BAL BHARATI PUBLIC SCHOOL

COMMON ANNUAL EXAMINATION (2024-2025)

SYLLABUS

CLASS: 11 **SUBJECT: Biology**

TEXTBOOKS:
1.Biology NCERT
2.

S. NO.	UNIT/CHAPTER /TOPIC	SUBTOPICS	WEIGHTAGE
1.	Diversity of Living Organisms	Chapter-1: The Living World Biodiversity; Need for classification; three domains of life; taxonomy and systematics; conceptof species and taxonomical hierarchy; binomial nomenclature Chapter-2: Biological Classification Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids. Chapter-3: Plant Kingdom Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnospermae (Topics excluded – Angiosperms, Plant Life Cycle and Alternation of Generations) Chapter-4: 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.)	15
2	Structural Organisation in plants and animals	Chapter-5: Morphology of Flowering Plants Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Description of family Solanaceae Chapter-6: Anatomy of Flowering Plants Anatomy and functions of tissue systems in dicots and monocots. Chapter-7: Structural Organisation in Animals Morphology, Anatomy and functions of different systems (digestive, circulatory,respiratory, nervous andreproductive) of frog.	10
3	Cell structure and function	Chapter-8: 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	15

		function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus. Chapter-9: 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) Chapter-10: Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significance	
4	Plant Physiology	Chapter-13: 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. Chapter-14: 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. Chapter-15: Plant - Growth and Development Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; plant growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.	12
5	Animal Physiology	Chapter-17: Breathing and 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, occupationalrespiratory disorders. Chapter-18: Body Fluids and 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	18

		circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure. Chapter-19: 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 - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant. Chapter-20: Locomotion and Movement Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and musclecontraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout. Chapter-21: Neural Control and Coordination Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse Chapter-22: Chemical Coordination and 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, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease. Note: Diseases related to all the human physiological systems to be taught in brie	
		Sub Total (theory)	70
		Sub Total (Practical)	30
		Total	100
			TOTAL MARKS=