TEST SERIES SCHEDULE: NEET UG / JEE-MAINS

PIMPRI & MOSHI BRANCH

BATCH	TEST NUMBER & DOE,Timing	BIOLOGY SYLLABUS	CHEMISTRY SYLLABUS	MATH SYLLABUS	PHYSICS SYLLABUS
CLASS 11th:EVENING BATCH 1:MOSHI BRANCH	**MINOR TEST 02** **22/09/2019** **3PM-6PM**	**ANIMAL KINGDOM :** Salient features and classification of animals-nonchordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples). **Structural Organization in Plants : Morphology** and modifications; Tissues; Anatomy and functions of different parts of flowering plants: Root, stem, leaf, inflorescence- cymose and recemose, flower, fruit and	***SOME BASIC CONCEPTS OF CHEMISTRY** *** STRUCTURE OF ATOM** **CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES :** Why do we need to classify elements, Genesis of periodic classification. Modern periodic law and long form of periodic table,	**SET, RELATION & FUNCTION** : Concept of Relation ,Domain ,Co-domain ,Range Concept of sign scheme Problem of Domain and Range Kind of function Composite Function with properties Inverse function with properties Some special function with their graph Exercise Question Exercise Question **TRIGONOMETRY:** Trigonometrical Ratio of Allied Angle	**PROPERTIES OF MATTER AND FLUID MECHANICS :** Elastic behavior, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear, modulus of rigidity, Poisson's ratio; elastic energy. Pressure, Pascal's law, Archimedes' Principle and Buoyancy. Floatation and Translatory equilibrium, Variation of Pressure with Depth, Atmospheric pressure and Gauge Pressure, Hydraulic

NOTE:TEST PAPER PATTERN: **For PCB Group(PHYSICS:45 MCQ,CHEMISTRY:45 MCQ,BIOLOGY:90 MCQ)**
For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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		seed (To be deal along with the relevant practical of the Practical Syllabus). **Cell Division :** Cell cycle, mitosis, meiosis and their significance. **Chemical constituents of living cells:** Biomoleculesstructure and function of proteins, carbohydrates, lipids, nucleic acids	Nomenclature of elements with atomic number > 100, Electronic configuration of elements and types of elements. periodic trends in properties of elements-atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency. *** STATES OF MATTER :** Gases and Liquids : Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws of elucidating the concept of the molecule, Boyle's law, Charle's law, Gay Lussac's law,	Compound Angle Formula Transformation Formula Trigonometric ratio of multiple angle Conditional trigonometrical identity Trigonometric Equations	Machines, Streamline and turbulent flow, Critical velocity and Reynolds's number, Principle of Continuity, Bernoulli's theorem and its applications. Speed of Efflux: Torricelli's law, Venturi-meter, Dynamic lift, Viscosity, Newton's law of viscous force, Stokes' law, terminal velocity,Surface energy and surface tension, angle of contact, excess of pressure, application of surface tension ideas to drops, bubbles and capillary rise. Detergent and surface tension

NOTE:TEST PAPER PATTERN: **For PCB Group(PHYSICS:45 MCQ,CHEMISTRY:45 MCQ,BIOLOGY:90 MCQ)**
For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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			Avogadro's law, ideal behaviour of gases, empirical derivation of gas equation. Avogadro number, ideal gas equation. Kinetic energy and molecular speeds (elementary idea), deviation from ideal behaviour, liquefaction of gases, critical temperature. LIQUID STATE : Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).		**KINEMATICS** (Motion along a straight line and Motion in a Plane) Motion and Rest with introduction of frame of reference, Variables of Translatory Motion (Position/ Displacement / Path length(Distance), Velocity/ Speed / Average Velocity / Average Speed, Acceleration / Average Acceleration), Relation among various variables of motion and their applications to variable acceleration, Equations of Motion with constant acceleration (scalar and vector forms), Motion

NOTE:TEST PAPER PATTERN: **For PCB Group(PHYSICS:45 MCQ,CHEMISTRY:45 MCQ,BIOLOGY:90 MCQ)**
For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
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					along a straight line, velocity time and position-time graphs for uniformly accelerated motion (graphical treatment), Motion under gravity, Free-fall, Motion in a plane with constant acceleration, Projectile Motion – Ground to Ground projection, Projection from a height (Horizontal projection), Relative Motion in one-dimensions, Relative Velocity in two dimensions (Rain-Man problem, River-Boat Problem & wind based questions)

