ST. NICHOLAS PUBLIC SCHOOL, GARHBETA

SYLLABUS FOR THE SESSION 2025- '26

CLASS: XI SUB: ENGLISH NAME OF THE TEACHER: S.B. + U.K.

SL NO	CHAPTER NO.	CHAPTER NAME	TOPIC	SUB TOPIC	NO. OF PERIODS	NAME OF EXAMINATION
1		`HORNBILL THE PORTRAIT OF A LADY, A PHOTOGRAPH SNAPSHOTS THE SUMMER OF THE BEAUTIFUL WHITE HORSE	EXPLORING THE THEMES OF FAMILY, CHANGE AND NOSTALGIA, EXPLORING THEMES OF LOSS, MEMORY AND THE TRANSIENT NATURE OF LIFE, UNDERSTANDING THE BONDS OF FAMILY AND FRIENDSHIP	INSIDE QUESTIONS, VOCABULARY, TEXTUAL GRAMMAR	9	PD1+MID TERM+ PRE BOARD
2		HORNBILL WE'RE NOT AFRAID TO DIE...IF WE CAN BE TOGETHER, DISCOVERING TUT: THE SAGA CONTINUES SNAPSHOTS THE ADDRESS	EXPLORING THEMES OF COURAGE AND RESILIENCE, EXPLORING TUTANKHAMUN'S TOMB, EXPLORING THE THEMES OF LOSS, MEMORY AND THE LASTING IMPACT OF WAR	INSIDE QUESTIONS, VOCABULARY, TEXTUAL GRAMMAR	9	PD1+MID TERM+ PRE BOARD

3		HORNBILL THE LABURNUM TOP, THE VOICE OF THE RAIN SNAPSHOTS MOTHER'S DAY	UNDERSTANDING THE CYCLE OF LIFE AND NATURE'S RESILIENCE, EXPLORING THE INTERCONNECTEDNESS OF NATURE, UNDESTANDING THE MISERY OF A MOTHER AND A HOUSEWIFE	INSIDE QUESTIONS, VOCABULARY, TEXTUAL GRAMMAR	9	PD1+MID TERM+ PRE BOARD
4		HORNBILL CHILDHOOD, THE ADVENTURE SNAPSHOTS BIRTH	EXPLORING THE THEME OF LOSS OF INNOCENCE, EXPLORING THE THEMES OF PARALLEL WORLDS AND DESTINY, UNDERSTANDING THE COMPLEXITIES OF MEDICAL PRACTICE AND ETHICAL DILEMMAS FACED BY DOCTORS	INSIDE QUESTIONS, VOCABULARY, TEXTUAL GRAMMAR	9	PD 2+ MID TERM+ PRE BOARD
5		HORNBILL SILK ROAD, FATHER TO SON SNAPSHOTS THE TALE OF MELON CITY	EXPLORING RESILIENCE, FAITH AND THE IMPORTANCE OF POSITIVE THINKING, UNDERSTANDING THE	INSIDE QUESTIONS, VOCABULARY, TEXTUAL GRAMMAR	9	PD 2+ MID TERM+ PRE BOARD

			COMMUNICATION GAP BETWEEN GENERATIONS, EXPLORING THE THEMES OF THE IMPORTANCE OF LANGUAGE AND CULTURAL IDENTITY			
			GRAMMAR SECTION			
6		GAP FILLING (TENSES, CLAUSES), RE-ORDERING/ TRANSFORMATION OF SENTENCES	UNDERSTANDING AND APPLICATION OF THE GIVEN CHAPTERS	IN-DEPTH KNOWLEDGE OF THE GIVEN CHAPTERS	50	PD 1+ MID TERM+PD 2+ PRE BOARD
			WRITING SECTION			
7		SHORT WRITING TASK- CLASSIFIED ADVERTISEMENTS, POSTER LONG WRITING TASK- SPEECH AND DEBATE	UNDERSTANDING AND APPLICATION OF THE GIVEN CHAPTERS	IN-DEPTH KNOWLEDGE OF THE GIVEN CHAPTERS	12	PD 1+PD 2+ MID TERM+PRE BOARD

