

**KENDRIYA VIDYALAYA SANGATHAN, KOLKATA REGION  
SPLIT - UP OF SYLLABUS [2019-20]  
CLASS – XI : BIOLOGY**

**THEORY**

<b>UNIT</b>	<b>TITLE</b>	<b>MARKS</b>	<b>NO. OF PERIODS</b>
I	DIVERSITY OF LIVING ORGANISMS	7	23
II	STRUCTURAL ORGANISATION IN PLANTS AND ANIMALS	12	22
III	CELL: STRUCTURE AND FUNCTION	15	35
IV	PLANT PHYSIOLOGY	18	40
V	HUMAN PHYSIOLOGY	18	40
	<b>TOTAL</b>	<b>70</b>	<b>160</b>

**PRACTICAL**

<b>Sl. No</b>	<b>Evaluation Scheme</b>		<b>Marks</b>
1.	<b>One Major Experiment Part A (Expt. No. 1, 3, 7, 8)</b>		<b>5 Marks</b>
2.	<b>One Minor Experiment Part A (Expt. No. 6, 9, 10, 11, 12, 13)</b>		<b>4 marks</b>
3.	<b>Slide Preparation Part A (Expt. No. 2, 4, 5)</b>		<b>5 marks</b>
4.	<b>Spotting Part B</b>		<b>7 marks</b>
5.	<b>Practical Record + Viva Voce</b>	<b>Credit to the students work over the academic session may be given.</b>	<b>4 marks</b>
6.	<b>Project Record + Viva Voce</b>		<b>5 marks</b>
	<b>Total</b>		<b>30 marks</b>

**SYLLABUS FOR PERIODIC TESTS / HALF Y E / S E E – 2019-20 CLASS –**

**XI : SUB – BIOLOGY**

<b>TEST / EXAM SCHEDULE(Tentative)</b>	<b>CHAPTERS</b>	<b>TOTAL MARKS</b>
Periodical Test-1	1,2,3,4,5,6 (as per NCERT book)	50 Marks
Half Yearly Examination	1 to 12 (as per NCERT book)	70 (Theory)
Periodical Test-2	13,14,15,16 (as per NCERT book)	50 Marks
Annual Examination	All the chapters as per CBSE Guidelines	70 (Theory)+ 30 (Practical)

**Month wise Split - up**

<b>UNIT</b>	<b>TITLE OF THE UNIT AND NAME OF THE CHAPTER</b>	<b>MONTH</b>	<b>PERIODS REQUIRED</b>	<b>PRACTICALS</b>
I	<b>DIVERSITY OF LIVING ORGANISMS</b> 1. The Living world 2. Biological Classification	June	08	<b>B.1.</b> Study of the parts of a compound microscope  <b>B.2.</b> Study of the specimens/slides/models and identification with reasons - Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen
I	3. Plant Kingdom 4. Animal Kingdom	July	15 <b>UNIT I :</b> 10 spiral 1 10 spiral 2 03 revisit of all the chapters)	<b>B.3.</b> Study of virtual specimens/slides/models and identification with reasons - Amoeba,