NOTE:TEST PAPER PATTERN: **For PCB Group(PHYSICS:45 MCQ,CHEMISTRY:45 MCQ,BIOLOGY:90 MCQ)**
For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
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TEST SERIES SCHEDULE: NEET UG / JEE-MAINS

PIMPRI & MOSHI BRANCH

CLASS 11th:PIMPRI BRANCH	**MINOR TEST 02** **22/09/2019 3PM-6PM**	**ANIMAL KINGDOM :** Salient features and classification of animals-nonchordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples). **Structural Organization in Plants : Morphology** and modifications; Tissues; Anatomy and functions of different parts of flowering plants: Root, stem, leaf, inflorescence- cymose and recemose, flower, fruit and seed (To be deal along with	***SOME BASIC CONCEPTS OF CHEMISTRY** *** STRUCTURE OF ATOM** **CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES :** Why do we need to classify elements, Genesis of periodic classification. Modern periodic law and long form of periodic table, Nomenclature of elements	**SET, RELATION & FUNCTION** : Concept of Relation ,Domain ,Co-domain ,Range Concept of sign scheme Problem of Domain and Range Kind of function Composite Function with properties Inverse function with properties Some special function with their graph Exercise Question Exercise Question **TRIGONOMETRY:** Trigonometrical Ratio of Allied Angle Compound Angle Formula	**LAWS OF MOTION AND FRICTION :** Intuitive concept of force, Basic or Fundamental forces in nature, The law of Inertia, Newton's first law of motion ,Momentum and Newton's second law of motion; impulse, Newton's third law of motion, Common forces in mechanics-Weight, Normal reaction, Friction, Contact force, Tension in string, Free Body diagram, Equilibrium of concurrent forces-Lami's theorem,

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For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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		the relevant practical of the Practical Syllabus). **Cell Division :** Cell cycle, mitosis, meiosis and their significance. **Chemical constituents of living cells:** Biomoleculesstructure and function of proteins, carbohydrates, lipids, nucleic acids	with atomic number > 100, Electronic configuration of elements and types of elements. periodic trends in properties of elements-atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency. *** STATES OF MATTER :** Gases and Liquids : Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws of elucidating the concept of the molecule, Boyle's law, Charle's law, Gay Lussac's law, Avogadro's law, ideal	Transformation Formula Trigonometric ratio of multiple angle Conditional trigonometrical identity Trigonometric Equations	Motion of bodies in contact or connected by strings, Pulley systems, Frame of Reference-Inertial and Non Inertial Frames. Pseudo Force and its applications, Cause of Friction, Static and Kinetic friction, Laws of friction, Limiting Static and Kinetic friction coefficients, Angle of Friction, Angle of Repose, Rolling friction, Lubrication. **KINEMATICS** (Motion along a straight line and Motion in a Plane) Motion and Rest with introduction

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For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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			behaviour of gases, empirical derivation of gas equation. Avogadro number, ideal gas equation. Kinetic energy and molecular speeds (elementary idea), deviation from ideal behaviour, liquefaction of gases, critical temperature. LIQUID STATE : Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).		of frame of reference, Variables of Translatory Motion (Position/ Displacement / Path length(Distance), Velocity/ Speed / Average Velocity / Average Speed, Acceleration / Average Acceleration), Relation among various variables of motion and their applications to variable acceleration, Equations of Motion with constant acceleration (scalar and vector forms), Motion along a straight line, velocity time and position-time graphs for uniformly accelerated motion

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For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

					(graphical treatment), Motion under gravity, Free-fall, Motion in a plane with constant acceleration, Projectile Motion – Ground to Ground projection, Projection from a height (Horizontal projection), Relative Motion in one-dimensions, Relative Velocity in two dimensions (Rain-Man problem, River-Boat Problem & wind based questions)

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TEST SERIES SCHEDULE: NEET UG / JEE-MAINS

