

ELECTIVE COURSE VI – ESTUARINE BIOLOGY

Unit I

Estuarine environment : Classification, characteristics – physical, chemical and biological.

South Indian Estuaries : any three with their biota.

Mangrove swamps : Classification and ecology – their role in fishery potential.

Unit II

Estuarine biota : Plankton – types – their collection and identification.

Fauna – types : Meiofauna, Macrofauna and Microfauna – Composition and characteristics.

Estuarine benthos – their ecology and adaptations.

Unit III

Estuarine Biota : Nekton – fishes – food and feeding habits – growth, reproduction and larval cycle of fin fish, prawns, crabs and edible mollusks.

Estuarine animals and their adaptations.

Unit IV

Estuarine fishery resources of South India – fin fish and shell fish – fishing methods – crafts and gears.

Unit V

Estuarine farming : Construction and maintenance of fish and prawn farms. Fish culture, Prawn culture, Oyster culture, Crab culture, Clam culture, Artemia culture.

Recommended Text Books :

1. KENNEDY, (1982), Estuarine Perspectives, Academic Press, New York.
2. PERKINS, (1982), The Biology of Estuarine and Coastal Waters, Academic Press New York.

Reference Books :

1. BARDACH, J.E., RYTHER, W.O. and McLARREY (1972) Aquaculture : The farming and Husbandry of Freshwater and Marine Organisms. Wiley Interscience, New York.
2. BISWAS, K.P. (1992) Prevention and Control of Fish and Prawn Diseases, Narendra Publishing House, Delhi.
3. BURTON-LIAS, (1982) Estuarine Chemistry, Academic Press, New York.
4. DONALD S. McLUSKY (1985) Ecology of Estuaries, Heinemann Educational Books, London.
5. CMFRI (1992) An Appraisal of the Marine Fisheries of Tamilnadu and Pondicherry, Special Bulletin No.34, Central Marine Fisheries Research Institute, Kochi.
6. DASH, M.C., and PATNAIK, P.N. (1994) Brackishwater Prawn Culture, Palani Paramount Publications, Palani.
7. HORNELL, J., (1995) Marine Fish Farming for India. Associate Publishing House, New Delhi.
8. MPEDA Handbook Aquafarming (1992) Sea Fishes, Marine Products Export Development Agency, Kochi.
9. SAMUEL PAUL RAJ (1995) Shrimp Farming Techniques : Problems and Solutions, Palani Paramount Publications, Palani.
10. SANTHANAM, R., RAMANATHAN, N., JAGATHEESAN, G., and VENGATARAMANUJAN, K. (1988) Phytoplankton of the Indian Seas. Daya Publishing House, New Delhi.
11. SANTHANAM R., and SRINIVASAN, A. (1994) A Manual of Marine Zooplankton. Oxford and IBH Publishing Co., Ltd., New Delhi.