



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1160(E)(A6)T

NATIONAL CERTIFICATE

MOTORBODYWORK THEORY N2

(11040572)

**6 April 2018 (X-Paper)
09:00–12:00**

This question paper consists of 5 pages.

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
MOTORBODYWORK 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. Sketches must be large, neat and fully labelled.
 5. Write neatly and legibly.
-

QUESTION 1

1.1 Complete the following sentences by writing down the missing words next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

- 1.1.1 ... the basic colours well before using them.
- 1.1.2 The number of mixing colours must be kept at a
- 1.1.3 Choose the ... colour which is as near as possible to the required colour.
- 1.1.4 Colours must be ... in bright daylight but not in direct sunshine.
- 1.1.5 Enamel paint which is applied too thickly will
- 1.1.6 When spraying, mix about one part of paint with ... parts of thinners.
- 1.1.7 After a section of a body has been ... it is necessary to prepare the surface for painting.
- 1.1.8 Water and ... must be used to sand the surface smooth and clean.
- 1.1.9 The spot putty must only be used to cover small ...
- 1.1.10 ... paint cannot be dissolved after it has dried.

(10 × 1) (10)

1.2 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.2.1–1.2.10) in the ANSWER BOOK.

- 1.2.1 Zink powder is obtained through distillation and condensation of zink.
- 1.2.2 A mixture of copper, aluminium, zinc and tin processed in almost same way as aluminium powder produces bronze paint.
- 1.2.3 Zinc oxide is obtained by melting zinc ore and leaving it to oxidise.
- 1.2.4 The number of different colours obtained from earth pigments are unlimited.
- 1.2.5 Good paint pigments are unnecessary for the manufacture of paint.
- 1.2.6 Paint pigments must dissolve in the required oils and thinners.
- 1.2.7 Umber brown is a reddish brown pigment known as raw umber.

- 1.2.8 Sienna has a red appearance caused by the presence of zinc and manganese.
- 1.2.9 Titanium white is a very inactive pigment and resists alkalis, acids and industrial gases.
- 1.2.10 When aluminium is hammered or ground to powder and then processed a pigment of fine thin flakes is the result.

(10 × 1)

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

- 2.1 Name THREE kinds of metallic pigment. (3)
- 2.2 State FOUR colours obtained from natural or earth pigments. (4)
- 2.3 State THREE more important paint pigments. (3)
- 2.4 Name SIX tools required when working with fibre glass. (6)
- 2.5 State FOUR parts that comprises the front section of a motor car. (4)

[20]

QUESTION 3

The right rear door of a Toyota Corolla is rusted through at the bottom.

Describe step by step how this rusted part will be repaired using partial panel replacement.

(20 × 1)

[20]

QUESTION 4

- 4.1 State THREE important requirements for a good aluminium flux. (3)
- 4.2 State SIX important rules to observe when using the spot welding machine. (6)
- 4.3 Explain in detail how a stretched section of a mudguard is repaired using the heat shrinking process. (11 × 1) (11)

[20]

QUESTION 5

- 5.1 Define *stress*. (2)
- 5.2 Name THREE kinds of stresses to which matter can be subjected. (3)
- 5.3 Explain how a repaired panel must be prepared before the first coat of primer is applied. (5)
- 5.4 State FIVE measures to prevent an orange peel effect. (5)
- 5.5 Give FIVE reasons why paint runs after spraying. (5)
- [20]**

TOTAL: 100