PIMPRI & MOSHI BRANCH

CLASS 11th:MORNING BATCH:MOSHI BRANCH	**MINOR TEST 02** **22/09/2019 3PM-6PM**	**DIVERSITY IN LIVING WORLD :** What is living? ; Biodiversity; Need for classification; Three domains of life; Taxonomy & Systematics; Concept of species and taxonomical hierarchy; Binomial nomenclature; Tools for study of Taxonomy – Museums, Zoos, Herbaria, Botanical gardens. **Plant Diversity :** Five kingdom classification; salient features and classification of Monera; Protista and Fungi into major groups; Lichens; Viruses and Viroids. Prokaryotic Cell (Bacteria) Salient features	**ORGANIC CHEMISTRY–SOME BASIC PRINCIPLES AND TECHNIQUES :** General introduction, Tetra valence of carbon: Shapes of organic compounds, structural representation of organic compounds, methods of purification qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a	**SET, RELATION & FUNCTION** : Concept of Relation ,Domain ,Co-domain ,Range Concept of sign scheme Problem of Domain and Range Kind of function Composite Function with properties Inverse function with properties Some special function with their graph Exercise Question Exercise Question **TRIGONOMETRY:** Trigonometrical Ratio of Allied Angle Compound Angle Formula Transformation Formula Trigonometric ratio of multiple angle	**KINEMATICS** (Motion along a straight line and Motion in a Plane) Motion and Rest with introduction of frame of reference, Variables of Translatory Motion (Position/ Displacement / Path length(Distance), Velocity/ Speed / Average Velocity / Average Speed, Acceleration / Average Acceleration), Relation among various variables of motion and their applications to variable acceleration, Equations of Motion with constant acceleration (scalar and vector forms), Motion

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For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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		and classification of plants into major groups- Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms (three to five salient and distinguishing features and at least two examples of each category); Angiospermsclassification up to class, characteristic features and examples). **ANIMAL KINGDOM :** Salient features and classification of animals-nonchordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples).	covalent bond: free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions (Reaction Mechanism). **CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES :** Why do we need to classify elements, Genesis of periodic classification. Modern periodic law and long form of periodic table, Nomenclature of elements with atomic number > 100, Electronic configuration of elements and types of	Conditional trigonometrical identity Trigonometric Equations	along a straight line, velocity time and position-time graphs for uniformly accelerated motion (graphical treatment), Motion under gravity, Free-fall, Motion in a plane with constant acceleration, Projectile Motion – Ground to Ground projection, Projection from a height (Horizontal projection), Relative Motion in one-dimensions, Relative Velocity in two dimensions (Rain-Man problem, River-Boat Problem & wind based questions)

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		Structural Organization in Animals : Animal tissues; Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect (cockroach). (Brief account only)	elements. periodic trends in properties of elements-atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency. **STATES OF MATTER :** Gases and Liquids : Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws of elucidating the concept of the molecule, Boyle's law, Charle's law, Gay Lussac's law, Avogadro's law, ideal behaviour of gases, empirical derivation of gas		**LAWS OF MOTION AND FRICTION :** Intuitive concept of force, Basic or Fundamental forces in nature, The law of Inertia, Newton's first law of motion ,Momentum and Newton's second law of motion; impulse, Newton's third law of motion, Common forces in mechanics-Weight, Normal reaction, Friction, Contact force, Tension in string, Free Body diagram, Equilibrium of concurrent forces-Lami's theorem, Motion of bodies in contact or connected by strings, Pulley systems,

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			equation. Avogadro number, ideal gas equation. Kinetic energy and molecular speeds (elementary idea), deviation from ideal behaviour, liquefaction of gases, critical temperature. LIQUID STATE : Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).		Frame of Reference- Inertial and Non Inertial Frames. Pseudo Force and its applications, Cause of Friction, Static and Kinetic friction, Laws of friction, Limiting Static and Kinetic friction coefficients, Angle of Friction, Angle of Repose, Rolling friction, Lubrication.

