

मत्स्य प्रसार पदाधिकारी/कनीय मत्स्य अनुसंधान पदाधिकारी के पद पर सीधी नियुक्ति हेतु पाठ्यक्रम।

Unit 1 : Fishery resources and management & Fish Biology.

Classification and taxonomical characteristics of cultivable fisheries, crustaceans and molluscs. Fresh water and pond ecosystem. Population dynamics, fish stock abundance methods and analysis. Conservation and management of fishery resources. Impact of over exploitation and climatic change on fishery resources. Culture & Capture fishery resource of Bihar and present status along its present production of fish and fish seed vis-à-vis supply & demand. Fin fish & shell fish anatomy and its various aspects of biology.

Unit 2 : Fish aquaculture.

Reproduction and breeding behavior in fishes and shellfishes, brood stock improvement, maturity and fecundity studies. Induced spawning methods and seed production, natural fish seed collection and rearing methods. Types of eggs and development of larval stages of fin fishes and shellfishes. Preparation and management of fresh water and brackish water fishponds. Cultivable species identification, introduction of exotic fishes in India. Culture methods: Pen and cage culture practices, carp and shrimp hatchery management, basic aspects of biotechnology and genetics in relation to fisheries. Fish disease and its control. Ornamental fish Breeding and its culture. Types of fish culture. Capture and culture fisheries in low lying water bodies.

Unit 3 : Ecology of water bodies.

Important limnological and biological parameters in relation to fisheries of lotic and lentic waters, biological productivity and its impact on fisheries. Environmental impact assessment on fisheries in lentic and lotic waters. Biological parameters including energy flow, community ecology and aquatic association, biodiversity and its conservation, aquatic pollution and its management.

Unit 4 : Harvest and post harvest technology.

Common crafts and gears used for fish capture. Boat building material and demerits of wood, steel, aluminium, Ferro cement and FRP. Different types of fibres and netting materials and their characteristics , preservation of netting , parts of a trammel net, pursescene, gill net and tuna long line. Food chemistry, fundamentals of microbiology, General methods of fish preservation and fishery by products. Canning and packaging techniques, processing and product development techniques.

Unit 5 : Fisheries economics, extension & statistics.

Introduction of Fishery economics and concepts of cooperative, marketing and banking management. Supply v/s demand economics of hatchery management and fish culture operations. Profit maximization. Problems in estimating costs and returns in fisheries. Fisheries extension methods. Training and education needs in fisheries. Communication concepts, Modern tools of fishery extension education, participatory rural appraisal (PRA), Rapid rural appraisal (RRA), role of women in fisheries; Basics of statistics in fisheries and computer science.