

**Academic planner 2019 -2020 (CLASS -XI - Biology)**

Date	Topic	Mode of Assesment	No. Of Assignment/HW	Activity
1/5/19 - 15/5/19 No.of days- 11	<b>General introduction and scope of biology.</b>		C.W-1 Assignment based on the chapter	To study the parts of the compound microscope
1/7/19 - 15/7/19 No. of days 12	<b>Chapter-1: The Living World</b> What is living? Biodiversity; Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature; tools for study of taxonomy-museums, zoological parks, herbaria, botanical gardens.	Class Test I ( 10 Marks) based on chap. 1 & 2	C.W-2-3 Assignment	To demonstrate osmosis by potato osmometer
	<b>Chapter-2: Biological Classification</b> Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups: Lichens, Viruses and Viroids.	Revision Chap.2		study of Spedimens/slides/model and identifications with reasons, Bacteria, yeast, oscillatoria, spirogyra, Rhizopus, mushroom, liverwort, moss,fern, pine. One monocot, one dicot plant and lichen.
16/7/19- 31/7/19 No.of days- 14	<b>Chapter-3: Plant Kingdom</b> Salient features and classification of plants into major groups - Algae, Bryophyta, Pteridophyta, Gymnospermae and Angiospermae (three to five salient and distinguishing features and at least two examples of each category); Angiosperms - classification upto class, characteristic features and examples.	MCQs based on chap. 3	C.W-1 Assignment based on the chapter	Study of distribution of stomata on the upper & lower surfaces of leaf
	<b>Chapter-4: Animal Kingdom</b> Salient features and classification of animals non-chordates up to phyla level and chordates up to class level (three to five salient features and at least two examples of each category).	C.W-2-3 Assignment	study of virtual specimens/slides/ model and identification with reason. Amoeba ,hydra, liver fluke, honey bee, snail, ascaris, leech, earthworm, prawn, silkworm, starfish, shark, rohu(fish) frog, calotes(lizard), pigeon, and rabbit	
	<b>Chapter-5: Morphology of Flowering Plants</b>		C.W-1	To Study modifications of roots, leaves and stem.
	Morphology and modifications: Tissues Morphology of flowering plants, The root, stem, leaf and inflorescence. The flower, fruit, seed, description of a typical flowering plant & study some important families.		Assignment based on Ch-5	Study & identify different types of inflorescences
		<b>Unit tests I</b>	<b>UT I Chapter 1 - 3</b>	

1/8/19 - 15/8/19	Chapter-6: Anatomy of Flowering Plants Anatomy and functions of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed (to be dealt along with the relevant experiment of the Practical Syllabus)		Assignment C.W-2-3	To prepare & study transverse sections of monocot & dicot stem & root
No.of days- 10	<b>Chapter 7</b>		C.W-2-3	
	Chapter-7: Structural Organisation in Animals Animal tissues: Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect (cockroach). (a brief account only)		Assignment	To study external morphology of Cockroach through models/charts and study of animal & plant tissues from permanent slides. (palisade parenchyma, guard cells, parenchyma, collenchyma, sclerenchyma, sylem and phloem, squamous epithelium, muscle fibres, nerve fibre, and mammalian blood smear.
16/8/19 - 31/8/19	<b>Chapter 8</b>			
No.of days- 13	Cell : The unit of life cell, cell theory & overview of cells. Prokaryotic & Eukaryotic cells			
	<b>Chapter 8 (contd)</b>		C.W-2-3	
	Eukaryotic cells, all the cell organelles, cell membrane, cell wall, endomembrane system, mitochondria, plastids, ribosomes, cytoskeleton, cilia and flagella, nucleus and types of chromosomes		Assignment	
	<b>Chapter 9</b>			
	Chapter-9: Biomolecules Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids, enzymes, types, properties, enzyme action			To test for glucose, sucrose, starch, proteins & fats & to show their presence in suitable plant & animal materials.
				Study of imbibation in seeds/ raisins
1/9/19 - 15/9/19	<b>Chapter 10</b>			
No.of days- 10	Chapter-10: Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significance		C.W-1	Study of mitosis in onion root tip and animal cells from permanent slides.
16/9/19 - 30/9/19	<b>Half yearly Exams</b>	<b>Half yearly Exams</b>		<b>Syllabus Chap.s 1 to 10</b>
No.of days- 13				

