



NATIONAL OPEN UNIVERSITY OF NIGERIA

14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS

SCHOOL OF SCIENCE AND TECHNOLOGY

MARCH/APRIL 2015 EXAMINATION

COURSE CODE: BIO 405

COURSE TITLE: HYDROBIOLOGY

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER QUESTION 1 (COMPULSORY) AND ANY OTHER THREE QUESTIONS.

- 1a. Outline the general features of Kainji Lake. (10marks).
- b. Why is Lake Tangayinka an important biological resource for the study of speciation in evolution? (10marks).
- c. Mention the five major natural vegetation types of Lake Chilwa. (5marks).
2. a. Outline the role of agriculture in eutrophication. (3marks).
- b. Identify any **SIX (6)** symptoms of eutrophication? (12marks).
- c. State **ANY FIVE (5)** effects of eutrophication on the receiving ecosystem. (10marks)
- 3a. Name the **THREE (3)** basic types of freshwater ecosystems. Give **TWO (2)** examples each. (11marks).
- b. Give a concise description of a freshwater ecosystem. 10marks

c. Name any **TWO (2)** sources of freshwater? 4marks.

4a. Define autotrophic organisms. Give any **TWO (2)** examples. (4marks)

b. Define heterotrophic organisms. Give any **TWO (2)** examples. (4marks)

c. Outline **FOUR (4)** importance of benthic invertebrates. (8marks).

d. Describe the diversity of benthic organisms in different communities. (9marks).

5a. Define Productivity in ecology. (3marks).

b. Distinguish between primary and secondary productivity in ecology. (6marks).

c. In aquatic systems, primary production is typically measured using different techniques. Enumerate **FOUR (4)** of these techniques. (12marks).

d. Why are wetlands the most productive natural ecosystems? (4marks).

6a. Define water pollution? (2marks).

b. State any **THREE (3)** causes of water pollution? (3marks).

c. Outline the negative effects that could arise as a result of water pollution. (10marks).

d. State **FIVE (5)** water-related diseases and their means of transmission. (10marks).

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