ST. NICHOLAS PUBLIC SCHOOL, GARHBETA

SYLLABUS FOR THE SESSION 2025- '26

CLASS: XI SUB: MATHEMATICS NAME OF THE TEACHER: SANTANU DAS

SL NO	CHAPTER NO.	CHAPTER NAME	TOPIC	SUB TOPIC	NO. OF PERIODS	NAME OF EXAMINATION
1	1	SETS	• Introduction Sets and their Representations • The Empty Set • Finite and Infinite Sets • Equal Sets • Subsets • Universal Set • Venn Diagrams • Operations on Sets • Complement of a Set	Sets and their representations, Empty set, Finite and Infinite sets, Equal sets, Subsets, Subsets of a set of real numbers especially intervals (with notations). Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Complement of a set. Properties of Complement.	10	PD-I + MID-TERM + ANNUAL
2	2	RELATIONS AND FUNCTIONS	• Introduction • Cartesian Product of Sets • Relations • Functions	Ordered pairs. Cartesian product of sets. Number of elements in the Cartesian product of two finite sets. Cartesian product of the set of reals with itself (up to R x R x R). Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. Function as a special	12	PD-I + MID-TERM + ANNUAL

				type of relation. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs. Sum, difference, product and quotients of functions.		
3	**3**	**TRIGONOMETRIC FUNCTIONS**	• Introduction • Angles • Trigonometric Functions • Trigonometric Functions of Sum and Difference of Two Angles	Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $sin^2x + cos^2x = 1$, for all x. Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing $sin\ (x \pm y)$ and $cos\ (x \pm y)$ in terms of $sinx, siny, cosx$ & $cosy$ and their simple applications.	**18**	**PD-I + MID-TERM + ANNUAL**

4	4	COMPLEX NUMBERS AND QUADRATIC EQUATIONS	• Introduction • Complex Numbers • Algebra of Complex Numbers • The Modulus and the Conjugate of a Complex Number • Argand Plane and Polar Representation	Need for complex numbers, especially $\sqrt{-1}$, to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane.	10	PD-I + MID-TERM + ANNUAL
5	5	LINEAR INEQUALITIES	• Introduction • Inequalities • Algebraic Solutions of Linear Inequalities in One Variable and their Graphical Representation	Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line.	6	MID-TERM + ANNUAL
	6	PERMUTATION AND COMBINATIONS	• Introduction • Fundamental Principle of Counting • Permutations • Combinations	Fundamental principle of counting. Factorial n. (n!) Permutations and combinations, derivation of Formulae for n Pr , nCr and their connections, simple applications.	12	MID-TERM + ANNUAL
	7	BINOMIAL THEOREM	• Introduction • Binomial Theorem for Positive Integral Indices	Historical perspective, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, simple applications.	08	MID-TERM + ANNUAL
	8	SEQUENCE AND SERIES	• Introduction • Sequences Series • Geometric Progression (G.P.)	Sequence and Series. Arithmetic Mean (A.M.) Geometric Progression (G.P.), general term of a	10	PD-II + ANNUAL

			• Relationship Between A.M. and G.M.	G.P., sum of n terms of a G.P., infinite G.P. and its sum, geometric mean (G.M.), relation between A.M. and G.M		
	9	**STRAIGHT LINES**	• Introduction • Slope of a Line • Various Forms of the Equation of a Line • Distance of a Point From a Line	Brief recall of two-dimensional geometry from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axis, point -slope form, slope-intercept form, two-point form, intercept form. Distance of a point from a line.	**12**	**PD-II + ANNUAL**
	10	**CONIC SECTIONS**	• Introduction • Sections of a Cone • Circle • Parabola • Ellipse • Hyperbola	Sections of a cone: circles, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.	**14**	**PD-II + ANNUAL**
	11	**INTRODUCTION TO THREE DIMENTIONAL GEOMETRY**	• Introduction • Coordinate Axes and Coordinate Planes in Three Dimensional Space • Coordinates of a Point in Space • Distance between Two	Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points.	**08**	**PD-III + ANNUAL**

			Points			
	12	**LIMITS AND DERIVATIVES**	• Introduction • Intuitive Idea of Derivatives • Limits • Limits of Trigonometric Functions • Derivatives	Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions. Definition of derivative relate it to scope of tangent of the curve, derivative of sum, difference, product and quotient of functions of polynomial and trigonometric functions.	**16**	**PD-III + ANNUAL**
	13	**STATISTICS**	• Introduction • Measures of Dispersion • Range • Mean Deviation • Variance and Standard Deviation	Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped data.	**08**	**PD-III + ANNUAL**
	14	**PROBABILITY**	• Event • Axiomatic Approach to Probability	Events; occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with other theories of earlier classes. Probability of an event, probability of	**05**	**ANNUAL**

				‘not’, ‘and’ and ‘or’ events.		

