



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
DEPARTMENT OF ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT
2025_2 EXAMINATIONS.

COURSE CODE: ESM424

COURSE TITLE: Fresh Water Ecology

CREDIT: 2Units

TIME ALLOWED: 2 Hours

Instruction: Attempt question number ONE (1) and any other TWO (2) questions. Question number one (1) carries 30marks, while the other questions carry (20) marks each.

- 1a) What are decomposers **(2marks)**
- 1b) How do decomposers within the freshwater ecosystem transfer energy **(4marks)**
- 1c) Describe microorganisms as an embodiment of the aquatic ecosystem**(6marks)**
- 1d) Explain the role of fishing activities on fresh water ecosystems**(10marks)**
- 1e) What are the traits of Riparian vegetation? **(8marks)**

- 2) Explain how bacteria, fungi and protozoa operate within a freshwater ecosystem. **(20marks)**

- 3a) Highlight major characteristics of the insect benthic invertebrate found in freshwater ecosystems. **(10marks)**
- 3b) Describe microorganisms as an embodiment of the aquatic ecosystem**(10marks)**

- 4a) Define ecology as a discipline? **(11marks)**
- 4b) Enumerate on the three different types of ecological pyramid in freshwater ecology **(9marks)**

- 5a) Discuss the factors affecting the length and intensity of exposure of freshwater ecosystem to the energy from the sun. **(16marks)**
- 5b) How does controlled fishing help in the conservation of the aquatic ecosystem**(4marks)**