

ST. JOSEPH'S COLLEGE FOR WOMEN (A), VISAKHAPATNAM

Four Year – B.Sc. (Hons), Semester – VIII

ZOOLOGY

SKILL ENHANCEMENT COURSE (AQUACULTURE)

MARICULTURE

Code: Z 8504(3)

Time:4hrs/week

Max. Marks-100

I. LEARNING Objectives:

Enable the students to

- Acquire knowledge about site selection & practices in Mariculture
- Evaluate the environment impact assessment and management.
- Develop insight into the design and construction of mariculture systems
- Understand the various steps involved in culture of Mud crab, Mussel etc.
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Learning Objectives:

By the successful completion of the course the students shall be able to –

- Understand the basic principles and objectives of mariculture.
- Learn the techniques of site selection and preparation for mariculture.
- Summarise the types of culture systems used in mariculture.
- Develop insight into the culture aspects of fin fish and crustaceans in mariculture.
- Understand the culture aspects of mussel farming, pearl oysters and seaweeds of mariculture.

SYLLABUS

UNIT-I:

- 1.1 Definition, history and scope of mariculture
- 1.2 Principles and objectives of mariculture
- 1.3 Status of mariculture in India.

UNIT-II:

- 2.1 Factors affecting site selection for mariculture
- 2.2 Techniques for site preparation
- 2.3 Environmental impact assessment and management

UNIT-III:

- 3.1 Types of mariculture systems: open sea culture, closed system, land-based tanks, and cages
- 3.2 Design and construction of mariculture systems (cages, pens, rafts)
- 3.3 Water quality monitoring in mariculture systems

UNIT-IV:

- 4.1 Culture of Grey mullets, Milk fish, Asian seabass, groupers.
- 4.2 Culture of Crustaceans- Mud crab

UNIT-V:

- 5.1 Mussel farming
- 5.2 Culture of abalone
- 5.3 Culture of seaweeds

II. REFERENCE BOOKS

1. Mariculture: Principles and Practices by John A. Hargreaves and James E. McVey
2. Aquaculture: Farming Aquatic Animals and Plants by John S. Lucas and Paul C. Southgate
3. Aquaculture Engineering by Odd-Ivar Lekang
4. Handbook of Mariculture: Aquaculture of Bivalve Molluscs by John W. Castello and C. D. D. Tacon
5. Marine Aquaculture: Opportunities for Growth by National Research Council

6. Aquaculture Production Systems by James E. McVey
7. Mariculture: Principles and Practices by B. Madhusoodana Kurup and K. K. Vijayan.
8. Marine Aquaculture: Principles and Practices by N. P. Kurup and K. K. Vijayan.
9. Marine Fisheries and Mariculture by R. B. Simha and S. S. Mishra.
10. Handbook of Fisheries and Aquaculture by B. C. Mahapatra.
11. Fishery Science and Aquaculture: Principles and Practices by R. K. Singh and P. C. Thomas.
12. Mariculture and Aquaculture Engineering by K. R. Gupta.