ST. NICHOLAS PUBLIC SCHOOL, GARHBETA

SYLLABUS FOR THE SESSION 2025- '26

CLASS: XI SUB: Physics NAME OF THE TEACHER:

SL NO	CHAPTER NO.	CHAPTER NAME	TOPIC	SUB TOPIC	NO. OF PERIODS	NAME OF EXAMINATION
1	1	UNITS AND MEASUREMENT	• INTRODUCTION • THE INTERNATIONAL SYSTEM OF UNITS • SIGNIFICANT FIGURES • DIMENSIONS OF PHYSICAL QUANTITIES • DIMENSIONAL FORMULAE AND EQUATIONS • DIMENSIONAL ANLYSIS AND APPLICATIONS	➢ RULES FOR ARITHMATIC OPERATION WITH SIGNIFICANT FIGURES ➢ ROUNDING OFF UNCERTAIN DIGITS ➢ DIMENTIONAL CONSISTENCY OF EQUATION	05	PD 1, MT, AT
2	2	MOTION IN A STRAIGHT LINE	• INTRODUCTION • INSTANTANEOUS VELOCITY AND SPEED • ACCELERATION • KINETIC EQUATIONS FOR UNIFORMLY ACCELERATED MOTION	➢ POSITON-TIME GRAPH ➢ VELOCITY-TIME GRAPH ➢ MOTION OF AN OBJECT UNDER FREE FALL	12	PD 1, MT AT
3	3	MOTION IN A PLANE	• INTRODUCTIONS	➢ POSITION AND DISPLACEMEN	16	PD 1+MT+AT

			• SCALARS AND VECTORS • MULTIPLICATION OF VECTORS BY REAL NUMBERS • ADDITION AND SUBTRACTION OF VECTORS- GRAPHICAL METHOD • VECTOR PRODUCT • RESOLUTION OF VECTORS • VECTOR ADDITION – ANALYTICAL METHOD • MOTION IN A PLANE WITH CONSTANT ACCELERATION • PROJECTILE MOTION • UNIFORM CIRCULA MOTION	T VECTOR ➢ EQUALITY OF VECTORS ➢ CENTRIPETAL AND CENTRIFUGAL ACCELERATION		
4	4	LAWS OF MOTION	• INTRODUCTION • ARISTOTLE'S FALLACY • THE LAW OF INERTIA • NEWTON'S LAWS OF MOTION • CONSERVATION OF MOMENTUM • EQUILIBRIUM OF A PARTICLE	➢ NEWTON'S FIRST, SECOND AND THIRD LAW ➢ CONCEPT OF INERTIA AND FORCE ➢ APPLICATIONS OF NEWTON'S LAWS ➢ FRICTION	16	PD1+ MT+AT

			• COMMON FORCES IN MECHANICS • CIRCULAR MOTION • SOLVING PROBLEMS IN MECHANICSs			
5	5	WORK, ENERGY AND POWER	• INTRODUCTION • WORK- ENERGY THEOREM FOR CONSTANT AND VARIABLE FORCES • WORK, KINETIC ENERGY AND POWER • WORK DONE BY VARIABLE FORCE • POTENTIAL ENERGY • CONSERVATION OF MECHANICAL ENERGY • COLLISIONS	➢ CONSERVATIVE AND NON-COSERVATIVE FORCES ➢ GRAVITATIONAL POTENTIAL ENERGY ➢ ELASTIC POTENTIAL ENERGY OF SPRING ➢ GRAPHICAL REPRESENTATION OF POTENTIAL AND KINETIC ENERGY ➢ COLLISION IN ONE AND TWO DIMESIONS	18	PD 1+MT+AT
6	6	SYSTEM OF PARTICLES AND ROTATIONAL MOTION	• INTRODUCTION • CENTRE OF MASS • MOTION OF CENTRE OF MASS • LINEAR MOMENTUM OF A SYSTEM OF PARTICLES • ANGULAR VELOCITY	➢ TRANSLATIONAL MOTION ➢ ROTATIONAL MOTION ➢ PRECESSION ➢ PARALLEL AND PERPENDICULAR AXIS THEOREM ➢ CONSERVATION OF ANGULAR MOMENTUM	20	PD1+ MT+AT