<p style="text-align: center;"><b>II</b></p>	<p style="text-align: center;"><b>STRUCTURAL ORGANISATION IN PLANTS AND ANIMALS</b></p> <p>5. Morphology of Flowering</p> <p>6. Anatomy of Flowering Plants</p>	<p style="text-align: center;"><b>July</b></p>	<p style="text-align: center;"><b>5</b></p> <p style="text-align: center;"><b>03</b></p> <p style="text-align: center;"><b>(+02 practical periods)</b></p>	<p>Hydra, liverfluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.</p> <p><b>B.7.</b> Study and identification of different types of inflorescence (cymose and racemose)</p> <p><b>A.A.1.</b> Study and description of three locally available common flowering plants, one from each of the Families Solanaceae, Fabaceae and Liliaceae including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams). Types of root (Tap and adventitious); stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).</p>
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<p style="text-align: center;">II</p>	<p style="text-align: center;"><b>STRUCTERAL ORGANISATION IN PLANTS AND ANIMALS</b></p> <p style="text-align: center;">Anatomy of Flowering Plants ( Continued ...)</p> <p style="text-align: center;">7. Structural Organisation in Animals.</p>	<p style="text-align: center;">August</p>	<p style="text-align: center;">12</p> <p style="text-align: center;">UNIT II: 10 spiral 1 10 spiral 2 02 revisit of all the chapters)</p>	<p><b>A.2</b> Preparation and study of T.S. of dicot and monocot roots and stems (primary).</p> <p><b>B.4.</b> Study of tissues and diversity in shapes and sizes of plant and animal cells (palisade cells, guard cells, parenchyma, collenchyma, sclerenchyma, xylem, phloem, squamous epithelium, muscle fibers and mammalian blood smear) through temporary/permanent slides Study of different modifications in roots, stems and leaves.</p> <p><b>B.6.</b> Study of different modifications in roots stems and leaves.</p> <p><b>B.11.</b>Study of external morphology of cockroach through virtual images/models</p> <p><b>A.7.</b>Test for the presence of sugar, starch, proteins and fats. Detection in suitable plant and animal materials.</p>
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UNIT	TITLE OF THE UNIT AND NAME OF THE CHAPTER	MONTH	PERIODS REQUIRED	PRACTICALS
III	<p>CELL: STRUCTURE AND FUNCTION</p> <p>8. Cell-The Unit of Life</p> <p>9 . Biomolecules</p>	August	<p>05</p> <p>03 +(06 practical periods)</p>	
III	<p>CELL: STRUCTURE AND FUNCTION</p> <p>9 . Biomolecules (continued)</p> <p>10. Cell Cycle and Cell Division</p>	September	<p>12 +9 (practical periods)</p> <p>UNIT III:</p> <p>15 spiral 1</p> <p>15 spiral 2</p> <p>05 revisit of all the chapters)</p>	<p>B.5. Study of mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides.</p> <p>A.3.Study of osmosis by potato osmometer.</p> <p>B.8. Study of imbibition in seeds/raisins.</p>
				<p>A.4. Study of plasmolysis of in</p>

<b>IV</b>	<b>PLANT PHYSIOLOGY</b> 11. Transport in Plants  12. Mineral Nutrition		<b>08</b>	epidermal peels (e.g. Rhoeo leaves). <b>A.5.</b> Study of distribution of stomata in the upper and lower surface of leaves.  <b>A.6.</b> Comparative study of the rates of transpiration in the upper and lower surface of leaves.
<b>IV</b>	13. Photosynthesis in Higher Plants 14. Respiration in Plants  ( REVISION OF HALF YEARLY SYLLABUS )	<b>October</b>	<b>15 +04</b> (practical periods)	<b>A.8.</b> Separation of plant pigments through paper chromatography.  <b>A.9.</b> Study of the rate of respiration in flower buds/ leaf tissue and germinating seeds.
<b>IV</b>	14. Respiration in Plants (continued)  15. Plant - Growth and Development	<b>November</b>	<b>10</b> <b>+03 practical periods)</b> <b>UNIT IV:</b> <b>18 spiral 1</b> <b>18 spiral 2</b> <b>04 revisit</b>	<b>B.9.</b> Observation and comments on the experimental set up for showing: a) Anaerobic respiration b) Phototropism c) Effect of apical bud removal
<b>V</b>	<b>HUMAN PHYSIOLOGY</b> 16. : Digestion and Absorption		<b>05</b>	
<b>V</b>	<b>HUMAN PHYSIOLOGY</b>  17. Breathing and Exchange of Gases 18. Body Fluids and Circulation 19. Excretory Products and Their Elimination	<b>December</b>	<b>15</b>	<b>A.10.</b> Test for presence of urea in urine. <b>A.11.</b> Test for presence of sugar in urine. <b>A.12.</b> Test for presence of albumin in urine. <b>A.13.</b> Test for presence of bile salts in urine

UNIT	TITLE OF THE UNIT AND NAME OF THE CHAPTER	MONTH	PERIODS REQUIRED	PRACTICALS
V	20. Locomotion and Movement 21. Neural Control and Coordination 22. Chemical coordination and integration	January	15 (+ 05 practical periods)  UNIT V: 18 spiral 1 18 spiral 2 04 revisit	B.10.Study of human skeleton and different types of joints with the help of virtual images/models only

### Note:

1. The syllabus for class XI to be completed by 31.01.2020.
2. Theory topics to be correlated with practical topics.
3. Each of the unit to be taught by spiral teaching method
  - a) Spiral 1 : Basic concepts of all the chapters of the given unit.
  - b) Spiral 2 : Left over content of all the chapters of the given unit
  - c) Revisit : Recapitulation of all the chapters of the given unit.