

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

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

**ZOOLOGY**

SKILL ENHANCEMENT COURSE (AQUACULTURE)

**MARICULTURE**

**Code:Z 8554(2)**

**PRACTICAL**

Time :2hrs/week

**Max marks:50**

**Learning Objectives:** Enable the students to

- Identify the characters of cultivable finfish
- Understand the importance of monitoring the water quality parameters suitable for mariculture
- Gain knowledge in identifying the important sea weeds and their uses.

**Learning Outcomes:**

- Acquire Skill in water quality monitoring for mariculture systems
- Develop Skill in identification and characters of different marine cultivable fin fishes,
- Identify cultivable shrimps and crabs
- Gain Skill in identification and characters of different marine cultivable seaweeds

**I. SYLLABUS**

1. Techniques for water quality monitoring- Physico chemical parameters.
2. Identification of cultivable finfish-  
*Mugil cephalus, Chanos chanos, Lates calcarifer, Cromileptes altivelis, Epinephelus areolatus.*
3. Identification of cultivable shrimps and crabs-  
*Penaeus indicus, Penaeus merguensis, Penaeus monodon, Penaeus vannamei, Scylla serrata, Scylla tranquibarica.*
4. Identification of important bivalves- *Crossostrea madrasensis, Pinctada fucata, Perna viridis, Perna indica, Anadara granosa.*
5. Identification of seaweeds *Ulva, Sargassum, Gelidiella, Gracilaria, Hypnae*

**II. REFERENCE BOOKS**

1. Marine Aquaculture: Opportunities for Growth edited by Sandra Shumway and Gary Loveridge
2. Seaweeds: Edible, Available, and Sustainable edited by Ole G. Mouritsen and Jonas Drotner Mouritsen
3. Marine Shrimp Culture: Principles and Practices by James M. Wyban

4. Mariculture: Principles and Practices by John A. Hargreaves and James E. McVey
5. Handbook of Mariculture: Aquaculture of Bivalve Molluscs by John W. Castello and C. D. D. Tacon
6. Marine Aquaculture: Opportunities for Growth by National Research Council
7. Mariculture: Principles and Practices by B. Madhusoodana Kurup and K. K. Vijayan.
8. Marine Fisheries and Mariculture by R. B. Simha and S. S. Mishra.
9. Handbook of Fisheries and Aquaculture by B. C. Mahapatra.
10. Mariculture and Aquaculture Engineering by K. R. Gupta.

### **III. CO-CURRICULAR ACTIVITIES**

- Visit to a mariculture farm to observe site selection and practical techniques
- Interactions with industry experts
- Attending/ Conducting Seminars and workshops on mariculture
- Participate in mariculture-related competitions and quizzes

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