

**UNIVERSITY OF AGRICULTURE, ABEOKUTA**  
**COLLEGE OF ENVIRONMENTAL RESOURCES MANAGEMENT**  
**DEPARTMENT OF AQUACULTURE AND FISHERIES MANAGEMENT**  
**SECOND SEMESTER EXAMINATION 2009/2010 SESSION**

**FIS 318: Fisheries Stock Assessment**

**INSTRUCTION: Answer three (3) Questions, at least one from each section**

**TIME: 2 Hours**

**SECTION A**

- 1 a (i). Give a brief definition of Fish stock assessment including its basic purposes.  
(ii). In a tabular form, distinguish between Commercial and Research surveys in fisheries stock assessment study.
- b. Make a list of the available methods or techniques used to achieve a sustainable stock management in capture fisheries. Discuss any three methods in details.

**SECTION B**

- 2 a. What is Mark-recapture?  
b. Using mark-recapture technique systematically explain how you can carry out a population estimate of Oyan Lake fishes, Southwest Nigeria.
- 3 a. List at least ten (10) fishing gears which are used by artisanal fishermen in Nigeria.  
b. Explain briefly how to calculate the Catch per Unit Effort (CPUE) for at least five (5) of the gears.

**SECTION C**

- 4 a (i). Define a 'mark' and state its objective in fish stock assessment study  
(ii). Mention FOUR characteristics of an ideal marking method  
(iii). State FOUR criteria for the use of parasites as stock indicators.  
b. Explain five factors to consider when embarking on marking and tagging exercise.
- 5 a. Describe how any three of the following techniques or materials are used in marking and tagging exercise:
- |                 |                     |                |
|-----------------|---------------------|----------------|
| i. Fin clipping | ii. Vital stains    | iii. Tattooing |
| iv. Branding    | v. Fluorescent dyes |                |
- b. Write a short note on individual marking techniques (Not more than 200 words)