

K. T. S. P. MANDAL'S

Hutatma Rajguru Mahavidyalaya

Rajgurunagar, Pune.

Department of Zoology

(Course Offered B. Sc. II)

B.Sc. ZOOLOGY PROGRAM OUTCOMES

PSO 1: After completion of this course students will be able to contribute as policy makers in biodiversity conservation, animal preservation and environment protection.

PSO 2: Equip with the knowledge of animal classification and diversity, ecology and economic importance of animals.

PSO 3: Acquire the advanced concepts in insect rearing and various animal breeding for the food security of human beings.

PSO 4: Inculcate the traditional knowledge of using various animal-based products in human healthcare system.

PSO 5: Adapt scientific research techniques in various applied branches of Zoology for sustainable development.

PSO 6: Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Toxicology,

Entomology, Sericulture, Biochemistry, Fish biology, Animal breeding and Clinical Pathology.

PSO 7: Zoology course also provides a knowledge of applied subjects to develop various skills to make a career and become an entrepreneur in the field of aquatic biology, sericulture, apiculture, vermiculture, prawn culture, dairy management, animal breeding and management, wildlife conservation and management, wildlife photography etc.

PSO 8: Analyze the relationships among animals, plants, and microbes.

PSO 9: Understand and analyze the ecological and evolutionary significance of different taxa of animals.

PSO 10: Analyze the mechanisms involved in life processes up to the molecular level.

PSO 11: Gains knowledge about research methodologies, effective communication and skills of problem-solving methods.

PSO 12: Contributes the knowledge for Nation building.

Course Outcomes:

After the completion of the course, students should be able to:

CO1: Understand the fundamental definitions, scope, principles and determinants of public health, and the concept of the Right to be healthy.

CO2: Identify the causes, symptoms, and preventive strategies for major communicable diseases such as malaria, STDs, and rabies.

CO3: Explain the risk factors, symptoms, and prevention methods for common non-communicable diseases like heart disease, asthma, diabetes, cancer, and mental health disorders.

CO4: Apply the principles and methods of health education in addressing population growth, family health, mental health in children, and substance abuse.

CO5: Evaluate the impact of lifestyle choices such as junk food, digital device overuse, and substance consumption on individual and community health.

CO6: Demonstrate knowledge of various types of hygiene including personal, food, and community hygiene and their role in disease prevention.

CO7: Analyze the relationship between hygiene practices and public health, including the role of sanitation, school hygiene programs, and national cleanliness campaigns.

CO8: Understand the structure and functioning of health administration at different levels and critically assess national and global health initiatives, with special emphasis on the COVID - 19 pandemic responses.

CO9: Classify and describe the anatomical, physiological and reproductive features of Protozoa, Porifera, Cnidaria.

CO10: Classify and describe the anatomical, physiological and reproductive features of Platyhelminthes, Aschelminths, and Annelida.

CO3: Understand use of nanoparticles in protozoan infection treatment, use of marine natural products from sponges for anticancer and antimicrobial drugs,

CO11: Learn about recent advances in venom studies, bioluminescence, potential in regenerative medicine.

CO12: Analyze life cycles and adaptations of parasitic species (e.g., *Plasmodium*, *Taenia*, *Wuchereria*) and connect this knowledge to current health challenges.

CO13: Interpret current scientific literature on invertebrate research (regeneration in *Hydra* and *Planaria*, genetic studies in *C. elegans*).

