

**RAYAT SHIKSHAN SANSTHA'S  
SHREE SADGURU GANGAGEER MAHARAJ SCINCE, GAUTAM ARTS & SANJIVANI  
COMMERCE COLLEGE, KOPARGAON DIST AHMEDNAGAR**

**Program Outcomes, Program Specific Outcomes and Course Outcome**

**Department of Zoology**

<b>Program outcome : B.Sc. (Zoology)</b>	
PO1	<ul style="list-style-type: none"><li>• Demonstrate, solve and an understanding of major concepts in all disciplines of Zoology.</li></ul>
PO2	<ul style="list-style-type: none"><li>• Solve the problem and also think methodically, independently and draw a logical conclusion.</li></ul>
PO3	<ul style="list-style-type: none"><li>• Understand the evolution, history of phylum.</li></ul>
PO4	<ul style="list-style-type: none"><li>• Create an awareness of the impact of Zoology on the environment, society, and development outside the scientific community</li></ul>
PO5	<ul style="list-style-type: none"><li>• To study and understand the classification of whole phyla includes in Non chordates with the help of charts/models/pictures.</li></ul>
PO6	<ul style="list-style-type: none"><li>• To inculcate the scientific temperament in the students and outside the scientific community.</li></ul>
PO7	<ul style="list-style-type: none"><li>• Use modern techniques, decent equipment's</li></ul>

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**Program Outcomes, Program Specific Outcomes and Course Outcome**

**Department of Zoology**

<b>Program Specific Outcome : B.Sc./ (Zoology)</b>	
PSO1	<ul style="list-style-type: none"><li>• Gain the knowledge of Zoology through theory and practical's.</li></ul>
PSO2	<ul style="list-style-type: none"><li>• Study and understand the DNA Recombinant technology.</li></ul>
PSO3	<ul style="list-style-type: none"><li>• Understand the testing of hypothesis.</li></ul>
PSO4	<ul style="list-style-type: none"><li>• Use modern Zoological tools, Models, Charts and Equipment's.</li></ul>
PSO5	<ul style="list-style-type: none"><li>• Know structure-activity relationship.</li></ul>
PSO6	<ul style="list-style-type: none"><li>• Understand good laboratory practices and safety.</li></ul>
PSO7	<ul style="list-style-type: none"><li>• Make aware and handle the sophisticated instruments/equipment.</li></ul>
PSO8	<ul style="list-style-type: none"><li>• Gain the knowledge of Zoology through theory and practical's.</li></ul>
PSO9	<ul style="list-style-type: none"><li>• Study and understand the DNA Recombinant technology.</li></ul>

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**Program Outcomes, Program Specific Outcomes and Course Outcome**

**Department of Zoology**

**Course Outcomes of B.Sc. (Zoology)**

<b>Class</b>	<b>Course title</b>	<b>Outcome</b>
F.Y.B.Sc. (Paper-I)	Animal systematics and Diversity I and II	<ul style="list-style-type: none"> <li>• Understanding of basics of Animal Classification.</li> <li>• Understanding of parasitology</li> <li>• Understanding of host and parasite relationship</li> </ul>
F.Y.B.Sc. (Paper-II)	Fundamental of Cell Biology and Genetics	<ul style="list-style-type: none"> <li>• Understanding of fundamentals of cell biology</li> <li>• Understanding of types of cells</li> <li>• Understanding of cell organelles</li> <li>• Understanding of techniques used in cell biology study</li> <li>• Understanding of Mendellian genetics.</li> <li>• Understanding of fundamentals of genetics</li> </ul>
S.Y.B.Sc. (Paper-I)	Animal systematics and Diversity III	<ul style="list-style-type: none"> <li>• Understanding of phylum Arthropoda, Mollusca and Echinodermata with respect to habits and habitats</li> <li>• Understanding of morphology and anatomy of starfish</li> <li>• Understanding of larval forms of above mentioned phyla</li> <li>• Economic importance of Arthropods and molluscs</li> </ul>
S.Y.B.Sc. (Paper-II)	Applied zoology I	<ul style="list-style-type: none"> <li>• Understanding of application of fishery science</li> <li>• Understanding of science of pest control</li> <li>• Understanding of different pests and their infestation</li> </ul>
S.Y.B.Sc. (Paper-I)	Animal systematics and Diversity IV	<ul style="list-style-type: none"> <li>• Understanding of Phylum Chordata and its classes</li> <li>• Understanding of general characteristics of reptiles aves and mammals.</li> <li>• Understanding of Scoliodon systems</li> <li>• Understanding of adaptations according to their habitat</li> </ul>
S.Y.B.Sc. (Paper-II)	Applied zoology II	<ul style="list-style-type: none"> <li>• Understanding of apiculture and sericulture</li> <li>• Understanding of tools and techniques used in apiculture and sericulture</li> <li>• Understanding of enemies of honey bees and silk moths</li> </ul>

