## BIOLOGY CLASS XI

## TEXTBOOKS:

1.Biology by NCERT

UNIT/ CHAPTER / TOPIC	SUBTOPICS	WEIGHTAGE ( MARKS)
Unit-I 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	29
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) 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	
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Kingdom	be displayed.)	
Unit-II Structural Organization in Plants and Animals		20
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.	

	Unit-III Cell: Structure and Function		21
	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 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	
TOTAL MARKS			70
EXAMINATIO N	UNIT/ CHAPTER / TOPIC	SUBTOPICS	WEIGHTAGE ( MARKS)
ANNUAL			

UNIT I		15
UNIT II		10
UNIT III		15
Unit-IV Plant Physiology		12
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.	
Unit-V Human Physiology Chapter-17: Breathing and	Respiratory organs in animals (recall only);	18

Exchange of Gases	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	
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 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 muscle contraction; 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.	
TOTAL MARKS			70