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

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

ZOOLOGY

(Skill Enhancement Course -Aquaculture)

FISH NUTRITION AND FEED TECHNOLOGY

Time:2hrs/week

Code: Z 7555(2) **Practical** **Max Marks:50**

LEARNING OBJECTIVES

Enable the students to

- To acquire skill in estimation of different ingredients in the aqua feeds..
- Analyze and evaluate different binders used in feed preparation.
- Understand the need and care for storage of aqua feed.
- Skill in identification of physical characteristics of floating and sinking feeds.

LEARNING OUTCOMES

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

- Gain skill in identification of proteins, carbohydrates and lipids.
- Formulate feeds using various ingredients.
- Gain information on methods of feed storage.
- Analyze and evaluate different binders used in feed preparation.

SYLLABUS

1. Estimation of protein content in aquaculture feeds
2. Estimation of carbohydrate content in aquaculture feeds
3. Estimation of lipid content in aquaculture feeds
4. Estimation of ash in aquaculture feed
5. Study of water stability of pellet feeds
6. Feed formulation and preparation in the lab
7. Study of binders used in aquaculture feeds
8. Study of feed packing materials
9. Study of physical and chemical change during storage
10. Study on physical characteristics of floating and sinking feeds

REFERENCE BOOKS

1. Fish nutrition. Academic press, San diego, Halver Jr 1989
2. Nutrition and feeding of fishes, Chapmann & Hall, New York Lovell rt 1998.
3. Fish Nutrition and Feed Technology by A.K. Datta, N. Gupta, and D.K. De
4. Aquafeed Technology by N. Rajendran and N. Gopalakrishnan
5. Aquaculture Nutrition: Gut Health, Probiotics and Prebiotics by S.K. Nayak, J.Mukherjee, and S. Prusty
6. Fish Feed Preparation and Management by K. Santhanam and S.

Viswanathan
7. Fish Nutrition and Feed Technology: A Practical Approach by K. Gopakumar and R.Shankar
8. Aquatic Animal Nutrition: Principles and Practices by N. Gupta and D.K. De

CO-CURRICULAR ACTIVITIES

- Field visits to nearest feed production plant.
- Visit to a farm for studying feeding practices
- Guest lectures by industry experts and researchers in the field
- Formulating and producing their own fish feed
- Evaluating and analyzing different types of fish feed and supplements.

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