



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA**  
**FACULTY OF SCIENCE**  
**Department of Biological Sciences**  
**2022\_2 EXAMINATION**

**BIO 410 - FISHERIES & AQUACULTURE.**

**CREDIT UNIT: 3**

**TIME ALLOWED: 2½ HOURS**

**INSTRUCTION: ANSWER FOUR QUESTIONS ONLY. QUESTION 1 IS COMPULSORY.**

**COURSE CODE: BIO 410**

- 1a. Using a well labelled diagram, show 10 external features of a bony fish (8marks)
  - b. Describe the process of gas exchange in typical bony fish (9 marks)
  - c.. List any 3 qualities of good water for fish pond management (3marks)
  - d. List the first 5 steps involved in fish drying (5marks)
2. Write short notes on the body shapes of the following fish species
- a. Barracuda (5 Marks)
  - b. Flounder (5 marks)
  - c. Eel (5 marks)
3. Write short notes on the following basic organs/systems in fish:
- a. Corpuscles of Stannius (3marks)
  - b. Ultimobranchial Gland (3marks)
  - c. Pineal Gland (4 marks)
  - d. Lateral line systems (5 marks).
4. Explain the effect of following factors on the feeding habit of fishes:
- a. Size ( 4 marks)
  - b. Temperature (4 marks)
  - c. Competition (4 marks)
  - d. Preference/Selectivity (3 Marks)
5. Write briefly on the following groups of fishes :
- a. Planktivores (5 marks)
  - b. Predators (5 marks)
  - c. Herbivores (3 marks)
  - d. Omnivores (2 marks)
- 6 a Explain the term ‘Fecundity’ (8 marks)
- b. Describe the gravimetric method of fecundity determination (5 marks)
  - c. List two types of constraints to fecundity (2marks)