T.Y.B.Sc. (Paper-I)	Animal Systematic and Diversity- V	<ul style="list-style-type: none"> <li>• Understand the evolution, history of phylum.</li> <li>• Understand about the Non Chordate animals.</li> <li>• To study the external as well as internal characters of non chordates.</li> <li>• To study the distinguishing characters of non chordates.</li> <li>• Understand the economical importance of Molluscs</li> <li>• Understand the various internal systems like Digestive system,nervous system with the help of charts.</li> <li>• Understand the functions of Gemmules and spicules.</li> <li>• Understand the economical importance of Molluscan shells.</li> </ul>
T.Y.B.Sc. (Paper-II)	Mammalian Histology	<ul style="list-style-type: none"> <li>• Understand the terms Histology and Physiology</li> <li>• Understand the cell, tissue, organ, system and organisms.</li> <li>• Study the derivatives of skin- horns, nails, hairs.</li> <li>• Study and understand the terms- acidosis, alkalosis, asphexia, hypoxia, anoxia and cyanosis</li> </ul>
T.Y.B.Sc. (Paper-III)	Biological Chemistry	<ul style="list-style-type: none"> <li>• Understand about the agencies responsible for Production of various products using biochemistry.</li> <li>• Understand the term pH, Buffer.</li> <li>• Understand the structure and function of carbohydrate, amino acids, proteins, and lipids.</li> <li>• Understand the concept Enzymes and also Vitamins and minerals.</li> <li>• Understand the Principle role of Vitamins in metabolism and the deficiency diseases.</li> </ul>
T.Y.B.Sc. (Paper-IV)	Enviromental Biology & Toxicology	<ul style="list-style-type: none"> <li>• Know the biotic and abiotic components of ecosystem.</li> <li>• Food chain &amp; food web in ecosystem.</li> <li>• Understand diversity among various groups of animal kingdom.</li> <li>• Understand Animal community &amp; ecological adaptationin animals.</li> <li>• Scope , importance and management of biodiversity</li> </ul>

T.Y.B.Sc. (Paper-V)	Parasitology	<ul style="list-style-type: none"> <li>• To study and understand the scope and branches of Medical Zoology.</li> <li>• To aware the students for various parasites and diseases which spreads in human with the help of study of host-parasite relationship.</li> <li>• To increase awareness for the health in students.</li> <li>• Understand the various disease causing vectors like Mosquitoes.</li> <li>• To aware about the typhoid, cholera like disease.</li> </ul>
T.Y.B.Sc. (Paper-VI)	Cell Biology	<ul style="list-style-type: none"> <li>• Understand the Scope of cell biology, because cell is the basic unit of life.</li> <li>• Understand the Main distinguishing characters between plant cell and animal cell.</li> <li>• To study and understand the whole cell organelles with their structure and function.</li> <li>• Understand the cell cycle and know the importance of various cells in body of organisms.</li> <li>• Understand the various applications of cells by using cell biology like study of various types of tumor.</li> <li>• Understand the Animal cells and various cell organelles by using microphotographs.</li> <li>• Course</li> </ul>
T.Y.B.Sc. (Paper-I)	Biological Techniques	<ul style="list-style-type: none"> <li>• Understand the various Applications of Biotechnology.</li> <li>• Study and Understand the Hybridoma technology as well as Enzyme biotechnology.</li> <li>• Study and understand the DNA Recombinant technology.</li> <li>• Understand the industrial and environmental biotechnology.</li> <li>• Study and understand the Stem cell biotechnology.</li> <li>• Understand the Scope and Significance of Biotechnology.</li> </ul>

T.Y.B.Sc. (Paper-II)	Mammalian Physiology and Endocrinology	<ul style="list-style-type: none"> <li>• Understand the Importance of physiology and branches of it.</li> <li>• Understand the terms-Osmosis, diffusion, pH and Buffer.</li> <li>• Understand the Digestion and Excretion process, by studying the organs of it</li> <li>• Understand the process of Metabolism.</li> <li>• Understand the term Detoxification.</li> <li>• Understand the Circulatory system and Lymphatic system.</li> <li>• Study the nervous system.</li> </ul>
T.Y.B.Sc. (Paper-III)	Genetics and Molecular Biology	<ul style="list-style-type: none"> <li>• Understand the Molecular biology and molecular biology.</li> <li>• Understand the cell divisions and types of mutation.</li> <li>• Understand the structure and function of the cells.</li> </ul>
		<ul style="list-style-type: none"> <li>• Understand the term cell signaling.</li> <li>• Aware the students for Cancer.</li> <li>• Understand the Tools and Techniques in Molecular Biology.</li> <li>• Understand the term ELISA technique and DNA finger printing.</li> </ul>
T.Y.B.Sc. (Paper-IV)	Organic Evolution	<ul style="list-style-type: none"> <li>• To understand Origin of life with respect to prokaryotic and eukaryotic cells.</li> <li>• Understand the evidences of organic evolution by anatomical embryological list, paleontological, physiological, genetics and molecular biology evidences.</li> <li>• Understand theories of organic evolution, isolation, speciation.</li> <li>• Understand geological time scale, methods and classification of animal distribution and factors affecting animal distribution.</li> </ul>
T.Y.B.Sc. (Paper-V)	General Embryology	<ul style="list-style-type: none"> <li>• Understand the terms: Gametogenesis, Fertilization and early development.</li> <li>• Understand the Morphogenesis and Organogenesis in animals.</li> <li>• Understand the Aging, Apoptosis and Senescence.</li> </ul>

T.Y.B.Sc. (Paper-VI)	Medical Entomology	<ul style="list-style-type: none"> <li>• Understand the fundamentals of agricultural, forest, medical and veterinary entomology.</li> <li>• Understand Morphology and Anatomy of Insects.</li> <li>• Understand intra specific and inter specific relationships among insects.</li> <li>• To understand significance of beneficial and harmful insects with reference to their habit and habitat, life cycle, diseases caused by them and their control measures.</li> </ul>
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