



**UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA**

**SECOND SEMESTER EXAMINATIONS, MAY 2018**

**OPTION A**

**COURSE NO:** ES 374  
**COURSE NAME:** HAZARDOUS WASTE ENGINEERING  
**CLASS:** ES III      **TIME:** 3 HOURS

Name: \_\_\_\_\_ Index Number: \_\_\_\_\_

**Section A (Answer All Questions)**

**Question 1**

- a) In your opinion why would waste professionals in any given country advocate for strict legal definition of waste. (6 marks)
- b) State four (4) characteristics of a hazardous waste (4 marks)

**Question 2**

- a) What does the hierarchy of waste management seek to achieve. (3 marks)
- b) List the options of waste management in the order of most preferred to the least preferred (7 marks)

**Question 3**

Why do you think emissions from municipal solid waste incineration may require treatment before final disposal/discharge into the atmosphere? (10 marks)

**Section B (Answer Two Questions)**

**Question 4**

- a) Explain what you understand by the “hierarchy of waste management” (4.5 marks)
- b) Explain each of the waste management options and give one example for each option (10.5 marks)

**Question 5**

- a) Define waste? (3 marks)
- b) State and briefly explain the methods used for treatment of hazardous wastes (12 marks)

**Question 6**

- a) How would you identify that a liquid waste generated from a lab is corrosive? (5 marks)
- b) Suggest ways of treating corrosive liquid wastes. (10 marks)

*Examiners: Assoc Prof W. K. Buah/ Assoc Prof S. A. Ndur*