			• TORQUE AND ANGULAR MOMENTUM • EQUILIBRIUM OF A RIGID BODY • MOMENT OF INERTIA • KINEMATICS AND DYNAMICS OF ROTATIONAL MOTION ABOUT A FIXED AXIS • ANGULAR MOMENTUM OF ROTATION ABOUT A FIXED AXIS	➢ CENTRE OF GRAVITY ➢ MOMENT OF INERTIA OF SOME REGULAR SHAPED BODIES ➢ WORK DONE BY A TORQUE		
7	7	GRAVITATION	• INTRODUCTION • KEPLER'S LAWS • UNIVERSAL LAWS OF GRAVITATION • ACCELERATION DUE TO GRAVITY OF THE EARTH • GRAVITATIONAL POTENTIAL ENERGY • ESCAPE VELOCITY • EARTH SATELLITES • ENERGY OF AN ORBITING SATELLITE	➢ UNIVERSAL GRAVITATIONAL CONSTANT ➢ CHANGES OF ACCELERATION DUE TO GRAVITY WITH HEIGHT AND DEPTH ➢ CHANGES OF ACCELERATION DUE TO GRAVITY DUE TO ROTATION OF EARTH ➢ ACCELERATION DUE TO GRAVITY AT EQUATOR AND POLE ➢ GEOSTATIONARY SATELLITE	15	PD1+MT+AT

				➢ POLAR SATELLITE		
8	8	MECHANICAL PROPERTIES OF SOLID	• INTRODUCTION • STRESS AND STRAIN • HOOKE'S LAW • ELASTIC MODULI • ELASTIC MODULI • APPLICATION OF ELASTIC BEHAVIOUR OF MATERIALS	➢ STRESS-STRAIN CURVE ➢ YOUNG'S MODULUS ➢ SHEAR MODULUS ➢ BULK MODULUS ➢ POISSON'S RATIO ➢ ELASTIC POTENTIAL ENERGY IN A STRETCHED WIRE	10	PD 2+AT
9	9	MECHANICAL PROPERTIES OF FLUIDS	• INTRODUCTION • PRESSURE • STREAMLINE FLOW • BERNOULLI'S PRINCIPLE • VISCOSITY • SURFACE TENSION	➢ PASCLE'S LAW ➢ VARIATION OF PRESSURE WITH DEPTH ➢ ATMOSPHERIC PRESSURE AND GAUGE PRESSURE ➢ HYDRAULIC MACHINES ➢ EQUATION OF CONTINUITY ➢ TORRICELLI'S LAW ➢ DYNAMIC LIFT ➢ COEFFICIENT OF VISCOSITY ➢ STOKE'S LAW ➢ TERMINAL VELOCITY ➢ SURFACE ENERGY ➢ ANGLE OF	15	PD 2+AT

				CONTACT ➢ DROPS AND BUBBLES ➢ CAPILLARY RISE		
10	10	THERMAL PROPERTIES OF MATTER	• INTRODUCTION. • TEMPERATURE AND HEAT • IDEAL GAS EQUATION • THERMAL EXPANSION • SPECIFIC HEAT CAPACITY • CALORIMETRY • CHANGE OF STATE • HEAT TRANSFER • NEWTONS LAW OF COOLING	➢ MEASUREMENT OF TEMPERATURE ➢ ABSOLUTE TEMPERATURE ➢ COEFFICIENTS OF THERMAL EXPANSION AND RELATION BETWEEN THEM ➢ ANOMALOUS EXPANSION OF WATER ➢ MOLAR SPECIFIC HEAT ➢ LATENT HEAT ➢ CONDUCTION, CONVECTION AND RADIATION ➢ BLACK BODY RADIATION ➢ KIRCHOFF'S LAW ➢ WIEN'S DISPLACEMENT LAW ➢ STEFAN-BOLTZMAN LAW	15	PD 3+AT
11	11	THERMODYNAMICS	• INTRODUCTION • THERMAL EQULIBRIUM • ZEROTH LAW	➢ HEAT, INTERNAL ENERGY AND WORK	15	PD 3+AT

