

**CLASS XI**  
**SUBJECT: BIOLOGY**

UNIT	MARKS
1. Diversity in Living World	07
2. Structural Organisation in Animals and Plants	12
3. Cell : Structure and Function	15
4. Plant Physiology	18
5. Human Physiology	18

MONTH	NAME OF TOPIC	DETAILED SPLIT UP	PERIODS FOR CLASSROOM TEACHING & PRACTICAL	PERIODS FOR COMPUTERS AIDED TEACHING	TOTAL PERIODS
June & July 2012	UNIT-1 Diversity in Living World 36 Periods 07 Marks	<p style="text-align: center;"><b>CHAPTERS 1- 4</b></p> <ul style="list-style-type: none"> <li>• <b>The living world</b></li> <li>• <b>Biological Classification</b></li> <li>• <b>Plant kingdom (major groups)</b></li> <li>• <b>Animal Kingdom</b></li> </ul> <p>Diversity of living organisms, classification of living organisms (Five kingdom classification Major groups And principles within kingdom) systematic and binomial system of nomenclature, salient features of animals (non chordates up to phylum level chordates up to class level) and plants (major group angiosperms up to sub class botanical gardens herbaria zoological parks and museums.)</p> <p><b>PRACTICALS :</b></p> <ol style="list-style-type: none"> <li>1. Study parts of compound microscope</li> <li>2. Study of the specimens and identification with reason-bacteria, oscillatoria, spirogyra, rhizopus, mushroom, yeast, liverwort, moss, fern, pinus, one monocotyledon, one dicotyledon and one lichen.</li> <li>3. Study of specimen and identification with reasons- Amoeba, Hydra, Liverfluke, Ascaris, Leech, Earthworms, Prawn, Silkworm, Honeybee, Cockroach, Snail, Starfish, Shark, Rohu, Frog, Lizard, Pigeon and Rabbit.</li> </ol>	30	06	36

Aug 2012	UNIT-II Structural organization in plants and animals 30 periods Marks 12	<p style="text-align: center;"><b>CHAPTERS 5 – 7</b></p> <ul style="list-style-type: none"> <li>• <b>Morphology of flowering plants</b></li> <li>• <b>Anatomy of flowering plants</b></li> <li>• <b>Structural organization in animals</b></li> </ul> <p>Tissues in animals and plants. Morphology, anatomy and functions of different parts of flowering plants: Root, stem, leaf, inflorescence, flower, fruit and seed. Morphology, anatomy and functions of Different systems of earthworm cockroach and frog.</p> <p><b>PRACTICALS :</b></p> <ol style="list-style-type: none"> <li>1. Study and describe three common flowering plants (Solanaceae, Fabaceae &amp; liliaceae)</li> <li>2. Preparation and study of T.S. of Dicot and monocot roots and stems (Normal)</li> <li>3. Study of different modifications in root stem and leaves.</li> <li>4. study and identify different types of inflorescence.</li> <li>5. study of tissue and diversity in shapes and sizes for plant and animal cells. (e.g. Palisade cells, guard cells, parenchyma, collenchyma, sclerenchyma, xylem, phloem, squamous epithelium, muscle fibres and mammalian blood smear) through temporary/ permanent slides.</li> </ol>	27	03	30
SEP 2012	UNIT-III Cell: Structure and functions Periods-40 Marks 15	<p style="text-align: center;"><b>CHAPTERS 8 - 9 - 10</b></p> <ul style="list-style-type: none"> <li>• <b>Cell: The unit of life</b></li> <li>• <b>Bio molecules</b></li> <li>• <b>Cell cycle and cell division</b></li> </ul> <p>Cell: Cell theory; Prokaryotic and Eukaryotic cell, cell wall, cell membrane, cell organelles (plastids, mitochondria, endoplasmic reticulum, golgi bodies/ dictyosomes, ribosomes, lysosomes, vacuoles centrioles) and nuclear organisation. Mitosis, meiosis, cell cycle . Basic chemical constituents of living bodies. Structure and functions of carbohydrates, proteins lipids, Nucleic acids. Enzymes: types, properties and functions.</p> <p><b>PRACTICALS</b></p> <ol style="list-style-type: none"> <li>1. study of mitosis in onion root tip cells and animal cells (grass hopper) from permanent slides.</li> <li>2. Study of external morphology of earthworm. Cockroach &amp; frog through models.</li> <li>3. Test for the presence of sugar, starch, proteins and fats in given food material.</li> </ol>	27	04	31