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TEST SERIES SCHEDULE: NEET UG / JEE-MAINS

PIMPRI & MOSHI BRANCH

CLASS 11th:EVENING BATCH 2:MOSHI BRANCH	**MINOR TEST 02** **22/09/2019 3PM-6PM**	**DIVERSITY IN LIVING WORLD :** What is living? ; Biodiversity; Need for classification; Three domains of life; Taxonomy & Systematics; Concept of species and taxonomical hierarchy; Binomial nomenclature; Tools for study of Taxonomy – Museums, Zoos, Herbaria, Botanical gardens. **Plant Diversity :** Five kingdom classification; salient features and classification of Monera; Protista and Fungi into major groups; Lichens; Viruses and Viroids. Prokaryotic Cell (Bacteria) Salient features	**ORGANIC CHEMISTRY–SOME BASIC PRINCIPLES AND TECHNIQUES :** General introduction, Tetra valence of carbon: Shapes of organic compounds, structural representation of organic compounds, methods of purification qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a	**SET, RELATION & FUNCTION** : Concept of Relation ,Domain ,Co-domain ,Range Concept of sign scheme Problem of Domain and Range Kind of function Composite Function with properties Inverse function with properties Some special function with their graph Exercise Question Exercise Question **TRIGONOMETRY:** Trigonometrical Ratio of Allied Angle Compound Angle Formula Transformation Formula Trigonometric ratio of multiple angle	**KINEMATICS** (Motion along a straight line and Motion in a Plane) Motion and Rest with introduction of frame of reference, Variables of Translatory Motion (Position/ Displacement / Path length(Distance), Velocity/ Speed / Average Velocity / Average Speed, Acceleration / Average Acceleration), Relation among various variables of motion and their applications to variable acceleration, Equations of Motion with constant acceleration (scalar and vector forms), Motion

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		and classification of plants into major groups- Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms (three to five salient and distinguishing features and at least two examples of each category); Angiospermsclassification up to class, characteristic features and examples). **ANIMAL KINGDOM :** Salient features and classification of animals-nonchordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples).	covalent bond: free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions (Reaction Mechanism). **CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES :** Why do we need to classify elements, Genesis of periodic classification. Modern periodic law and long form of periodic table, Nomenclature of elements with atomic number > 100, Electronic configuration of elements and types of	Conditional trigonometrical identity Trigonometric Equations	along a straight line, velocity time and position-time graphs for uniformly accelerated motion (graphical treatment), Motion under gravity, Free-fall, Motion in a plane with constant acceleration, Projectile Motion – Ground to Ground projection, Projection from a height (Horizontal projection), Relative Motion in one-dimensions, Relative Velocity in two dimensions (Rain-Man problem, River-Boat Problem & wind based questions)

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		Structural Organization in Animals : Animal tissues; Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect (cockroach). (Brief account only)	elements. periodic trends in properties of elements-atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency. **STATES OF MATTER :** Gases and Liquids : Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws of elucidating the concept of the molecule, Boyle's law, Charle's law, Gay Lussac's law, Avogadro's law, ideal behaviour of gases, empirical derivation of gas		**LAWS OF MOTION AND FRICTION :** Intuitive concept of force, Basic or Fundamental forces in nature, The law of Inertia, Newton's first law of motion ,Momentum and Newton's second law of motion; impulse, Newton's third law of motion, Common forces in mechanics-Weight, Normal reaction, Friction, Contact force, Tension in string, Free Body diagram, Equilibrium of concurrent forces-Lami's theorem, Motion of bodies in contact or connected by strings, Pulley systems,

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TEST SERIES SCHEDULE: NEET UG / JEE-MAINS

PIMPRI & MOSHI BRANCH

			equation. Avogadro number, ideal gas equation. Kinetic energy and molecular speeds (elementary idea), deviation from ideal behaviour, liquefaction of gases, critical temperature. LIQUID STATE : Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).		Frame of Reference-Inertial and Non Inertial Frames. Pseudo Force and its applications, Cause of Friction, Static and Kinetic friction, Laws of friction, Limiting Static and Kinetic friction coefficients, Angle of Friction, Angle of Repose, Rolling friction, Lubrication.
12th+ Repeater:MOSHI BRANCH	**MINOR TEST 03** **22/09/2019 3PM-6PM**	**Human circulatory system-** Structure of human heart and blood vessels; Cardiac cycle, cardiac output, ECG, Double circulation; Regulation of	**ORGANIC CHEMISTRY–SOME BASIC PRINCIPLES AND TECHNIQUES** : General introduction, Tetra		**Nuclear Physics:** Atoms (Alpha-particle scattering experiments; Rutherford's model of atom, Bohr model, energy levels,

