

**PART I: SEMESTER 1**  
**IDC-1: Animal Biology**  
**IDC-1-TH**

<b>Full Marks 75</b>	<b>3 Credits</b>	<b>30 Hours</b>
<b>Unit 1: Animal Diversity</b>		<b>10</b>
Phylum Characters and example: [Non-chordates-Porifera, Cnidaria, Ctenophora, Platyhelminthes, Nematelminthes, Annelida, Arthropoda, Mollusca and Echinodermata]; Chordata		
<b>Unit 2: Genetics</b>		<b>12</b>
<ol style="list-style-type: none"> <li>1. Mendelian Principles and Laws of inheritance</li> <li>2. Linkage and Recombination basic Concepts</li> <li>3. Sex Determination with reference to <i>Drosophila</i> [only genic balance theory]</li> <li>4. Chromosomal Aberration [Structural and Numerical]</li> </ol>		
<b>Unit 3: Biodiversity and Wildlife</b>		<b>15</b>
<ol style="list-style-type: none"> <li>1. Biodiversity: Definition, types and value</li> <li>2. Biodiversity: Indices [Shannon &amp; Simpson]</li> <li>3. Conservation: <i>in situ</i> and <i>ex situ</i> [outline idea]</li> <li>4. Conservation Priority: Hotspot, Megadiversity, Sensitive Ecosystem</li> <li>5. Indigenous Knowledge and PBR: Basic Concepts</li> </ol>		
<b>Unit 4: Insect Vectors</b>		<b>8</b>
<ol style="list-style-type: none"> <li>1. Concept of Vector: Biological and Mechanical Vectors with examples</li> <li>2. Disease cycle &amp; Reservoir Concept</li> <li>3. Major Vectors: Mosquito (<i>Anopheles</i> sp. &amp; <i>Aedes</i> sp.) Life cycle, control, role as vector.</li> </ol>		
<b>Unit 5: Laboratory techniques and Instrumentation</b>		<b>5</b>
<ol style="list-style-type: none"> <li>1. Basics of Light Microscopy</li> <li>2. Principles and Application of Colorimetry</li> <li>3. Principles and application of Ultracentrifugation</li> </ol>		

**Animal Biology Lab: IDC-1-P**

<b>Full Marks 25</b>	<b>1 Credit</b>	<b>20 Hours</b>
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<b>List of Practical</b>
<ol style="list-style-type: none"> <li>1. Karyotype analysis of Klinefelter, Down, Turner, Edward &amp; Patau Syndrome</li> <li>2. Identification (Phylum and specimen characters): <i>Amoeba</i>, <i>Paramecium</i>, <i>Sycon</i>, <i>Neptune's Cup</i>, <i>Taenia</i>, <i>Ascaris</i>, <i>Nereis</i>, <i>Pheretima</i>, <i>Pila</i>, <i>Lamelledens</i>, <i>Penaeus</i>, <i>Macrobrachium</i>, <i>Musca</i>, <i>Anopheles</i>, <i>Culex</i>, <i>Asterias</i>.</li> <li>3. One Local-Outdoor Trip for Biodiversity Studies.</li> </ol>