



Bhiwapur Mahavidyalaya
Academic session-2026-2027

B.Sc. Zoology
Course Outcome

Sr. No.	Subject	Paper	Course Outcomes (COs)
Semester-V			
1	Zoology	DSC- General Mammalian Physiology – Paper I	After completing this course satisfactorily, a student will be able to: CO1: To describe the structural organization and physiological aspects of mammalian digestive, respiratory, circulatory, and excretory systems. CO2: To understand biochemical and physiological mechanisms involved in digestion, respiration, blood circulation, and urine formation. CO3: To understand the regulatory mechanisms controlling major physiological processes in mammals. CO4: To acquire knowledge of various physiological disorders, including respiratory disorders, cardiovascular diseases, and renal dysfunctions. CO5: Apply theoretical physiological concepts to laboratory experiments and interpret experimental data scientifically. CO6: Identify and interpret the histological structure of major mammalian organs including digestive, respiratory, and excretory tissues. CO7: Develop practical laboratory skills, observation ability, data interpretation skills, and understanding of clinical relevance in physiology.
2	Zoology	DSC- Applied Zoology	After completing this course satisfactorily, a student will be able to: CO1: Explain aquaculture practices and fisheries resources for sustainable production.

			CO2: Apply knowledge of apiculture, sericulture, and lac culture for entrepreneurship. CO3: Understand scientific animal husbandry practices and livestock management. CO4: Demonstrate basic understanding of modern biological instruments and laboratory techniques. CO5: Apply zoological knowledge in agriculture, industry, and biotechnology sectors. CO6: Develop observational, documentation, and reporting skills through field visits to fish farms, apiaries, dairy, or poultry units. CO7: Apply practical zoological knowledge for entrepreneurship, pest management, aquaculture, and allied biological sectors.
3	Zoology	DSC- Evolutionary Biology	After completing this course satisfactorily, a student will be able to: CO1: Explain the origin of life and major evolutionary events. CO2: Describe mechanisms of evolution and population genetics principles. CO3: Understand speciation processes and macroevolutionary patterns. CO4: Illustrate human evolution and molecular evolutionary concepts. CO5: Apply evolutionary principles in medicine, agriculture, and conservation. CO6: Identify and interpret major fossil forms and fossil replicas, and explain their evolutionary significance. CO7: Construct and interpret phylogenetic trees and cladograms to understand evolutionary relationships among organisms.

			CO8: Differentiate between homologous and analogous organs and explain evolutionary importance of connecting links such as Archaeopteryx and Peripatus.
4	Zoology	DSC Male Mammalian Reproductive Physiology	After completing this course satisfactorily, a student will be able to: CO-1: Describe anatomy and histology of male reproductive organs CO-2: Explain spermatogenesis and hormonal regulation CO-3: Understand semen composition and fertilization CO-4: Analyze causes of male infertility and contraception methods CO-5: Perform basic laboratory techniques related to male reproduction
5	Zoology	Vocational Skill Course	After completing this course satisfactorily, a student will be able to: CO1: Identify and classify different types of silkworms used in sericulture. CO2: Demonstrate practical knowledge of cultivation practices, including nursery management and field preparation. CO3: Apply standard silkworm rearing techniques and manage rearing houses and appliances effectively. CO4: Identify major diseases and pests of silkworms and describe appropriate preventive and management strategies. CO5: Perform cocoon harvesting, sorting, and grading based on standard sericulture practices. CO6: Explain basic silk reeling techniques and recognize important by-products of sericulture. CO7: Develop practical exposure to sericulture through field visits, internships, or training in sericulture farms, grainages, or silk reeling units.

6	Zoology	Minor 5: BZO3T05 Life and Diversity of Animals - Chordates (Protochordata to Amphibia)	After completing this course satisfactorily, a student will be able to: CO 1. Describe classes and orders of phylum Chordata. CO 2. Identify, Classify various animals of the Phylum Chordata. CO 3. Differentiate between Protochordate and higher Chordates upto Amphibia based on their characters. CO 4. Analyze the anatomy and physiology of protochordates, agnathans, pisces and amphibians. CO 5. Create interlinking and mapping between various chordate groups.
7	Zoology	Minor 6: BZO3T06 Genetics	After completing this course satisfactorily, a student will be able to: CO 1. Understand the Fundamental Principles of Genetics: Explain Mendelian inheritance, the Chromosome Theory of Inheritance, mitochondrial DNA and plasmids, and genetic variation and mutation, distinguish various chromosomal aberrations, recognize types of mutations (point mutations, frameshift), and evaluate their roles in genetic diversity and disease. CO 2. Comprehend the Mechanisms of Genetic Inheritance and Gene Structure: Explore genetic inheritance mechanisms, gene structure, chromosomal mapping concepts, and cytoplasmic inheritance. Analyze pedigree analysis for autosomal and X-linked traits to identify inheritance patterns. CO 3. Analyze Genetic Variation and Evolutionary Dynamics: Apply the Hardy-Weinberg principle to study genetic equilibrium and the impact of factors such as mutation, selection, and genetic drift on population genetics, Explain the genetic basis of speciation, adaptation, and evolutionary processes, use quantitative genetics to explore polygenic traits, heritability, and their role in natural selection and evolution. CO 4. Examine Human Genetics and Genetic Disorders: Interpret human karyotypes and identify chromosomal and genetic disorders, Understand the inheritance patterns of single-gene and multifactorial disorders, Discuss the ethical considerations in genetic