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		cardiac activity; Disorders of circulatory system-Hypertension, Coronary artery disease, Angina pectoris, Heart failure. **Chemical Coordination and Regulation :** Endocrine glands and hormones; Human endocrine system-Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary Idea); Role of hormones as messengers and regulators, Hypo-and hyperactivity and related disorders (Common disorders e.g. Dwarfism, Acromegaly, Cretinism,	valence of carbon: Shapes of organic compounds, structural representation of organic compounds, methods of purification qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions (Reaction		hydrogen spectrum), X-rays and their elementary idea, Nuclei (Composition and size of nucleus, Atomic masses, Isotopes, isobars, isotones and isodiapheres, Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, Nuclear fission and fusion, Nuclear reactor, Nuclear Force and its properties, Radioactivity (Law of Radioactive decay, Alpha decay, Beta decay, Gamma decay) PROPERTIES OF **MATTER AND FLUID MECHANICS :** Elastic behavior, Stress-strain relationship, Hooke's law,

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For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
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		goiter, exopthalmic goiter, diabetes, Addison's disease). **Excretory products and their elimination:** Modes of excretion- Ammonotelism, ureotelism, uricotelism. Human excretory system : Structure and function; Urine formation, Osmoregulation; Regulation of kidney function- Renin-angiotensin, Atrial Natriuretic Factor, ADH and Diabetes insipidus; Role of other organs in excretion; Disorders; Uraemia, Renal failure, Renal calculi, Nephritis; Dialysis and artificial kidney.	Mechanism). **STRUCTURE OF ATOM :** Atomic number, isotopes and isobars. Concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbital, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals- Aufbau principle, Pauli exclusion principles and Hund's rule, electronic configuration of atoms, stability of half filled and completely filled orbitals. **CHEMICAL KINETICS :** Rate of a reaction (average		Young's modulus, bulk modulus, shear, modulus of rigidity, Poisson's ratio; elastic energy. Pressure, Pascal's law, Archimedes' Principle and Buoyancy. Floatation and Translatory equilibrium, Variation of Pressure with Depth, Atmospheric pressure and Gauge Pressure, Hydraulic Machines, Streamline and turbulent flow, Critical velocity and Reynolds's number, Principle of Continuity, Bernoulli's theorem and its applications. Speed of Efflux: Torricelli's law, Venturi-meter, Dynamic

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For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
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		Biology and Human Welfare : Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers. (Domestication of Plants) : Improvement in food production, Plant breeding, tissue culture, single cell protein, Biofortification. Health and Disease; Pathogens; parasites causing human diseases (Malaria, Filariasis, Ascariasis. Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts	and instantaneous), factors affecting rates of reaction; concentration, temperature, catalyst; order and molecularity of a reaction; rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment). Activation energy, Arrhenious equation **STATES OF MATTER :** Gases and Liquids : Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of		lift, Viscosity, Newton's law of viscous force, Stokes' law, terminal velocity,Surface energy and surface tension, angle of contact, excess of pressure, application of surface tension ideas to drops, bubbles and capillary rise. Detergent and surface tension **Current electricity and Heating Effects of Current** : Electric current, flow of electric charges in a metallic conductor, drift velocity and mobility, relaxation time and their relation with electric

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		of immunology-vaccines; Cancer, HIV and AIDS; Adolescence, drug and alcohol abuse. Apiculture and Animal husbandry (Domestication of Animals).	gas laws of elucidating the concept of the molecule, Boyle's law, Charle's law, Gay Lussac's law, Avogadro's law, ideal behaviour of gases, empirical derivation of gas equation. Avogadro number, ideal gas equation. Kinetic energy and molecular speeds (elementary idea), deviation from ideal behaviour, liquefaction of gases, critical temperature. LIQUID STATE : Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).		current and current density, Ohm's law, electrical resistance, V-I characteristics (liner and non-linear),Electrical resistivity and conductivity, Carbon resistors, colour code for carbon resistors, Series and parallel combinations of resistors, Temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's laws (KCL and KVL) and simple applications, Wheatstone

