

| Course Code | Course Name     | Credits |
|-------------|-----------------|---------|
| 26ZY901     | APPLIED ZOOLOGY | 04      |

### Course Objectives

- To understand the principles and scope of applied zoology.
- To study the practical applications of zoology in human welfare.
- To develop knowledge on economically important animals.
- To understand animal resources and sustainable utilization.
- To enhance awareness on applied aspects of zoological sciences.

### Learning Outcomes

- Explain the importance and applications of zoology.
- Identify economically important animals and their uses.
- Demonstrate knowledge of applied zoological techniques.
- Analyze animal resources and management practices.
- Apply zoological knowledge in agriculture, health and industry.

### Unit 1 - Introduction to Applied Zoology (12 Hrs.)

Definition, scope and importance of applied zoology; applications of zoology in agriculture, medicine and industry; economic importance of animals; role of zoology in human welfare; branches of applied zoology; recent advances and interdisciplinary applications in zoological sciences.

### Unit 2 - Aquaculture and Fisheries (12 Hrs.)

Freshwater and marine fisheries; fish culture techniques; ornamental fish culture; fish breeding and hatchery management; fish processing and preservation; integrated fish farming; economic importance of fisheries resources.

### Unit 3 - Apiculture and Sericulture (12 Hrs.)

Bee keeping methods; honey and bee products; silkworm rearing; mulberry cultivation; silk production and processing; diseases and pests of honey bees and silkworms; economic importance and rural employment opportunities.

### Unit 4 - Pest and Vector Management (12 Hrs.)

Agricultural pests; stored grain pests; vector insects and diseases; biological, chemical and environmental control methods; integrated pest management; public health importance of vector control.

### Unit 5 - Animal Biotechnology and Conservation (12 Hrs.)

Applications of biotechnology in zoology; recombinant DNA technology and animal tissue culture; wildlife conservation strategies; biodiversity protection; sustainable utilization of animal resources; future prospects and ethical issues in applied zoology.

### Reference Books:

1. Shukla, G.S. (2018). Economic Zoology. Rastogi Publications.
2. Srivastava, K.P. (2017). Applied Zoology. Scientific Publishers.
3. Pedigo, L.P. (2019). Entomology and Pest Management. Waveland Press.
4. Rath, R.K. (2017). Freshwater Aquaculture. Scientific Publishers.
5. Hunter, M.L. (2020). Conservation Biology. Wiley.

### Websites and eLearning Sources:

1. <https://www.icaa.org.in/>
2. <https://www.fao.org/>
3. <http://www.easybiologyclass.com/>

