotational Motion:-</b> Torque & angular momentum.
Chemistry Daily Test 45	<b>Equilibrium:-</b> 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	<b>Plant Kingdom:-</b> Bryophytes–general characters
Zoology Daily Test 45	<b>Neural Control &amp; Coordination:-</b> Elementary Structure, and functions of sense organs - Ear
Physics Daily Test 46	<b>System of Particles &amp; Rotational Motion:-</b> Equilibrium of rigid body, Moment of inertia, Theorems of perpendicular of parallel axis.
Chemistry Daily Test 46	<b>Equilibrium:-</b> 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	<b>Plant Kingdom:-</b> Bryophytes & Pteridophytes
Zoology Daily Test 46	<b>Chemical Coordination &amp; Integration:-</b> Endocrine Glands and hormones, hypothalamus, pituitary and thyroid gland.
Physics Daily Test 47	<b>System of Particles &amp; Rotational Motion:-</b> 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	<b>Equilibrium:-</b> Factors affecting acid and bases - Strength, Common ion effect in the ionisation of acids and bases,
Botany Daily Test 47	<b>Plant Kingdom:-</b> Pteridophytes– general characters, classes

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

Test Name	Test Syllabus
Zoology Daily Test 47	<b>Chemical Coordination &amp; Integration:-</b> 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	<b>System of Particles &amp; Rotational Motion:-</b> Rolling motion.
Chemistry Daily Test 48	<b>Equilibrium:-</b> Buffer solution, Salt hydrolysis and solubility product.
Botany Daily Test 48	<b>Plant Kingdom:-</b> 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	<b>Gravitation:-</b> 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	<b>Redox Reactions:-</b> Classification idea of redox reactions, Redox reactions in terms of electron transfer reactions, Competitive electron transfer reactions
Botany Daily Test 49	<b>Plant Kingdom:-</b> Gymnosperms – general characters
Physics Daily Test 50	<b>Gravitation:-</b> Gravitational potential energy,
Chemistry Daily Test 50	<b>Redox Reactions:-</b> 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	<b>Plant Kingdom:-</b> Salient Features of Cycas & Pinus, Economic importance
Physics Daily Test 51	<b>Gravitation:-</b> Escape speed, Earth's satellite, Energy of an orbiting satellite, Geostationary & polar satellite, Weightlessness.
Chemistry Daily Test 51	<b>Redox Reactions:-</b> 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	<b>Plant Kingdom:-</b> 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	<b>Mechanical Properties of Solids:-</b> Introduction, Plastic behavior of solids, Stress & strain, Hooke's law, Stress-strain curve
Botany Daily Test 52	<b>Transport in Plants:-</b> Introduction, Means of transport
Physics Daily Test 53	<b>Mechanical Properties of Solids:-</b> Elastic Potential Energy, Elastic moduli, Applications of elastic behaviour of materials.
Botany Daily Test 53	<b>Transport in Plants:-</b> Plant water relations–water potential, osmosis, DPD, TP
Physics Daily Test 54	<b>Mechanical Properties of Fluids:-</b> Introduction, Pressure, Pascal's Law
Botany Daily Test 54	<b>Transport in Plants:-</b> Plasmolysis, imbibition, Long distance transport of water – absorption of water (apoplast pathway, symplast pathway)
Physics Daily Test 55	<b>Mechanical Properties of Fluids:-</b> Archimedes Principle
Botany Daily Test 55	<b>Transport in Plants:-</b> Mechanism of absorption, Ascent of sap– root pressure (including guttation), Transpiration pull
Physics Daily Test 56	<b>Mechanical Properties of Fluids:-</b> Streamline flowBernoulli's principle,
Botany Daily Test 56	<b>Transport in Plants:-</b> Transpiration – structure of stomata, mechanism of opening and closing of stomata, factors affecting transpiration, significance, Transpiration and photosynthesis – a compromise
Physics Daily Test 57	<b>Mechanical Properties of Fluids:-</b> Viscosity, Reynolds number
Botany Daily Test 57	<b>Transport in Plants:-</b> 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	<b>Mechanical Properties of Fluids:-</b> Surface tension.
Botany Daily Test 58	<b>Mineral Nutrition:-</b> Introduction, Methods to study the mineral requirement of plants, Essential mineral elements, Criteria for essentiality, Classification of essential elements
Botany Daily Test 59	<b>Mineral Nutrition:-</b> 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	<b>Mineral Nutrition:-</b> Metabolism of nitrogen– nitrogen cycle, biological nitrogen fixation, fate of ammonia.
Botany Daily Test 61	<b>Photosynthesis in Higher Plants:-</b> Introduction, Importance, What do we know?, Historical account, Where does photosynthesis take place? Photosynthetic pigments,
Botany Daily Test 62	<b>Photosynthesis in Higher Plants:-</b> Absorption spectrum and action spectrum, What is light reaction?, Electron transport system
Botany Daily Test 63	<b>Photosynthesis in Higher Plants:-</b> Splitting of water, Cyclic and non-cyclic photophosphorylation
Botany Daily Test 64	<b>Photosynthesis in Higher Plants:-</b> Chemiosmotic theory, Dark reaction– C <sub>3</sub>
Botany Daily Test 65	<b>Photosynthesis in Higher Plants:-</b> C <sub>4</sub> cycles, Difference between C <sub>3</sub> & C <sub>4</sub> -plants

