



ZIMBABWE EZEKIEL GUTI UNIVERSITY

COLLEGE FOR LIFELONG LEARNING

**FACULTY OF SCIENCE, TECHNOLOGY, AGRICULTURE AND FOOD
SYSTEMS**

EXAMINATION PAPER

Diploma in Strategic Mine Safety, Health and Environment

MODULE CODE : DSMS123
MODULE TITLE : Waste Management
DURATION : 2 Hours
LEVEL : 1.2
DATE : 12 JUN 2025

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Question 1 (Section A) is compulsory. In Section B, choose and answer any Two (2) questions.
3. The number of marks for each question or part question is shown in brackets []
4. Begin each answer on a new page.
5. **DO NOT OPEN THIS PAPER UNTIL THE INVIGILATOR INSTRUCTS YOU.**

Section A: Compulsory Question

- 1 a) Identify and explain the primary types of waste produced during mining operations. Provide specific examples for each type and discuss their potential environmental impacts. **(13 marks)**
- b) Discuss the significant challenges encountered in waste management within the mining sector in Zimbabwe. What strategies can be implemented to address these challenges? **(12 marks)**

Section B

Answer any two questions

2. As a SHEQ Officer at a gold mining company, identify the relevant laws and regulations that your company must adhere to. Discuss the impact of these regulations on waste management practices within the mining industry. **(25 marks)**
- 3 a) Discuss waste minimization techniques that can be applied in any mining activity of your own choice. Explain how these techniques contribute to sustainable waste management. **(15 marks)**
- b) Discuss how can waste management practices be integrated into the Sustainable Development Goals? **(10 marks)**
4. Draw a Life Circle Assessment (LCA) for a mining activity of your own choice. Discuss how LCA can be employed to improve waste management practices in Mining sector. **(25 marks)**
5. a) What is acid mine drainage, and what are its environmental effects? Discuss the mechanisms that lead to acid mine drainage in mining operations. **(15 marks)**
- b) Discuss why is it important to have a waste management plan **(10 marks)**

THE END

1/1 AM