

III SEMESTER
Course No.: 7 - Fresh water Aquaculture
credits :3

Course outcomes:

1. Learn the Status, Scope and Prospects of fresh water aquaculture in the world, India and AP.
2. Learn about Major Cultivable Indian Carps and Exotic fish Species introduced in India
3. Know about recent developments in the culture of clarius, anabas and murrels and special systems of aquaculture.
4. Gain knowledge of commercially valuable Fresh water prawns of India and their culturing methods.

UNIT-1: Introduction to Freshwater Aquaculture

- 1.1 Status, scope and prospects of fresh water aquaculture in the world, India and AP
- 1.2 Different fresh water aquaculture systems

UNIT-II: Carp Culture

- 2-1 Major cultivable Indian carps – Labeo, Catla and Cirrhinus & Minor carps
- 2-2 Exotic fish species introduced to India – Tilapia, Pangassius and Clarius sp.

Unit-III

- 3.1 Composite fish culture system of Indian and exotic carps
- 3.2 Impact of exotic fish, Compatibility of Indian and exotic carps and competition among them

UNIT-IV: Culture of air-breathing and cold water fish

- 4-1 Recent developments in the culture of clarius, anabas, murrels,
- 4-2 Advantages and constraints in the culture of air-breathing and cold water fishes- seed resources,
feeding, management and production
- 4-3 Special systems of Aquaculture- brief study of culture in running water, re-circulatory systems, cages and pens, sewage-fed fish culture

UNIT-V: Culture of Prawn

- 5-1 Fresh water prawns of India - commercial value
- 5-2 Macrobrachium rosenbergii and M. Malcomsonii– biology, seed production, pond preparation,
stocking, management of nursery and grow-out ponds, feeding, morphotypes and harvestin

III SEMESTER
Course No.: 7 - Fresh water Aquaculture.
credits :1

1. Identification of important cultivable carps.
2. Identification of important cultivable air-breathing fishes .
3. Identification of important cultivable freshwater prawns.
- 4 Identification of different life history stages of fish.
- 5 Identification of different life history stages of fresh water prawn.
- 6 Identification of commercially viable crabs – *Scylla cerrata*, *Portunus pelagicus*,
P.sanguinolentus,
Neptunus pelagicus, *N. Sanguinolentus* .
7. Identification of lobsters – *Panulirus polyphagus*, *P.ornatus*, *P.homarus*, *P.sewelli*,
P.penicillatus.
8. Identification of oysters of nutritional significance – *Crossostrea madrasensis*,
C.gryphoides,
C. cucullata, *C.rivularis* , *Picnodonta* .
9. Identification of mussels and clams.
10. Identification of developmental stages of oysters.

PRESCRIBED BOOK(S):

- 1 Jhingran VG 1998. Fish and Fisheries of India. Hindusthan Publishing Corporation, New Delhi

REFERENCES:

1. Santharam R, N Sukumaran and P Natarajan 1987. A manual of aquaculture, Oxford-IBH, New Delhi
2. Srivatsava 1993. Fresh water aquaculture in India, Oxford-IBH, New Delhi Marcel H 1972. Text book of fish culture.Oxford fishing news books.