



**National Open University of Nigeria**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**2021\_2 EXAMINATIONS**

**COURSE CODE: ESM317**

**COURSE TITLE: Land and Water Pollution**

**CREDIT: 2 Units**

**TIME ALLOWED: 2 Hours**

**Instruction:** Attempt question number ONE (1) and any other THREE (3) questions. Question number one (1) carries 25 marks, while the other questions carry (15) marks each.

- 1a) With specific examples, explain how chemicals and hazardous waste are recycled (5 marks)
  - b) Explain the efforts businesses and industries have made to reduce chemicals and hazardous wastes (5 marks)
  - c) Differentiate between low- and high- level nuclear wastes (5 marks)
  - d) Describe the effects of pollution on industrialized countries (3 marks)
  - e) Write short note on petrochemical smog (5 marks)
  - f) State one of the definition of pollution among the several definitions that you know (2 marks)
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- 2a) Discuss secondary effects of pollution (5 marks)
  - b) Narrate the formation and characteristics of urban smog (5 marks)
  - c) Explain the results of polluted rain water on the ecosystem (5 marks)
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- 3a) Explain how air pollution affects the stratosphere (5 marks)
  - b) What do you understand by global warming? (5 marks)
  - c) Explain what gave rise to the withdrawal of fresh water from the water bodies? (5 marks)
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- 4a) Define soil and its importance to ecosystem (5 marks)
  - b) With vivid example, state how did unhealthy soil management methods affect soil quality? (5 marks)
  - c) What are the ratings of sounds in man and other higher animals? (5 marks)
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- 5a) Describe the ranges of noise intensity and its consequences on man (5 marks)
  - b) Enumerate the solutions for noise pollution. (5 marks)
  - c) Classify pollutants by the forms they exist in the environment after their release (5 marks)