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

Zoology Daily Test 49	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> Basis of classification, Levels of organisation, Symmetry, Body-plan, Protostomous, Deuterostomous
Zoology Daily Test 50	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> Coelom-its types, Open/closed vascular system, Segmentation, Notochord, Broad classification of Kingdom Animalia based on common fundamental features
Zoology Daily Test 51	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> 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	<b>Hydrogen:-</b> Position, Occurrence, Isotopes, Preparation, Properties and uses of hydrogen hydrides.
Zoology Daily Test 52	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> Cnidaria: General characters, Body wall, Nematoblasts-Structures, Hydra-General characters, Polymorphism, Types of Zooids, Polyps, Medusa, Metagenesis, Corals.
Chemistry Daily Test 53	<b>Hydrogen:-</b> Hardness of H <sub>2</sub> O and its removal, H <sub>2</sub> O <sub>2</sub> : Preparation and properties, D <sub>2</sub> O, Dihydrogen as fuel.
Zoology Daily Test 53	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> Ctenophora; General characters, Comb plates, examples, Platyhelminthes: General characters, Symmetry, Parenchyma, Flame cells, Ladder like nervous part, Reproduction
Chemistry Daily Test 54	<b>The s-Block Elements:-</b> Alkali metals : Physical and chemical properties, Salt of oxo acids, Anomalous properties of Lithium, Similarity between Li and Mg, Compounds of Na : Na <sub>2</sub> CO <sub>3</sub> .10H <sub>2</sub> O, NaCl, NaOH, NaHCO <sub>3</sub> , Biological importance of Na & K,
Zoology Daily Test 54	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> 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	<b>The s-Block Elements:-</b> Alkaline earth metals : Physical and chemical properties, Salts of oxoacids, Anomalous behaviour of beryllium, Diagonal relationship between Be & Al
Zoology Daily Test 55	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> 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	<b>The s-Block Elements:-</b> Compounds of Ca : CaO, Ca(OH) <sub>2</sub> , CaCO <sub>3</sub> , CaSO <sub>4</sub> .1/2H <sub>2</sub> O. Biological importance of Mg and Ca.
Zoology Daily Test 56	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> Annelida: General characters, Reproduction, Larval form, Nereis–Heteronereis, Pheretima, Hirudinaria, Pontobdella, Botryoidal tissue in leech
Chemistry Daily Test 57	<b>The p-Block Elements:-</b> 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	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> Arthropoda: General characters of arthropods, Chitinous exoskeleton, Types of respiration, excretory structures, reproduction, Types of mouthparts in insects
Chemistry Daily Test 58	<b>The p-Block Elements:-</b> The carbon family : Physical properties. ; Chemical properties of group 14 elements, Allotropes of carbon, Compounds of C and Si : CO, CO <sub>2</sub> , SiO <sub>2</sub> , silicones, silicates and geolites.
Zoology Daily Test 58	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> 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	<b>Thermal Properties of Matter:-</b> Introduction, Temperature & Heat, measurement of temperature, Ideal gas equation & Absolute temperature, Thermal expansion.
Chemistry Daily Test 59	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Tetravalence of carbon, Structure of organic compounds, Classification of organic compounds
Zoology Daily Test 59	<b>Animal Kingdom–General Account &amp; Non chordates :-</b> 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	<b>Thermal Properties of Matter:-</b> Specific heat capacity, Calorimetry, Change of state
Chemistry Daily Test 60	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Nomenclature of organic compounds (excluding functional group).
Zoology Daily Test 60	<b>Animal Kingdom-Chordates:-</b> Vertebrata: Agnatha & Gnathostomata: Cyclostomata-General characters with examples Petromyzon, Myxine
Physics Daily Test 61	<b>Thermal Properties of Matter:-</b> Heat transfer–Conduction, Convection.

