

SIR C.R.REDDY AUTONOMOUS COLLEGE, ELURU
(Affiliated To Adikavi Nannaya University, Rajamahendravaram)
III B.Sc.-VI semester syllabus (under CBCS pattern)
Subject: ZOOLOGY CLUSTER-ELECTIVE PAPER
PAPER-VIII (B-2) Aquaculture Management

UNIT-I

1.1 Breeding and hatchery management

- 1.1.1 bundh breeding and induced breeding of carp by hypophysation; and use of synthetic hormones
- 1.1.2 types of fish hatcheries; hatchery management of Indian major carps
- 1.1.3 breeding and hatchery management of *penaeus monodon/liptopenaeus vannamei*
- 1.1.4 breeding and hatchery management of giant fresh water prawn

UNIT-II

2.1 Water Quality Management

- 2.1.1 Water quality and soil characteristics suitable for fish and shrimp culture
- 2.1.2 Identification of oxygen depletion problems and control mechanism in culture ponds
- 2.1.3 Aeration: principles of aeration and emergency aeration
- 2.1.4 Liming materials, organic manures and inorganic fertilizers commonly used in their Implications in fish Ponds

UNIT-III

3.1 Feed management

- 3.1.1 Live foods and their role in shrimp larval nutrition
- 3.1.2 Supplementary feeds: principle foods in artificial diets; types of feeds; feed additives and Preservatives; role of pro biotics.
- 3.1.3 Feed formation in manufacturing; feed storage
- 3.1.4 Feed strategies; feed devices, feed schedules and ration size; feed evaluation- Feed conversion efficiencies and ratios.

UNIT-IV

4.1 disease management

- 4.1.1 Principles of disease diagnosis and health management
- 4.1.2 Prophylaxis, hygiene and therapy of fish diseases
- 4.1.3 Specific and non-specific defense systems in fish; fish immunization and vaccination
- 4.1.4 Etiology, symptoms, prophylaxis and therapy of common fish diseases in fish ponds
- 4.1.5 Etiology, symptoms, prophylaxis and therapy of common shrimp diseases in shrimp ponds

UNIT-V

5.1 Economics and marketing

- 5.1.1 Principles of aquaculture economics- capital costs, variable costs, cost-benefit analysis
- 5.1.2 Fish marketing methods in India; basic concepts in demand and price analysis

5.2 fisheries extension

- 5.13 fisheries training and education in India role of extension in community development

5.3 fish genetics

- 5.1.4 Genetic improvement fish stocks- hybridization of fish.
- 5.1.5 Gynogenesis, androgenesis, polyploidy, transgenic, fish cryopreservation of gametes, Production of Mono sex and sterice fishes and their significances in aquaculture

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(AFFILIATED TO ADIKAVI NANNAYYA UNIVERSITY)
III BSC DEGREE EXAMINATION SEMSTER –VI
PART II – ZOOLOGY
PAPER VIII B – 2 CLUSTERS -1, AQUA CULTURE MANGEMENT
MODEL QUESTION PAPER**

TIME: 3 HRS

MAX MARKS: 75

SECTION A

Answer Any Five Of The Following Questions. Draw Diagrams Wherever Necessary 5x10=50

1. Give an account of induced breeding technique in Indian major carps
2. Write any essay on hatchery management
3. Write an essay on cause of deficiency of oxygen and control measures adopted in fish culture
4. Write an essay on feeds storage
5. Discuss about different types of supplementary feeds and their nutritional value used in fish culture
6. Describe the symptoms and treatment of various viral and bacterial diseases affecting fishes
7. Write any essay on genetic engineering in fishes
8. Give an account of the role play by live food in shrimp larval nutrition

SECTION B

Write on Short Notes on Any Five of the Following Not exceeding 10 Lines 5x5=25

9. *Litopenaeus vannamei*
10. Soil PH
11. Role of pro biotics in feed
12. Fish hatchery
13. Any two viral diseases in shrimps
14. Polyploidy
15. Algal blooms
16. Cryopreservation