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For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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			CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES : Why do we need to classify elements, Genesis of periodic classification. Modern periodic law and long form of periodic table, Nomenclature of elements with atomic number > 100, Electronic configuration of elements and types of elements. periodic trends in properties of elements- atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency.		bridge, Meter Bridge, Potentiometer-principle and applications to, Measure potential difference, For comparing emf of two cells, Measurement of internal resistance of a cell, Moving coil galvanometer and its, Current sensitivity and voltage sensitivity, Conversion to ammeter and voltmeter, Electrical energy and power. Applications to Electric Bulbs and Heaters. **MAGNETIC EFFECT OF CURRENT AND MAGNETIC FORCE ON MOVING CHARGE**

NOTE:TEST PAPER PATTERN: **For PCB Group(PHYSICS:45 MCQ,CHEMISTRY:45 MCQ,BIOLOGY:90 MCQ)**
For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

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					: Concept of magnetic field, Oersted's experiment, Biot-Savart law and its application to current carrying circular loop and straight wire, Ampere's law and its applications to (Infinitely long straight wire, Straight and toroidal solenoids),Circular motion of a moving charged particle in uniform magnetic field, Force on a moving charge in uniform magnetic and electric fields (Lorentz force) (Velocity Selector, Cyclotron], Force on a current-carrying conductor

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For PCM Group(PHYSICS:30 MCQ,CHEMISTRY:30 MCQ,MATH:30 MCQ)
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TEST SERIES SCHEDULE: NEET UG / JEE-MAINS

PIMPRI & MOSHI BRANCH

					in a uniform magnetic field, Force between two parallel current-carrying conductors-definition of ampere, Torque experienced by a current loop in a magnetic field, Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron,
REPEATER BATCH:PIMPRI	**MINOR TEST 02** **22/09/2019 3PM-6PM**	**Biotechnology : Principles and process of Biotechnology:** Genetic engineering (Recombinant DNA technology). Biotechnology and Its Applications : Application of Biotechnology in health and	**s–BLOCK ELEMENTS** (Alkali and Alkaline Earth Metals) : Group I and group II elements : General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group,		**OSCILLATIONS :** (SHM, damped and forced oscillations& Resonance) Periodic (harmonic) motion and Oscillatory motion, Periodic motion-period, frequency, displacement as a function of time, Periodic

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		agriculture: Human insulin and vaccine production, gene therapy; Genetically modified organisms-Bt crops; Transgenic Animals; Biosafety issues- Biopiracy and patents. **GENETICS** : Principles of Inheritance and variation: Mendelian Inheritance; Deviations from Mendelism-Incomplete dominance, Co-dominance, Multiple alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination-In	diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens; uses. Preparation and Properties of Some important Compounds: Sodium carbonate, sodium chloride, sodium hydroxide and sodium hydrogencarbonate, biological importance of sodium and potassium. Industrial use of lime and limestone, biological importance of Mg and Ca. **Solutions :** Types of		functions, Simple harmonic motion (SHM) and its equation; Velocity, Acceleration and Phase, Oscillations of a spring-restoring force and force constant. Equivalent spring constant of Series and parallel combinations, Energy in SHM – Kinetic and Potential energies, Simple pendulum-derivation of expression for its time period, Superposition of two SHMs of Same Frequency in the same direction, Free, forced and damped oscillations (qualitative ideas only), resonance. **LAWS OF MOTION AND FRICTION :**

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		humans, birds, honey bee; Linkage and crossing over; Sex linked inheritance-Haemophilia, Colour blindness; Mendelian disorders in humans-Thalassemia; Chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes. **REPRODUCTION :** Reproduction in organisms: Reproduction, a characteristic feature of all organisms for continuation of species; Modes of reproduction – Asexual and sexual; Asexual reproduction; Modes-Binary	solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties- relative lowering of vapour pressure, Raoult's law, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties abnormal molecular mass. Van Hoff factor. **ORGANIC CHEMISTRY–SOME BASIC PRINCIPLES**		Intuitive concept of force, Basic or Fundamental forces in nature, The law of Inertia, Newton's first law of motion ,Momentum and Newton's second law of motion; impulse, Newton's third law of motion, Common forces in mechanics-Weight, Normal reaction, Friction, Contact force, Tension in string, Free Body diagram, Equilibrium of concurrent forces-Lami's theorem, Motion of bodies in contact or connected by strings, Pulley systems, Frame of Reference-Inertial and Non Inertial

