



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES, MIHINTALE**

**B.Sc. (Special) Degree in Applied Biology
Fourth year – Semester I Examination – March/ April 2015**

ZOO 4308 - FISH NUTRITION AND GROWTH

Time : Three (03) hours

Answer six (06) questions and no more.

1. a) Discuss the **factors that affect energy partitioning** in fish.
b) A poultry farmer is planning to culture tilapia in his farm. He is not aware of how to utilize poultry byproducts in the formulation of fish feed/s. As an aquaculturist, briefly explain how you would instruct him in this regard.
2. a) What are feed additives?
b) Write a concise account on different feed additives used in fish feeds.
3. a) Discuss the factors that should be considered when selecting ingredients for fish feed formulation.
b) Explain the procedure that should be adopted in determining of quality of raw materials used in fish feeds.
4. “*Artemia* is one of the best feeds for different larval forms of fish”. Critically evaluate this statement.
5. a) Discuss the qualities of a formulated feed that need to be considered, prior to its usage in aquaculture.
b) Illustrate the processing of floating pellets.
c) Briefly describe the different types of formulated larval fish feeds.

6. a) Formulate a ration containing 30% crude protein (CP), using fish meal (72% CP) and soybean meal (43% CP) in the ratio 1:2. Use maize (10% CP) as the energy source.
(Note that the ratios are assigned when using more than one source of nutrients in the formulation of the ration)
- b) A farmer sampled his fish pond and determined that the **average length** of a fish was 1.55 cm and the **average individual weight** was approximately 85 g. If the farmer has 350 fish in his pond and fed them at a rate of 4% of body weight/day, calculate the required amount of feed /day.
7. a) Give a concise account on the **different types of contaminants** in fish feeds.
- b) Instruct the fish farmer how to minimize the above mentioned contaminants.