



ZIMBABWE

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

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

MOTOR VEHICLE MECHANICS

**MODULE: Maintain Safety, Health Environment PAPER NO: 346/22/M01
And Fitting and Machining Processes**

DURATION: 3 Hours

NOVEMBER / DECEMBER 2023 EXAMINATION

REQUIREMENTS

Answer booklet, pen, drawing instrument

INSTRUCTIONS TO CANDIDATE

- 1. Answer all questions.**
- 2. Section A: 50 marks.**
- 3. Section B: 50 marks.**

This paper consists of 3 printed pages.

SECTION A

Answer all questions.

QUESTION 1

- a) Define the following terms in relation to Safety and Health:
- | | |
|--------------------|-----------|
| i) Hazard | (2 marks) |
| ii) Identification | (2 marks) |
| iii) Risk | (2 marks) |
| iv) Harm | (2 marks) |
| v) Risk assessment | (2 marks) |
- b) Safety colours are visual markers that can help to keep employees safe in the workplace. List any five (5) safety colours and give a meaning of each.
(10 marks)

QUESTION 2

- a) State one cause of the following fire classes:
- | | |
|--------------|----------|
| i) Class A | (1 mark) |
| ii) Class B | (1 mark) |
| iii) Class C | (1 mark) |
| iv) Class D | (1 mark) |
- b) Briefly describe how you would extinguish a fire using a fire extinguisher.
(5 marks)
- c) State the three (3) elements of fire.
(3 marks)
- d) Explain the purpose of the safety procedure that must be carried out in the work place.
(3 marks)
- e) List any five (5) types of workplace policies.
(5 marks)

QUESTION 3

- a) What are the eight (8) items that should be included in an accident report?
(8 marks)
- b) Give the main purpose of using PPEs.
(2 marks)

SECTION B

Answer all questions.

QUESTION 4

- a) State the purpose of a file. (2 marks)
- b) How are files classified in a workshop? (3 marks)
- c) Name any six (6) measuring tools that are used in an Automotive workshop. (6 marks)
- d) Give three (3) types of taps that are used in cutting internal (female threads). (3 marks)

QUESTION 5

- a) Draw an outside micrometer and label all parts. (10 marks)
- b) Define the following terms:
 - i) Ductility (2 marks)
 - ii) Malleability (2 marks)
 - iii) Toughness (2 marks)

QUESTION 6

- a) Give any five (5) metal and non-metals joining techniques. (5 marks)
- b) State and describe three (3) types of gas welding flames. (9 marks)
- c) Define the term welding process. (2 marks)
- d) List four (4) precautions that should be observed when working in a workshop. (4 marks)

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