



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2016/2017

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR 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 101: FISHERIES ENVIRONMENT I: FUNDAMENTALS OF
LIMNOLOGY**

Date: 23rd November, 2016

Time: 12.00 - 3.00pm

INSTRUCTIONS:

- Answer ALL Questions in Section A and any other THREE in Section B.
- Illustrate answers with labeled diagrams whenever appropriate



SECTION A (40 marks)

Answer ALL the questions in this section

- Q1. Define and give the scope of Limnology as a subject (3 marks).**
- Q2. Illustrate how temperature reduction on a scale of positive 10 to negative 10 ($^{\circ}\text{C}$) would affect the density of water (5 marks).**
- Q3. Using an illustration, state and define parts of a typically stratified lake (5 marks).**
- Q4. Distinguish the zones of a lacustrine environment based on water transparency (3 marks).**
- Q5. Give the characteristics of any five types of lakes based on thermal stratification (5 marks).**

- Q6. Explain the similarities and differences between temperate lake water characteristics in spring and fall seasons. (4 marks).
- Q7. Describe any three lake types based on nutrients loading and biological productivity (3 marks).
- Q8. Explain the structure and mechanism of use of a turbidity measuring implement in limnological studies (5 marks).
- Q9. Giving real examples, compare the characteristics of meromictic, holomictic and polymictic lakes (3 marks).
- Q10. State the three characteristics that are used to define plankton organism (4 marks).

Section B (30 Marks)

Answer any THREE questions from this section

- Q11. Describe each of the five *life-forms* of the aquatic environment (10 marks).
- Q12. Discuss dynamism in a dimictic lake within one year circle (10 marks).
- Q13. Discuss the various nektonic communities in their environment in relation to their contribution to the general socio- economic welfare of mankind (10 marks).
- Q14. Discuss the nature and purpose of "*dark – and – white - bottle*" investigations in Limnolgical studies (10 marks).
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