COURSE CODE: BIO 410

COURSE TITLE: FISHERIES AND AQUACULTURE

TIME ALLOWED: 2HOURS

INSTRUCTION: QUESTION ONE IS COMULSORY AND ANY OTHER THREE QUESTIONS.

1. a. Describe the body of a bony fish (Illustrate with a well labeled diagram). **(7marks)**
   b. Distinguish between a bony and cartilaginous fish **(5marks)**
   c. Distinguish between pectoral and pelvic fin **(2marks)**
   d. Differentiate between dorsal and anal fin **(2marks)**

   e. Write short notes on the following basic organs and systems in fish:
   i. Integument **(3marks)**
   ii. Respiratory apparatus **(3marks)**
   iii. Lateral line system **(3marks)**

2. a. What do you understand by feed formulation? **(4marks)**
   b. Explain the steps in feed formulation **(4marks)**
   c. With an example, explain the term "best-by-technique" in diet formulation **(7marks)**

3. a. Outline **six** major objectives of food studies in fisheries **(6marks**)
   b. Mention **six** different methods of analyzing food of fishes? **(3marks)**
   c. Explain any **two** of these methods of analyzing food of fishes **(6marks**)

4. a. Briefly explain what you understand by fish culture **(4marks**)
   b. Give **five** reasons why we practice aquaculture **(5marks**)
   c. Based on the level of manipulation of the environment, explain **three** classifications of techniques involved in fish culture **(6marks**)

5. a. State **three** factors that determine the size of a fish pond **(3marks)**
   b. State **four** factors determining the shape of a fish pond **(4marks**)
   c. Outline the steps or procedures for pond management **(8marks**)

6. a. State **six** significance of age and growth studies in fishes **(3marks)**
   b. Outline **eight** steps involved in age and growth studies of fishes **(4marks**)
   c. Explain the forms in which the growth of fish is estimated **(3marks)**
   d. Mention **five** methods of studying growth of a fish **(5marks)**