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		fission, sporulation, budding, gemmule, fragmentation; vegetative propagation in plants. Sexual reproduction in flowering plants : Flower structure; Development of male and female gametophytes; Pollinationtypes, agencies and examples; Outbreeding devices; Pollen-Pistil interaction; Double fertilization; Post fertilization events- Development of endosperm and embryo, Development of seed and formation of fruit; Special modes-apomixis, parthenocarpy, polyembryony; Significance	**AND TECHNIQUES** : General introduction, Tetra valence of carbon: Shapes of organic compounds, structural representation of organic compounds, methods of purification qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions; electrophiles and		Frames. Pseudo Force and its applications, Cause of Friction, Static and Kinetic friction, Laws of friction, Limiting Static and Kinetic friction coefficients, Angle of Friction, Angle of Repose, Rolling friction, Lubrication. **KINEMATICS** (Motion along a straight line and Motion in a Plane) Motion and Rest with introduction of frame of reference, Variables of Translatory Motion (Position/ Displacement / Path length(Distance), Velocity/

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		of seed and fruit formation. Human Reproduction : Male and female reproductive systems; Microscopic anatomy of testis and ovary; Gametogenesisspermatogenesis & oogenesis; Menstrual cycle; Fertilisation, embryo development upto blastocyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementary idea). Reproductive Health : Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control- Need and Methods, Contraception and	nucleophiles, types of organic reactions (Reaction Mechanism). **CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES :** Why do we need to classify elements, Genesis of periodic classification. Modern periodic law and long form of periodic table, Nomenclature of elements with atomic number > 100, Electronic configuration of elements and types of elements. periodic trends in properties of elements- atomic radii, ionic radii,		Speed / Average Velocity / Average Speed, Acceleration / Average Acceleration), Relation among various variables of motion and their applications to variable acceleration, Equations of Motion with constant acceleration (scalar and vector forms), Motion along a straight line, velocity time and position-time graphs for uniformly accelerated motion (graphical treatment), Motion under gravity, Free-fall, Motion in a plane with constant acceleration, Projectile

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		Medical Termination of Pregnancy (MTP); Amniocentesis; Infertility and assisted reproductive technologies – IVF, ZIFT, GIFT (Elementary idea for general awareness).	ionization enthalpy, electron gain enthalpy, electronegativity, valency. **CHEMICAL BONDING AND MOLECULAR STRUCTURE :** Kossel Lewis Approach to Chemical Bonding, Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, valence bond theory, resonance, geometry of molecules, VSEPR theory, concept of hybridization involving s, p and d orbitals		Motion – Ground to Ground projection, Projection from a height (Horizontal projection), Relative Motion in one-dimensions, Relative Velocity in two dimensions (Rain-Man problem, River-Boat Problem & wind based questions) **Ray optics and optical Instruments :** Reflection of light (Laws of Reflection, Reflection at Plane Surface (Plane Mirror): Formation of Image, Deviation, Rotation of mirror, Number of

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			and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only). Hydrogen bond. Dipole Moment.		images, velocity of image, Minimum length of mirror to see full image of a man, Field of view, Reflection at Spherical Surface (Curved Mirror: Rules of image tracing, Image formation in concave and convex mirrors, Focal length of spherical mirrors, Relation between u, v and f (i.e. Mirror Equation for Para-axial rays), Sign convention, Magnification), Refraction of light at Plane Surface (Snell's law, Total internal reflection and its applications (Mirage, Looming, Diamond, prism

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For PCMB Group(PHYSICS:20 MCQ,CHEMISTRY:20 MCQ,BIOLOGY:40 MCQ, MATH:20 MCQ)

					and optical fibers), Optical Path, Lateral and normal shift], Refraction at spherical surfaces (single and double surface), Lenses (Thin lens formula, Lens-maker's formula, Magnification, Power of a lens, Combination of thin lenses in contact, Combination of a lens and a mirror, Silvering of Lenses, Chromatic and Spherical Aberrations.), Refraction and dispersion of light through a prism, combinations of prisms, Some Natural Phenomena due to Sunlight (Rainbow-dispersion of sun light and

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					TIR, Scattering of light-blue colour of the sky and reddish appearance of the sun at sunrise and sunset), Optical instruments (Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia and astigmatism) using lenses, Microscopes and telescopes (reflecting and refracting) and their magnifying powers)

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