MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN FISHERIES AND AQUACULTURE AND BACHELOR OF SCIENCE IN AQUATIC RESOURCES CONSERVATION AND DEVELOPMENT WITH INFORMATION TECHNOLOGY

MAIN CAMPUS

AFN 211: MORPHOLOGY, ANATOMY AND PHYSIOLOGY OF FISHES

Date: 7th December, 2016   Time: 12.00 - 3.00 pm

INSTRUCTIONS:

- Answer ALL questions in SECTION A and in SECTION B answer any other THREE questions.

SECTION A: Answer ALL Questions in this section (40 marks)

1. (a) Distinguish between taxonomy and systematics in the classification of organisms (2 marks)

   (b) Outline six distinguishing characteristics of Elasmobranchs (3 marks)

2. (a) List two involuntary muscles found in the soft anatomy of fishes (2 marks)

   (b) Distinguish between physostomous and physodistous fishes (3 marks)

3. Illustrate five main types of caudal fins found in fishes (5 marks)

4. Outline the advantages and disadvantages of using scales in determination of fish age (3 marks)

5. (a) Outline adaptations for aerial breathing in some fishes (3 marks)

   (b) Outline the adaptations of the gills as respiratory structures in fish (2 marks)

6. Highlight the different migratory guilds among fishes (4 marks)

7. Highlight two methods used in fish gut content analysis (2 marks)

8. Outline two food selectivity indices used in fisheries science (4 marks)

9. Outline the main forms of hermaphroditism that can occur in fishes (4 marks)

10. Outline ways through which fish provide parental care to their eggs and young ones (3 marks)

Section B: Answer any THREE questions in this section (30 marks)

11. (a) Account for the success of bonny fishes (5 marks)

    (b) Explain why young fish prefer zooplankton to other food items in their diet (5 marks)

12. Discuss Length-Weight relationship and condition factor in fishes (10 marks)

13. Discuss the digestive system of fishes (10 marks)

14. Discuss excretion and osmoregulation in freshwater and sea water fishes (10 marks)

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