



**SOUTH EASTERN UNIVERSITY COLLEGE**  
(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)

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**UNIVERSITY EXAMINATIONS 2012/2013**

**SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN FISHERIES  
MANAGEMENT AND AQUACULTURE TECHNOLOGY**

**WFA 206: ICHTHYOLOGY**

**DATE: 13<sup>th</sup> August 2012**

**TIME: 2 HOURS**

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**INSTRUCTIONS TO CANDIDATES**

- (a) Answer ALL the Questions in Section A  
(b) Answer ANY THREE Questions in Section B
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### **SECTION A ( 5 MARKS EACH)**

- 1 . Using an annotated diagram, describe the main morphological differences between hagfishes and lampreys.
2. State the main distinguishing characteristics between elasmobranchs and holocephali.
3. Briefly compare and contrast reproductive behavior between Skates and rays.
4. Describe the anatomical affinity of the crossopterygii to the tetrapoda.
5. Briefly explain the meaning of:
  - a) Aestivation
  - b) Ovoviviparity
6. State 2 main characteristics of the sub-class dipneustei (sarcopterygii) and name the 3 representative species.
7. Name 5 families of fish found in Lake Victoria and give an example of each.
8. Explain the meaning of hyostylic suspension and state its significance.

### **SECTION B (20 MARKS EACH)**

9. Discuss the anatomical, physiological and behavioural adaptations that have contributed to the adaptive radiation of the teleosts.
10. Discuss the major differences between chondrichthyes and osteichthyes.
11. Discuss any three methods of quantifying the diet of fish and their limitations
12. Account for the loss of species diversity in Lake Victoria
13. Account for the speciosity of the cichlidae in the Great lakes of East Africa



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DEGREE OF BACHELOR OF SCIENCE IN FISHERIES  
MANAGEMENT AND AQUACULTURE TECHNOLOGY**

**WFA 207: FISH CAPTURE TECHNIQUES**

**DATE: 14<sup>th</sup> August 2012**

**TIME: 2 HOURS**

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**INSTRUCTIONS TO CANDIDATES**

- (a) Answer ALL the Questions in Section A  
(b) Answer ANY THREE Questions in Section B
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### **SECTION A ( 5 MARKS EACH)**

- 1 . Explain the differences between active and passive fishing gears and give an example of each.
2. Describe and illustrate the structure of a gill net.
3. Distinguish between;
  - i). Monofilament and Multifilament gill nets
  - ii). Beach seining and Purse seining
4. Explain the meaning of Hanging Ration (E) and state its significance.
5. Briefly describe trolling as a fishing technique.
6. Briefly explain why bottom trawling has been banned in Lake Victoria.
7. Name 5 traditional fishing gears and briefly describe how they operate.
8. i) Name any 2 toxicants used in fishing  
ii) Name any 3 fish gear accessories and explain their functions

### **SECTION B ( 20 MARKS EACH)**

- 9a. Discuss the principles of electric fishing and the advantages and shortcomings of this technique.
- b. Discuss how the principles of acoustics and echo sounding are applied in fishing.
10. Discuss the types and operations of trawl gears
11. Write an essay on gill net selectivity
13. Discuss the factors that determine the choice of a gear in both commercial and artisanal fishing.