

# **Govt. Degree College Baramulla (Autonomous)**

## **SEMESTER 1<sup>st</sup> COURSE – SKILL ENHANCEMENT COURSE**

### **Subject: Industrial Fish and Fisheries**

**Title: COMMERCIAL FISH FARMING**

CREDIT: (2+2) THEORY: 02; PRACTICAL: 02

**Code: BFF22S102**

CONTACT HOURS: 30 (T) + 30 L)

### **Part 1: Theory (2 Credits)**

Course Objectives:

- *To provide Basic knowledge about the aquaculture.*
- *To provide knowledge about construction and management of fish farm.*

Learning outcomes:

*This course will be helpful in generation of self-employment by rearing of fishes in backyard ponds on small as well as large scale.*

#### **UNIT I: Basics of Aquaculture**

**(15 Contact hours)**

- 1.1 Definition, History and Scope of Aquaculture
- 1.2 Present Status of Aquaculture
- 1.3 Different systems of aquaculture - extensive, semi-intensive, intensive, Integrated fish farming,
- 1.4 Different fish farming practices - Pond Culture, Raceway Culture, Cage Culture, Re-circulatory aquaculture systems (RAS), Bio- floc technology
- 1.5 Monoculture, Polyculture, Composite fish culture

#### **Unit II: Management of Culture Ponds**

**(15 Contact hours)**

- 2.1 Criteria for site selection of a fish farm
- 2.2 Criteria for selection of fish species for aquafarming
- 2.3. Different types of culture ponds – Nursery pond, Rearing pond, Stocking Pond
- 2.4 Pre stocking management - Control of aquatic weeds and algal blooms, Control of predatory and weed fishes
- 2.5 Procurement and stocking of fish seed
- 2.4 Post stocking Management – Care of fish stock, Artificial feeding, Harvesting

## **Part 2: Laboratory Course (2 Credits)**

1. Aquaculture production statistics- world and India (Charts, Tables & diagrams).
2. Practices on pre-stocking management - Liming, Manuring, Deweeding, Removal of predator and weed fishes, Removal of insects).
3. Practices on post stocking management – Aeration , Artificial feeding
4. Water analysis - Measurement of temperature, Determination of pH, transparency, dissolved oxygen,
5. Field visit to various fish farms and hatcheries to observe cultural practices

### ***Books Recommended:***

1. Ayyappan, S., 2017, .Handbook of Fisheries and Aquaculture, ICAR Publications, New Delhi.
2. Rath, R.K., 2011. Fresh water Aquaculture, Scientific publications.
3. Huet Marcel. 1972. Text book of fish culture. Oxford Fishing news books.
4. Santhanam, R., Sukumaran, N. and Natarajan, P. 1987. A manual of Aquaculture. Oxford- IBH, New Delhi.
5. Sriyatsava. 1993. Freshwater Aquaculture in India, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi.
6. Bardach. 1972. Aquaculture, John Wiley and sons, New York.