



GWANDA STATE UNIVERSITY

FACULTY OF ENGINEERING AND ENVIRONMENT

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SCIENCE

ENVIRONMENTAL CHEMISTRY

NGE2104

Examination Paper

September 2024

This examination paper consists of 2 pages

Time Allowed: 3 hours

INSTRUCTIONS

1. Answer any **four** questions.
2. Each question carries 25 marks.
3. Credit will be given to answers that are clear, illustrated, concise, and grammatically well-constructed.

1. Analyze the primary drivers of eutrophication, including both natural and anthropogenic factors and the resultant effects of this environmental issue. [25 marks]
2. Conduct a comprehensive examination of the major greenhouse gases, their sources, atmospheric concentrations, and the mechanisms by which they contribute to climate change. [25 marks]
3. Critically evaluate the major threats facing wetland ecosystems. Discuss evidence-based strategies for the conservation and restoration of these vital ecological systems. [25 marks]
4. Evaluate potential ecological and human health impacts of heavy metal contamination, including specific case studies. [25 marks]
5. Examine of the sources, fate, and environmental effects of microplastics in the environment. [25 marks]
6. Critically evaluate the role of environmental education and public awareness in promoting environmental sustainability. [25 marks]

END OF PAPER