

CORE COURSE XII – AQUACULTURE

Unit I

Aquaculture – History of present status in India cultivable species – Fin fishes and shell fishes, Shrimps, culture of live feed organisms – Algae, Phytoplankton, Rotifers and Artemia.

Unit II

Composite Fish culture – Carps inland waters – Shrimps in Coastal areas – Site selection – Pond construction pond preparation – water quality management – control of predatory organisms – seed transport and stocking – supplementary feed.

Unit III

Brackish water shrimp and freshwater prawn culture – Natural seed resources – water management – feed monitoring – Pathology – Diseases of fishes and prawns and their control measures.

Unit IV

Hypophysation or Induced breeding in carps ploidy induction – Hybrid fish, monosex culture, Transgenic fish – Techniques for hatching and spawning – modern hatchery system and their management – Transport fry and fingerlings.

Unit V

Harvesting – methods of Harvesting – Freezing – Techniques – Canning – Smoking – Fish products – Fish meal, fish soup, Sauce, fish oil, fish pickle – extraction of fish oil – Chitin – Chitosan – Fish medicine – Marketing – Export and Import countries – Quality control role of MPEDA in marketing. Impact of Aquaculture on Environment and their related laws.

Reference Book:

1. Barton Lias – Estuarine Chemistry
2. Kennedy – Estuarine Perspective
3. Perkins – The Biology of Estuarine and Coastal Lagoons.
4. Wiley – Estuarine interactions.
5. T.A. Qureshi and N.A. Qureshi – Indian Fishes, Brig. Brothers, Sullania Road, Bhopal, India.
6. Donald, McLusky – Ecoogy of Estuaries, Heinemann Publications, Glasgow and London.
7. Milne, P.H. – Fish and Shell, Fish formation in coastal water, Fishing (Books) Ltd., London.
8. V.C.Jhingran and Gopalakrishnan Ray, P. and Chosh, A – Methodology for survey of brackish water areas V.in India, For Coastal – Aquaculture IndoPacific Fish Council, 14th session.

9. T.A.Aanson and Goodwin, H. – Shrimp and Prawn farming in the Hemisphere, Downdon Authchinson and Rea, Inc., Pennysylvania.
10. Chen, T.P., - Aquaculture Practices in Taiwan, Fish News Book Ltd, London.
11. C.M.F.R.I. – Coastal Aquaculture – Marine Prawn culture.
12. Bulletin No. 28, Part – Larval development of Indian Penaeid Prawns.
13. T.V.R.Pillay (1994) – Aquaculture – Principles and Practices, Fishing News Books, Blackwell, London.
14. Jhingran, V.G. (1998) – Fish and Fisheries of India, Hindustan Publishing Corporation, New Delhi.
15. FAO, FAO Identification sheets for Fishery Purposes, Vol. I – IV, FAO, Rome, Italy.
16. MPEDA, Publication Series, Vol. 1-26, Books Marine Products Export Development Authority, Cochin, Kerala.