			OF THERMODYNAMICS • FIRST LAW OF THERMODYNAMICS • THERMODYNAMIC STATE VARIABLE AND EQUATION OF STATE • SECOND LAW OF THERMODYNAMICS • THERMODYNAMIC PROCESS	➢ SPECIFIC HEAT CAPACITY ➢ REVERSIBLE AND IRREVERSIBLE PROCESS ➢ CARNOT ENGINE ➢ HEAT ENGINE ➢ REFRIGERATOR ➢ QUASI-STATIC PROCESS ➢ ISOTHERMAL PROCESS ➢ ADIABATIC PROCESS ➢ ISOCHORIC PROCESS ➢ ISOBARIC PROCESS ➢ CYCLIC PROCESS		
12	12	KINETIC THEORY	• INTRODUCTION • MOLECULAR NATURE OF MATTER • BEHAVIOUR OF GASES • KINETIC THEORY OF AN IDEAL GAS • LAW OF EQUIPARTION OF ENERGY • SPECIFIC HEAT CAPACITY • MEAN FREE PATH	➢ PRESSURE OF AN IDEAL GAS ➢ DEGREES OF FREEDOM ➢ SPECIFIC HEAT CAPACITY OF SOLIDS ➢ RELATIONSHIP BETWEEN TWO SPECIFIC HEAT CAPACITIES	10	PD 3 +AT
13	13	OSCILLATION	• INTRODUCTION	➢ SIMPLE	15	AT

			• PERIODIC AND OSCILLATORY MOTION • SIMPLE HARMONIC MOTION • SIMPLE PENDULUM	HARMONIC MOTION AND UNIFORM CIRCULAR MOTION ➢ VELOCITY AND ACCELERATIO N IN SIMPLE HARMONIC MOTION ➢ FORCE LAW OF SIMPLE HARMONIC MOTION ➢ ENERGY IN SIMPLE HARMONIC MOTION ➢ KINETIC , POTENTIAL AND TOTAL ENERGY AS A FUNCTION OF TIME		
14	14	WAVES	• INTRODUCTION • TRANSVERSE AND LONGITUDINAL WAVES • PROGRESSIVE WAVE • PRINCIPLE OF SUPERPOSITIN OF WAVES • REFLECTION OF WAVES • STATIONARY WAVES • BEATS	➢ AMPLITUDE AND PHASE ➢ TIME PERIOD, ANGULAR FREQUENCY ➢ SPEED OF A TRANSVERSE WAVE ON A STRETCHED STRING ➢ SPEED OF LONGITUDINAL WAVE ➢ STANDING WAVES AND	15	AT

				NORMAL MODES		

ST. NICHOLAS PUBLIC SCHOOL, GARHBETA

SYLLABUS FOR THE SESSION 2025- '26

CLASS:11 SUB: Chemistry NAME OF THE TEACHER:Arindam Mukherjee

SL NO	CHAPTER NO.	CHAPTER NAME	TOPIC	SUB TOPIC	NO. OF PERIODS	NAME OF EXAMINATION
1	1	Some basic concept of chemistry	Matter, classification of matter, Mass and weight,Law of chemical combination,Avogadros law, Daltons atomic theory		4	p.d-1
2	2	Structure of atom	Introduction,Atomic model,Thomson and Rutherford, Atomic number and mass number,Isobar and isotope,Drawbacks of Rutherford atomic model, bohr atomic model,Atomic spectra,QUANTUM NUMBERS, Paulis exclusion principles and Hunds rule		5	p.d-1
3	12		Periodic law, atomic radius , ionization energy, electronegativity, metallic and non metallic property		4	Midterm
4	Chemical bonding and molecular structure		Introduction, octet rule,covalent bond, lewis dot structure,formal charge,ionic bond, lattice enthalpy,dipole moment, vsepr theory,Hybridisation and its different types,		6	Midterm

			Molecular orbital theory, Hydrogen bonding			
5	12	Organic chemistry some basic principles and technics	General introduction, tetravalence of carbon, nomenclature, classification,		4	Midterm
6	6	Equilibrium	Introduction, laws of chemical equilibrium,Heterogeneous and homogeneous,Relationship between equilibrium constant and gibbs free energy		4	Pd-2
7	8	Redox reactions	Introduction, oxidation and reduction reaction oxidation no, electrode reaction		4	Pd-2
8	9	Hydrogen	Position of hydrogen, preparation and compounds of hydrogen		3	Pd2
9	10	The s block elements	Alkali metals, general characteristics, anamolous property, group 2 elements, biological importance of sodium and potassium		3	
10	11	The p block elements				
11	13	Hydrocarbons			3	