			counseling, genetic testing, and biotechnology, especially in the context of human health. CO 5. Explore Advanced Topics in Genetics and Their Applications: Analyze the genetic basis of cancer, oncogenes, and tumor suppressor genes, and the role of mutations and environmental factors in cancer development, Discuss the role of epigenetics and environmental influences on gene expression and development, Evaluate the applications of gene therapy, agriculture, and biotechnology, addressing ethical and societal implications.
Semester-VI			
7	Zoology	DSC- General Mammalian Physiology II	After completing this course satisfactorily, a student will be able to: CO1: Explain the structural organization and functional mechanisms of mammalian muscle, nerve, endocrine, reproductive, and sensory systems. CO2: Describe physiological mechanisms such as muscle contraction, nerve impulse transmission, hormonal regulation, and reproductive processes. CO3: Interpret cellular and molecular basis of neuromuscular transmission, synaptic function, and hormone action. CO4: Correlate physiological processes with associated disorders such as endocrine imbalances, reproductive dysfunctions, concepts of infertility and assisted reproductive techniques. CO5: Explain the physiological basis of sensory perception (vision, hearing, taste, and smell), homeostasis, thermoregulation, and stress response.
8	Zoology	DSC- Parasitology	After completing this course satisfactorily, a student will be able to: CO1: Explain the fundamental principles of parasitology, including types of parasites, host parasite relationships, modes of transmission, and mechanisms of pathogenesis.

			CO2: Describe the morphology, life cycles, transmission patterns, and pathogenic effects of major protozoan parasites of medical importance. CO3: Understand the structural organization, classification, life cycles, and disease-causing mechanisms of helminth parasites including trematodes, cestodes, and nematodes. CO4: Analyze the epidemiology, clinical manifestations, diagnostic techniques, prevention, and treatment strategies of important parasitic diseases. CO5: Identify medically and veterinary important ectoparasites and insect vectors, and evaluate their role in disease transmission and control programs. CO6: Interpret host immune responses and parasite adaptations, and relate parasite biology to public health management and disease control strategies.
9	Zoology	DSC Female Mammalian Reproductive Physiology	After completing this course satisfactorily, a student will be able to: CO1: To study the location, structure and functions of organs of female reproductive system CO2: To reveal the phases of menstrual cycle, hormones and process of oogenesis CO3: To understand the process of pregnancy and birth control methods and IUDs CO4: To analyze the various prenatal diagnostic tests
10	Zoology	Vocational Skill Course (VSC) Prawn Culture	After completing this course satisfactorily, a student will be able to: CO1: Identify commercially important freshwater and marine prawn species used in aquaculture. CO2: Explain the biological characteristics and life cycle of prawns relevant to aquaculture practices. CO3: Demonstrate pond preparation, water quality management, and feeding strategies in prawn culture. CO4: Identify common diseases and predators of prawns and describe preventive and management measures.

			CO5: Understand harvesting techniques, processing methods, and marketing strategies for prawn products. CO6: Develop vocational and entrepreneurial skills related to prawn farming and aquaculture industries.
11	Zoology	Minor 7- BZO4T07 Life and Diversity of Animals- Chordates (Reptilia to Mammalia)	After completing this course satisfactorily, a student will be able to: CO 1. Describe, explain characters, classification of Reptile. Could analyze general pattern of different system of reptile. CO 2. Describe, explain characters, classification of Aves. Could analyze general pattern of different system of Aves. CO 3. Describe, explain characters, classification of Mammalia. Could analyze general pattern of different system of Mammalia. CO 4. Compare integuments, urinogenital systems, heart and aortic arches in Reptilia, Aves and Mammalia. Also describe and analyze autonomous nervous system in Mammalia.