



**National Open University of Nigeria**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science**  
**2023 2 EXAMINATIONS\_**

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**COURSE CODE: ESM 444**

**COURSE TITLE: Industrial Waste and Industrial Water Treatment.**

**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) Explain the primary treatment of industrial wastewaters. **(13marks)**
- (b) Explain in detail the Biological treatment of industrial wastewaters. **(12marks)**
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- (2a) State the aim of waste management practice. **(2marks)**
- (b) State the various ways of reducing wastes. **(13marks)**
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- (3a) Describe a boiler. **(6marks)**
- (b) Explain the types of boilers. **(9marks)**
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- (4a) What is industrial waste? **(5marks)**
- (b) State ten sources of industrial waste. **(5marks)**
- (c) Enumerate ten common industrial wastes. **(5marks)**
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- (5) Discuss landfill method of disposing wastes. **(15marks)**