



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**DEPARTMENT OF BIOLOGICAL SCIENCES**  
**2024\_2 EXAMINATION**

**COURSE CODE: BIO 405**

**COURSE TITLE: HYDROBIOLOGY**

**CREDIT UNIT: 2 UNITS**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTION: ANSWER QUESTION ONE AND ANY TWO OTHERS.**

- 1a. Enumerate any five (5) types of fresh water ecosystem. (5 marks)
- b. Discuss any five (5) main abiotic factors of fresh water ecosystem. (25 marks)
2. Explain any two (2) of the following biotic components of fresh water ecosystem:
  - i) Autotrophic organisms. (10 marks)
  - ii) Heterotrophic organisms. (10 marks)
  - iii) Bacteria. (10 marks)
- 3a. Outline the three distinct communities of benthic organisms. (3 marks)
- b. Describe the composition of any two (2) of the three communities of benthic organisms. (13 marks)
- c. Mention four (4) ways in which benthic invertebrate organisms are used as prime indicators of environmental condition. (4 marks).
- 4a. Based on any four (4) named features, distinguish a river from a lake. (10 marks)
- b. Outline the four (4) main techniques used in measuring primary production of an aquatic system. (4 marks)
- c. Briefly explain the three (3) main attributes that characterize tropical wetlands. (6 marks)
5. Write notes on any four (4) of the following:
  - i) Causes of eutrophication. (5 marks)
  - ii) Ways of determining water quality. (5 marks)
  - iii) Biological resources of Lake Tanganyika. (5 marks)
  - iv) General features of Lake Chilwa. (5 marks)
  - v) Water-linked diseases. (5 marks)