1/10/19 - 15/10/19	<b>Chapter-11: Transport in Plants</b> Movement of water, gases and nutrients; cell to cell transport, Diffusion, facilitated diffusion, active transport; plant-water relations, Imbibition, water potential, osmosis, plasmolysis; long distance transport of water - Absorption, apoplast, symplast, transpiration pull, root pressure and guttation; transpiration, opening and closing of stomata; Uptake and translocation of mineral nutrients - Transport of food, phloem transport, massflow hypothesis; diffusion of gases.		C.W-2-3	
No.of days-9				
No. of days 6	<b>Chapter-12: Mineral Nutrition</b> Essential minerals, macro- and micronutrients and their role; deficiency symptoms; mineral toxicity; elementary idea of hydroponics as a method to study mineral nutrition; nitrogen metabolism, nitrogen cycle, biological nitrogen fixation.			To separate & study the Plant Pigments by Paper Chromatography.
16/10/19 - 31/10/19	<b>Chapter-13: Photosynthesis in Higher Plants</b> Photosynthesis as a mean 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.		C.W-2-3	To compare the rate of transpiration from the upper & lower surfaces of the leaf
No. of days - 13	<b>Chapter-14: Respiration in Plants</b> 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.		Assignment	To study the rate of respiration in germinating seeds having different substances such as wheat(carbohydrates),groundnut (fats) & gram (proteins)
1/11/19 - 15/11/19 No. of days	<b>Chapter-15: Plant - Growth and Development</b> 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; growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA; seed dormancy; vernalisation; photoperiodism	Class tests	C.W-2-3	To demonstrate plasmolysis & deplasmolysis in leaf peels

16/11/19 - 30/11/19 No. of days 11	<b>Chapter-16: Digestion and Absorption</b> Alimentary canal and digestive glands, role of digestive enzymes and gastrointestinal hormones; Peristalsis, digestion, absorption and assimilation of proteins, carbohydrates and fats; calorific values of proteins, carbohydrates and fats; egestion; nutritional and digestive disorders - PEM, indigestion, constipation, vomiting, jaundice, diarrhoea. <b>Chap. 17 Breathing and exchange of gases</b> : Breating and Exchange of Gases Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing Revision		C.W-1	
	<b>Chapter- 17 Contd.</b>	<b>Unit tests II</b>		<b>Ch. 11,12,13,14,15,</b>
1/12/19 - 15/12/19 No. of days 11	Chapter-17 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			To test the given sample of urine for the presence of urea, sugar, albumin & bile salts
16/12/18 - 31/12/1 No. of days 13	<b>Chapter- 18:</b> 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.		C.W-1	observation & comments on the experimental set up for showing a) Anaerobic respiration b)Phototropism c)Apical bud removal d) Suction due to transpiration
	<b>Chapter- 19:</b> 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.	Class tests	Assignment	
1/1/19 - 15/1/19 No. of days nil	<b>Chapter- 20</b>			

16/1/19 - 31/1/19	<b>Chapter-20: Locomotion and Movement</b> Types of movement - ciliary, flagellar, muscular; skeletal muscle- contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal system - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.		C.W-2-3	Study & identification of human bones & joints
No.of days- 14			Assignment	
	<b>Chapter-21</b>		C.W-2-3	Study & description of some flowers & their parts
	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; reflex action; sensory perception; sense organs; elementary structure and functions of eye and ear.		Assignment	
	<b>Chapter- 22</b>			
	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 goiter, diabetes, Addison's disease.  Note: Diseases related to all the human physiological systems to be taught in brief.	Class tests	C.W-2-3	
1/2/19 - 15/2/19 No. of days 12	Doubts and problems to be taken up		Assignment	
	<b>Revision</b>		<b>Revision</b>	
No.of days- 12	<b>ANNUAL EXAMINATION Examination Schedule</b>	<b>ANNUAL EXAMINATION</b>	<b>ANNUAL EXAMINATION</b>	

**Unit test 1- Chap. 1,2,3**  
**Half Yearly Chap.s 1 to 10**  
**Unit test II - 11 to 15**  
**Annual Examination Complete syllabus**