



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

MOTOR BODYWORK THEORY N2

(11040572)

**31 August 2021 (X-paper)
09:00–12:00**

This question paper consists of 5 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
MOTOR BODYWORK THEORY N2
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
 2. Read all the questions carefully.
 3. Number the answers according to the numbering system used in this question paper.
 4. Start each section on a new page.
 5. Only use a black or blue pen.
 6. Write neatly and legibly.
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QUESTION 1

1.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

- 1.1.1 The surface should be tag-ragged before spraying.
- 1.1.2 Proper care and attention paid to the preparation of the surface will add life and appearance to the final finish.
- 1.1.3 The existing finishes must be carefully inspected and tested before refinishing.
- 1.1.4 Clean the area to be painted with polish to remove all traces of prepsol.
- 1.1.5 Fill in deep scratches and indentations with nitrocellulose spot putty.
- 1.1.6 Apply in thin layers with 15 to 20 minutes between each layer and allow the final layer to dry.
- 1.1.7 Complete refinishing from bare metal, ensure that the surface is free from grease, rust, finger marks and other rust-forming agents.
- 1.1.8 Prime the bare clean metal with 1 coat of Twin Pack etching primer and allow to dry for 10 minutes.
- 1.1.9 The second double coat of the primer surfacer should be applied and when dry should be wet sanded with 120 grit paper.
- 1.1.10 Spray at least 2 double coats with 10 to 15 minutes between coats and allow an adequate period for hardening off before putting into service.

(10 × 1) (10)

1.2 Complete the following sentences by filling in the missing words. Write only the word next to the question number (1.2.1–1.2.10) in the ANSWER BOOK.

- 1.2.1 ... is not suitable for acrylic lacquers.
- 1.2.2 Tack rag the ... before spraying.
- 1.2.3 ... wax is a paste type polish for maintenance of any finish while in service.
- 1.2.4 Before any ... operations are carried out, liberally wet the surface to be repainted with prepsol.

- 1.2.5 Dulux Etch Primer thinner is to be used to thin single pack etch primers to spraying ...
- 1.2.6 ... is a change which takes place in the measurements of a material when such material is subjected to external forces.
- 1.2.7 If a rivet is subjected to a load or force which tends to shear the rivet at a spot between the two plates, it is known as ... stress.
- 1.2.8 ... is calculated by dividing the change in length by the original length.
- 1.2.9 The SI unit of stress is ...
- 1.2.10 The Young's modulus for a given material is usually denoted by the symbol ...

(10 × 1)

(10)
[20]**QUESTION 2**

In the case where a panel has to be sprayed, certain important steps need to be observed.

Write down short descriptive notes on the following steps:

- 2.1 The preparation of the repaired panel. (5)
- 2.2 The application of primer. (5)
- 2.3 The application of spot putty. (5)
- 2.4 The spraying and finishing off of the final colour coat. (5)

[20]

QUESTION 3

- 3.1 State THREE metallic pigments. (3)
- 3.2 Name FOUR causes of an orange peel effect in a paint finish. (4)
- 3.3 State FOUR basic rules to be complied with when mixing colours. (4)
- 3.4 Name the FOUR most important components of a spray gun. (4)
- 3.5 State FIVE causes of spray fluttering. (5)

[20]

QUESTION 4

The left front door of a car is rusted through at the bottom.



Describe step by step and in detail how this rusted portion will be repaired with the aid of panel replacement.

[20]

QUESTION 5

- 5.1 Give FOUR precautionary measures to be observed when using the disc sander. (4)
- 5.2 Name THREE types of disc sanders used in motor bodywork. (3)
- 5.3 State THREE applications of disc sanders. (3)
- 5.4 Name FIVE parts that comprise the front section of a motor body. (5)
- 5.5 List FIVE parts that comprise the rear section of a motor body. (5)

[20]

TOTAL: 100