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

VIII SEMESTER **BIOTECHNOLOGY** TIME: 2 Hrs/Week BTH 8754 (3) **AQUATIC DISEASE DIAGNOSIS** Max. Marks: 50

(Skill Enhancement Course – SEC)

W.e.f 20AH Batch

OBJCECTIVE: To enable the students to

- 1. Gain knowledge on carp, prawn, shrimp and crab culture
- 2. Improve the technical knowledge onmodern techniques employed in fish preservation
- 3. Understand bacterial, protozoan, helminthic and fungal diseases and their precautionary measures.
- 4. Learn about parasite pathology, treatments and control of the disease caused by protozoan parasites.
- 5. Gain knowledge on viral diseases of finfish, shell fish, epidemiology, treatment and control methods.

COURSE OUTCOMES: Students will

- **CO1:** Be able to list out different types of nurseries and beds
- **CO2:** Indentify the nursery tools, implements and containers.
- CO3: Develop skill on potting media preparation and plant production
- **CO4:** Learn the technique of establishing cutting, layering, grafting etc.

PRACTICAL COURSE:

- 1. Examination of moribund fish for bacterial diseases;
- 2. Sampling techniques and culture techniques,
- 3. Isolation and identification of bacterial pathogens; Identification of virulence factors.
- 4. Serological and molecular diagnostic techniques.
- 5. Isolation, culture and identification of fungal pathogens
- 6. Collection and identification of parasites; Preparation of permanent slides.
- 7. Micrometry and diagrams of parasites; Histological slide preparation of parasite-infected tissues;
- 8. Processing for study of helminthes and their larval stages;
- 9. Examination of intermediate host for larval stages; Processing and study of the arthropods and their larval stages; Fixation staining and study of the protozoans.
- 10. Examination of biopsy material, examination of tissue sections for parasites.

REFERENCES

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- 2. Lydia Brown (Ed). 1993. Aquaculture for Veterinarians. Pergamon Press; 447 p.
- 3. Clucas IJ. 1981. Fish Handling, Preservation and Processing in the Tropics. Parts I, II.
- 4. Cheng TC. 1964. The Biology of Animal Parasites. W.B. Saunders Company, Philadelphia, Pennsylvania, USA.

- 5. Conroy CA and Herman RL. 1968. Text book of Fish Diseases.TFH (Great Britain) Ltd, England.
- 6. Lightner DV. 1996. A Handbook of Shrimp Pathology and Diagnostic Procedures for diseases of Cultured Penaeid Shrimp. World Aquaculture Society, Lousiana, USA.
- 7. Reichenbach KH. 1965. Fish Pathology. TFH (Gt. Britain) Ltd, England.
- 8. Ribelin WE and Miguki G. 1975. The Pathology of Fishes. The Univ. of Wisconsin Press Ltd, Great Russel Street, London, UK.
- 9. Shuzo Egusa.1978. Infectious Diseases of Fish. Oxonian Press Pvt. Ltd. New Delhi.
- 10. Van Duijn, C. 1973. Diseases of Fishes. Cox and Wyman Ltd. London.

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