

**SARDAR PATEL UNIVERSITY**  
**Programme: B.Sc**  
**Semester: II**  
**Syllabus with effect from: November-2011**

<b>Paper Code: US02EBIO01</b>	<b>Total Credit: 2</b>
<b>Title of Paper: Biology</b>	

Unit	Description in detail	Weightage (%)
<b>I</b>	<b>Animal Biology Branches and Behaviour</b> Introduction to various branches of zoology: Physiology, Cell Biology, Biochemistry, Biostatistics, Molecular Biology, Biotechnology, Biophysics, Entomology, Immunology. Introduction to sub division of zoology based on animal studies Animal Behaviour: Classification of behavioural patterns and Analysis of behaviour with common Examples	<b>25%</b>
<b>II</b>	<b>Animal Physiology</b> Nutrition in animals - Type of Nutrition (Autotrophic, Heterotrophic-Holozoic, Saprozoic, Osmotrophic, Parasitic, Nutrition), Type of Digestion ( Intracellular.) Circulation - Type of Hearts ( Neurogenic and Myogenic Heart) open and close circulation Blood-Composition and Function	<b>25%</b>
<b>III</b>	Diversity of life forms in plant kingdom (Important Character of each group and brief Description of each example) Virus: Bacteriophage Bacteria: Morphological forms only Algae: Spirogyra Fungi: Mushroom, Mucor Bryophyte: Riccia Pteridophyte: Fern Angiosperm: Monocot - Maize, Dicot - Sunflower Gymnosperm: Cycas	<b>25%</b>
<b>IV</b>	<b>Biotic Interactions:</b> Positive Interactions (Symbiosis) With suitable Examples. <ul style="list-style-type: none"> <li>• Commensalism</li> <li>• Mutualism</li> </ul> Negative Interactions with suitable example <ul style="list-style-type: none"> <li>• Parasitism</li> <li>• Predation</li> <li>• Antibiosis</li> </ul> Ecological Adaptations in Plants: Morphology of Hydrophytes and <ul style="list-style-type: none"> <li>• Xerophytes</li> </ul>	<b>25%</b>

**Basic Text & Reference Books:**

- Modern Textbook of Zoology (Vertebrates) -R.L.Kotpal
- Invertebrate Zoology - Jordan and Verma
- Animal Physiology - K.A Goyal and K.V Shastri
- Animal behaviour - Reena Mathur



- Gangulee S. C. Das. K.S. Dutta. C.D. and A.K. college Botany Vol – 1
- Smith, G. M.- Cryptogamic Botany Vol-1
- Vaishtha B R - Botany for Degree students: Vol – 1 algae.
- Alexopoulos C J introduction Mycology
- Bessy, E. A - Morphology and taxonomy of fungi
- Dubey. H. C - An introduction to Fungi
- Gangulee,S. C. Das, K.S. Dutta, C.D. and Kar College Botany Vol - 1
- Parihar N. S. - Bryophyta
- Prem puri - Bryophyta
- Parihar N. S - pteridophyta
- Smith, G. M - Cryptogamic Botany Vol - 1 and 2
- Vasishtha B. R. botany for degree students vol - 2 fungi
- Vasishtha B. R. botany for degree students vol - 3 bryophyta
- Vasishtha B. R. botany for degree students vol - 4 Pteridophyta
- Gangulee S. C., Das, K.S, Dutta, C.D. and kar, A. K. college botany vol 2 & 3