ST. NICHOLAS PUBLIC SCHOOL, GARHBETA

SYLLABUS FOR THE SESSION 2025- '26

CLASS: XI SUB: BIOLOGY NAME OF THE TEACHER: SL

SL NO	CHAPTER NO	CHAPTER NAME	TOPIC	SUB TOPIC	NO. OF PERIODS	NAME OF EXAMINATION
1	01	THE LIVING WORLD	Biodiversity; Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature	biodiversity and the various levels of biological classification taxonomy, systematics, and nomenclature.	08	PD I & MT & AT
2	02	BIOLOGICAL CLASSIFICATION	Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids.	Monera, Protista, Fungi, Plantae, and Animalia.	09	PD I & MT & AT
3	03	PLANT KINGDOM	Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnospermae and Angiosperms.	Algae, Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms, along with their characteristics and life cycles.	09	PD I & MT & AT
4	05	MORPHOLOGY OF FLOWERING PLANT	Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed.	root and shoot systems, leaf modifications, inflorescence, and floral structures.	09	PD I & MT & AT

			Description of family Solanaceae			
5	08	CELL; THE UNIT OF LIFE	Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus.	focusing on their unique structures and functions, including cell walls, chloroplasts, and vacuoles	12	PD I & MT & AT
6	04	ANIMAL KINGDOM	Salient features and classification of animals, non-chordates up to phyla level and chordates upto class level (salient features and at a few examples of each category). (No live animals or specimen should be displayed.)	the classification of animals, their characteristics, and major phyla like Porifera, Cnidaria, Platyhelminthes, Nematoda, Annelida, Arthropoda, Mollusca, and Echinodermata.	10	MT & AT
7	06	ANATOMY OF FLOWERING PLANT	Anatomy and functions of tissue systems in dicots and monocots.	Apical meristem– occurs at the tip and produces primary tissues, e.g. dermal, vascular and ground tissues ...	09	MT & AT

8	11	PHOTOSYNTHESIS IN HIGHER PLANTS	Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.	light reactions, the Calvin cycle, and factors affecting photosynthesis.	10	MT & AT
9	14	BREATHING & EXCHANGE OF GASES	Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.	the mechanism of breathing, the human respiratory system, gas exchange, and transport of gases, along with respiratory volumes and capacities and related disorders.	10	MT & AT
10	15	BODY FLUIDS & CIRCULATION	Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of	the composition and functions of blood and lymph, including blood groups, the circulatory system, and the cardiac cycle.	10	MT & AT

			circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure.			
11	07	STRUCTURAL ORGANISATION IN ANIMALS	Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog.	animal tissues, organs, and organ systems,	09	PD II & AT
12	09	BIOMOLECULES	Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, and nucleic acids; Enzyme - types, properties, enzyme action. (Topics excluded: Nature of Bond Linking Monomers in a Polymer, Dynamic State of Body Constituents Concept of Metabolism, Metabolic Basis of Living, The Living State)	organic molecules essential for life, including carbohydrates, proteins, lipids, and nucleic acids, along with their structures, functions, and roles in metabolism.	10	PD II & AT
13	12	RESPIRATION IN PLANTS	Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.	the process of cellular respiration (aerobic and anaerobic), glycolysis, the Krebs cycle, the electron transport chain, and the role of stomata and lenticels in gas exchange.	08	PD II & AT

14	10	CELL CYCLE & CELL DIVISION	Cell cycle, mitosis, meiosis and their significance	cell cycle phases (Interphase and M phase), mitosis (prophase, metaphase, anaphase, telophase, and cytokinesis), and meiosis, including its phases and significance.	08	PD III & AT
15	13	PLANT GROWTH & DEVELOPMENT	Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes 5 in a plant cell; plant growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.	plant growth regulators (PGRs), meristems, phases of growth, and the effects of various factors on plant development.	09	PD III & AT
16	16	EXCRETORY PRODUCTS & 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 - uremia, renal failure, renal calculi, nephritis; dialysis and	process of how organisms eliminate waste products like ammonia, urea, and uric acid, focusing on the human excretory system, kidney function, and urine formation.	09	PD III & AT

			artificial kidney, kidney transplant.			
17	17	LOCOMOTION & MOVEMENT	Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.	different types of movements, the muscular and skeletal systems, joints, and disorders related to these systems.	09	AT
18	18	NEURAL CONTROL & COORDINATION	Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse	the nervous system, including neurons, the central and peripheral nervous systems, brain structure and function, reflex arcs, and sensory organs like the eye and ear.	09	AT
19	19	CHEMICAL COORDINATION & INTEGRATION	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; dwarfism, acromegaly,	the endocrine system, focusing on endocrine glands, hormones, and their functions, including the human endocrine system and the mechanism of hormone action.	10	AT

			cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.			