		4. To study the effect of salivary amylase on starch.			
OCT 2012	UNIT - IV Plant Physiology Periods 40 Marks 18	<p style="text-align: center;"><b>CHAPTERS 11 –12 - 13</b></p> <ul style="list-style-type: none"> <li>• <b>Transport in Plants</b></li> <li>• <b>Mineral Nutrition</b></li> <li>• <b>Photosynthesis in higher Plants</b></li> </ul> <p>Movement of water food nutrients and gases , water relations.</p> <p><b>PRACTICALS :</b></p> <ol style="list-style-type: none"> <li>1. Study of osmosis by potato osmometer-</li> <li>2. Study of plasmolysis in epidermal peels (eg. Rhoeo leaves)</li> <li>3. Study of distribution of stomata in upper and lower surface of leaves and calculate the stomatal index. stomatal index = No of stomata / (no of stomata + no of epidermal cells) x100</li> <li>4. Comparative study of the rate of transpiration in the lower and upper surface of leaves.</li> <li>5. To separate chlorophyll pigment through paper chromatography</li> </ol>	18	04	22
NOV 2012	UNIT- IV Contd	<p style="text-align: center;"><b>CHAPTERS 14 - 15</b></p> <ul style="list-style-type: none"> <li>• <b>Respiration in Plants</b></li> <li>• <b>Plant growth and development</b></li> </ul> <p><b>PRACICALS :</b></p> <ul style="list-style-type: none"> <li>• Study the rate of respiration in flower bud/leaf tissues and germinating seeds.</li> <li>• Study of imbibition in seeds/ raisins.</li> </ul> <p style="text-align: center;"><b>Revision for Half Yearly Exam</b></p>	16	02	18
DEC 2012	UNIT-V Human Physiology Periods 45 Marks 18	<p style="text-align: center;"><b>CHAPTERS 16 - 17 - 18</b></p> <ul style="list-style-type: none"> <li>• <b>Digestion and absorption.</b></li> <li>• <b>Breathing and exchange of gases.</b></li> <li>• <b>Body fluids and circulation.</b></li> </ul> <p><b>PRACTICALS :</b></p> <ol style="list-style-type: none"> <li>1. To test the presence of urea albumin, sugar and bile salts in urine.</li> </ol>	15	03	18
JAN 2013	UNIT-V Human Physiology (contd.)	<p style="text-align: center;"><b>CHAPTERS 19 – 20 – 21</b></p> <ul style="list-style-type: none"> <li>• <b>Excretory products and elimination.</b></li> <li>• <b>Locomotion and movement.</b></li> <li>• <b>Neural control and coordination,</b></li> </ul> <p><b>PRACTIALS :</b></p> <ol style="list-style-type: none"> <li>1. Study of human skeleton and different types</li> </ol>	18	02	20

FEB 2013	UNIT- V Contd	<p>of joints.</p> <p>2. Observation and comment on the experiment set up on :-</p> <ol style="list-style-type: none"> <li>a. Anaerobic respiration</li> <li>b. Phototropism</li> <li>c. Apical bud removal</li> <li>d. Suction due to transpiration</li> </ol> <p style="text-align: center;"><b>CHAPTER - 22</b></p> <ul style="list-style-type: none"> <li>• <b>Chemical coordination and integration.</b></li> </ul> <p><b>Revision for annual exam and practical</b></p>	05	02	07
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