

**CORE COURSE VI : FARM ENGINEERING AND AQUACULTURE
TECHNIQUES**

UNIT 1:

Criteria of site selection –principles and procedures of elementary survey – designing and layout of farm, water supply to farm, open water and land based farms, ponds, race ways, pens and saltpan reservoirs.

UNIT:2

Natural seed resources – seed production –seed grounds –methods of collection of seed for culture practices – quarantining – acclimation of seeds.Collection and transportation of brood stock. Breeding under controlled conditions, brood stock management, techniques of induced breeding, hatchery production of seed, components of a hatchery, nursery management.

UNIT:3

Extensive culture – traditional culture practices – in India and other countries, advantages and disadvantages of extensive semi- intensive and intensive culture. Culture of shrimps. Culture of carp, milk fish and sea bass.

UNIT:4

Feeding and food utilization, energy metabolism, live and artificial feed. Recent advancement – probiotics – immuno stimulants, aqua mtas, bacteria controlling chemicals.

UNIT:5

Culture of fresh water prawn *Macrobrachium* spp. and its seed production. Culture of lobsters and crabs – prospects and constraints. Production and economics of aquaculture in extensive and semi-intensive systems.

References:

1. Pillay. T.V.R., 1972. Coastal Aquaculture in the indo-pacific Region, Fishing News(Book)Ltd., London.
2. Pillay, T.V.R., 1990. Aquaculture principles and practices. Fishing News (Book) Ltd., London
3. Shigueno, K., 1976. Shrimp culture in Japan. Association for international technical promotion, Tokyo.
4. Bardach, J.E., J.H.Ryther and W.O.McLarney, 1972. Aquaculture:Farming and Husbandry of Freshwater and Marine Organisms. Wiley interscience, New York.