**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**JUNE/JULY EXAMINATION**

**COURSE CODE: BIO405**

**COURSE TITLE: HYDROBIOLOGY**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER ONLY 4 QUESTIONS**

1. a. Define autotrophic organisms. Give examples.

b. Define heterotrophic organisms. Give examples.

c. Outline the importance of benthic invertebrates.

d. Mention the different communities of benthic organism.

1. a. Define Productivity in ecology.
2. Distinguish between primary productivity and secondary productivity
3. In aquatic systems, primary production is typically measured using different techniques. Name these techniques.
4. Why are wetlands the most productive natural ecosystems?
5. a. Outline the general features of Kainji Lake.

b. Why is Lake Tanganyika an important biological resource for the study of speciation in evolution?

c. Mention the five major natural vegetation types of Lake Chilwa.

1. a. Define water pollution?

b. What are the causes of water pollution?

c. Outline the negative effects that could arise as a result of water pollution.

d. Mention five water-related diseases and their means of transmission.

1. a. Name the basic types of freshwater ecosystems. Give examples.

b. Briefly describe a freshwater ecosystem.

c. What are the sources of freshwater?

 6. a. Outline the role of agriculture in eutrophication.

b. What are the symptoms of eutrophication?

c. Mention the effects of eutrophication on receiving ecosystem.