**Program Outcomes (POs)**

Upon successful completion of the B.Sc. in Industrial Fish & Fisheries program, students will be able to:

1. **PO1: Scientific Knowledge**  
   Apply knowledge of biological sciences with emphasis on fisheries, aquaculture, and environmental conservation.
2. **PO2: Technical Proficiency**  
   Acquire hands-on skills in fish identification, culture, breeding techniques, and disease management.
3. **PO3: Environmental Awareness**  
   Understand the ecological significance of aquatic ecosystems and promote sustainable fishery practices.
4. **PO4: Problem Solving**  
   Analyze and solve field-based issues related to fish farming, water quality management, and post-harvest technology.
5. **PO5: Communication Skills**  
   Communicate scientific ideas effectively through oral and written means to stakeholders, including farmers, policymakers, and academicians.
6. **PO6: Entrepreneurship Development**  
   Demonstrate the capability to initiate and manage small-scale or commercial aquaculture and fisheries enterprises.
7. **PO7: Ethics and Sustainability**  
   Develop awareness of ethical, legal, and environmental aspects in fisheries resource management.
8. **PO8: Research and Innovation**  
   Design, conduct, and report basic research in fisheries biology and aquaculture technologies.

**Program Specific Outcomes (PSOs)**

On completion of the B.Sc. Industrial Fish & Fisheries program, students will be able to:

1. **PSO1:** Identify and classify economically important freshwater and marine fishes, crustaceans, and mollusks.
2. **PSO2:** Operate and manage freshwater and brackish water aquaculture systems.
3. **PSO3:** Apply modern tools for water quality analysis, disease diagnosis, fish nutrition, and breeding.
4. **PSO4:** Demonstrate knowledge of fish preservation, processing, value addition, and marketing strategies.
5. **PSO5:** Conduct surveys and fieldwork to assess fish biodiversity and conservation status in natural water bodies.

**Course Outcomes (COs)**

Below are model COs for some core papers across the three years. Full detailed COs for each paper can be developed similarly.

**Paper I – *Ichthyology and Inland Fisheries***

* CO1: Understand the anatomy and physiology of fishes.
* CO2: Identify and classify Indian freshwater fishes.
* CO3: Describe inland fishery resources and their economic importance.
* CO4: Assess threats to inland fisheries and suggest conservation measures.

**Paper II – *Aquaculture and Hatchery Management***

* CO1: Learn various aquaculture systems and culture techniques.
* CO2: Understand broodstock selection and induced breeding techniques.
* CO3: Manage hatcheries for carps and other cultivable species.
* CO4: Evaluate seed production and rearing practices.

**Paper III – *Fish Ecology and Limnology***

* CO1: Study physical, chemical, and biological features of aquatic ecosystems.
* CO2: Analyze fish habitats and their influence on fish diversity.
* CO3: Apply limnological techniques to assess water quality.

**Paper IV – *Fish Pathology and Health Management***

* CO1: Identify major fish diseases and causative agents.
* CO2: Learn disease prevention and biosecurity protocols.
* CO3: Apply chemotherapeutic and immunological disease control measures.

**Paper V – *Fish Technology and Post-Harvest Management***

* CO1: Understand preservation methods and fish processing techniques.
* CO2: Learn fish curing, freezing, canning, and packaging techniques.
* CO3: Evaluate the role of value addition in fishery product marketing.

**Paper VI – *Fisheries Economics and Extension***

* CO1: Understand principles of fishery economics and marketing.
* CO2: Learn strategies for rural fisheries extension and community development.
* CO3: Design awareness programs for sustainable fisheries management.