



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

NATIONAL CERTIFICATE

IN

ELECTRICAL ENGINEERING

**MODULE: Safety, Health Environmental
Quality Management**

PAPER NO: 321/22/M01

DURATION: 3 Hours

NOVEMBER/ DECEMBER 2025 EXAMINATION

REQUIREMENTS

Answer booklet.

INSTRUCTIONS TO CANDIDATES

- 1. Answer all questions from the six (6) given.**
- 2. All questions carry equal marks.**

This paper consists of 3 printed pages.

SECTION A

QUESTION 1

- a) Define the following with regards to Safety, Health and Quality Management.
- i) Safety
 - ii) Health
 - iii) Risk
 - iv) PPE
- (4 marks)
- b) Give the four (4) basic types of PPE. (4 marks)
- c) Give the PPE required by the following people:
- i) Welder
 - ii) Electrician
- (2 marks)

QUESTION 2

Give five responsibilities of each of the following with regard to safety:

- i) Employer (5 marks)
- ii) Employee (5 marks)

QUESTION 3

- a) Draw the fire triangle and label. (3 marks)
- b) Explain how one will operate a hand-held portable fire extinguisher. (4 marks)
- c) Give the fire extinguishers suitable for the following fire classes:
- i) Class A
 - ii) Class B
 - iii) Class C
- (3 marks)

QUESTION 4

- a) Define the term “Accident”. (2 marks)
- b) List down any four (4) conditions that contributes to accidents and ill health at work place. (4 marks)
- c) Give any four (4) safe conditions in an electrical workshop. (4 marks)

QUESTION 5

- a) Define the term hazardous substances. (2 marks)
- b) State any four (4) side effects of exposure to hazardous substances. (4 marks)
- c) Give two (2) legal requirements for hazardous substances. (2 marks)
- d) Give two (2) examples of hazardous substances. (2 marks)

QUESTION 6

Waste can be classified as:

- a) Biodegradable and non-biodegradable. Explain each of these wastes. (4 marks)
- b) Write down the steps followed for an effective waste management. (6 marks)

QUESTION 7

- a) Define the term electric shock. (2 marks)
- b) Write down the procedures to be followed in the event someone had an electric shock. (8 marks)

QUESTION 8

- a) Explain the term Risk Management. (2 marks)
- b) Explain the five (5) steps involved in a risk management. (8 marks)

QUESTION 9

- a) State three (3) types of ladders. (3 marks)
- b) Highlight the safety precaution required when working on heights, such as towers and ladders. (5 marks)
- c) State two (2) types of equipment guards. (2 marks)

QUESTION 10

- a) Outline eight (8) steps one must follow when lifting heavy loads. (8 marks)
- b) Explain meaning of the following safety signs:
 - i) Prohibition signs
 - ii) Mandatory signs (2 marks)

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