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

Test Name	Test Syllabus
Chemistry Daily Test 61	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> IUPAC nomenclature of organic compounds including mono and bi functional groups.
Zoology Daily Test 61	<b>Animal Kingdom-Chordates:-</b> 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	<b>Thermal Properties of Matter:-</b> Heat transfer – Radiation, Stefan's Law, Newton's law of cooling, Wien's law.
Chemistry Daily Test 62	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Isomerism : Structural isomerism including tautomerism, Stereoisomerism (Definition).
Zoology Daily Test 62	<b>Animal Kingdom-Chordates:-</b> Amphibia: General characters, Parental care and examples.
Physics Daily Test 63	<b>Thermodynamics:-</b> 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	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Fundamental concepts in organic reaction, Mechanism : Bond fission, Nucleophile and electrophile
Zoology Daily Test 63	<b>Animal Kingdom-Chordates:-</b> Reptilia: True land vertebrates, General characters, Rhynchocephalia
Physics Daily Test 64	<b>Thermodynamics:-</b> Thermodynamic processes,
Chemistry Daily Test 64	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Inductive and electromeric effect, Resonance effect.
Zoology Daily Test 64	<b>Animal Kingdom-Chordates:-</b> Squamata, Crocodilia, Chelonia, Poisonous & non poisonous, Snakes
Physics Daily Test 65	<b>Thermodynamics:-</b> Heat engines, Refrigerators & heat pumps, Second law of thermodynamics, Reversible and irreversible process, Carnot's Engine.
Chemistry Daily Test 65	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Hyperconjugation, Aromaticity and anti-aromaticity.
Zoology Daily Test 65	<b>Animal Kingdom-Chordates:-</b> Aves: General characters
Physics Daily Test 66	<b>Kinetic Theory:-</b> 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	<b>Organic Chemistry : Some Basic Principle &amp; Techniques:-</b> Reaction intermediates : Carbocation, Carbanion, Carbon free radicals, Carbene.



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

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

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

Test Name	Test Syllabus
Botany Daily Test 70	<b>Plant Growth and Development:-</b> 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	<b>Structural Organisation in Animals– Animal Morphology:-</b> Digestive system of Cockroach-peritrophic membrane, Respiratory system and mechanism respiration, Circulating system: Heart, blood sinuses and circulation
Physics Daily Test 71	<b>Waves:-</b> Introduction, Transverse & Longitudinal waves
Chemistry Daily Test 71	<b>Hydrocarbons:-</b> Properties of Alkene
Botany Daily Test 71	<b>Plant Growth and Development:-</b> Growth hormones : Auxins, Gibberellins
Zoology Daily Test 71	<b>Structural Organisation in Animals–Animal Morphology:-</b> Malpighian tubules, Nerve cord, Sense organs of cockroach, Reproductive system of Cockroach-male & female system, fertilization, Development, Moulting
Physics Daily Test 72	<b>Waves:-</b> Displacement relation in a progressive wave, The speed of a travelling wave.
Chemistry Daily Test 72	<b>Hydrocarbons:-</b> Alkynes : Nomenclature and isomerism, Preparation, Properties of Alkyne
Botany Daily Test 72	<b>Plant Growth and Development:-</b> 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	<b>Structural Organisation in Animals– Animal Morphology:-</b> Frog : Morphology, Anatomy, Digestive System, Respiratory System, Circulatory System, Excretory System, Nervous System, Reproductive System, Economic Importance.
Physics Daily Test 73	<b>Waves:-</b> The principle of super position of waves, Reflection of waves.
Chemistry Daily Test 73	<b>Hydrocarbons:-</b> Aromatic hydrocarbons : Nomenclature, Preparation
Botany Daily Test 73	<b>Plant Growth and Development :-</b> 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



## Summary for Class XI & XII

JOINT PACKAGE		
Year Syllabus	1st Year (Class XI)	2nd Year (Class XII)
AIATS	9	15
Unit Tests	6	6
Part Tests	3	2
Cumulative Tests	2	-
Full Syllabus Tests	3	6
No. of Books	22	20
Daily Practice Tests	291	199