



ZIMBABWE

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

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

MOTOR VEHICLE BODY REPAIRS AND REFURBISHING

MODULE: Accident Damage Vehicle Body Repair PAPER NO: 347/22/M01

DURATION: 3 hours

MAY/JUNE 2024 EXAMINATION

REQUIREMENTS

1. Blue pen
2. Pencil
3. Ruler
4. Rubber

INSTRUCTIONS TO CANDIDATE

1. Section A – Answer all questions – 20 marks.
2. Section B – Answer all questions – 40 marks.
3. Section C – Answer all questions – 40 marks.

SECTION A

Answer all questions.

QUESTION 1

- a) Briefly explain the following types of damages:
- i) Direct damage (1 mark)
 - ii) Indirect damage (1 marks)
- b) Define the following:
- i) Skin fusion (2 marks)
 - ii) Total fusion (2 marks)
 - iii) Surface fusion (2 marks)
- c) Briefly explain the following terms:
- i) Parent metal (1 mark)
 - ii) Fusion zone (1 mark)
 - iii) Tack welds (1 mark)
- d) State any two (2) defects in arc welding . (2 marks)
- e) Name any three (2) types of gases used in MIG/MAG welding. (3 marks)
- f) Identify the two types of glazing systems used in the motor trade. (2 marks)
- g) Give the three (3) components of a body jack. (3 marks)

SECTION B

Answer all questions.

QUESTION 2

- a) Explain the three (3) factors that govern the power of the flame in gas welding. (3 marks)
- b) Identify the three (3) kinds of distortion associated with resistance spot welding. (3 marks)
- c) Name and describe the three (3) types of blows used in panel beating. (3 marks)

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QUESTION 3

- a) State any five (5) safety precautions to observe when soft soldering. (5 marks)
- b) In point form, describe the cold shrinking process. (6 marks)

QUESTION 4

- a) Sketch a neat diagram to explain the principle of arc welding. (6 marks)
- b) Identify and list down any four (4) types of frame constructions in the motor trade. (4 marks)

QUESTION 5

- a) In point form, explain the process of bleeding a body jack. (8 marks)
- b) Justify the reason or importance of cleaning a panel before repairing. (2 marks)

SECTION C

Answer all questions.

QUESTION 6

- a) Sketch a well labelled diagram to illustrate the flame temperature. (8 marks)
- b) Give any two (2) purposes of the coating on an electrode. (2 marks)

QUESTION 7

- a) Briefly explain the process of hot shrinking. (5 marks)
- b) Give any five (5) properties required for an effective flux for brazing aluminium and its alloys. (5 marks)

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QUESTION 8

Outline the process used when re-skinning damaged door panel. (10 marks)

QUESTION 9

Illustrate how to weld a cracked chassis of a small vehicle using arc welding. (10 marks)

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