higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

MOTORBODYWORK THEORY N2

(11040572)

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This question paper consists of 7 pages.

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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. Use only a blue or black pen.
5. Start each question on a new page.
6. Write neatly and legibly.

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SECTION A

QUESTION 1

Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1–1.10) in the ANSWER BOOK.

1.1 Repairing and finishing all types of original car finishes in … colours.

A loose
B mix
C solid
D black

1.2 Existing finishes must be carefully inspected and tested before commencing to …

A refinish
B restart
C report
D reopen

1.3 Always clean the area to be painted to remove all traces of polish …

A oil
B paraffin
C grease
D prepsol

1.4 Fill in the minor scratches and indentation with nitrocellulose …

A water
B body filler
C spot putty
D solder

1.5 Ensure that the surface before painting is free from …

A paint
B welding
C grease
D rubber

1.6 Tag-rag the surface before …

A spraying
B welding
C sanding
D brazing

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1.7 Wet sand the entire area and ensure that all damaged areas are …

A clean
B polished
C feather edged
D painted

1.8 The low bake enamel has high gloss from the gun and does not normally need …

A rubber
B polishing
C sanding
D washing

1.9 Always flat to smooth with grit paper …

A water
B oil
C thinners
D P600

1.10 Where the condition of the existing finish is suspect, it should be stripped to …

A empty
B reasonable condition
C full
D bare metal

(10 × 1) **[10]**

QUESTION 2

Indicate whether the following statements are TRUE or FALSE by writing 'True' or 'False' next to the question number (2.1–2.5) in the ANSWER BOOK.

2.1 After a section of a body has been repaired it is necessary to prepare the surface for painting.

2.2 Water and sandpaper must be used to prevent the paint from chipping at a later stage.

2.3 The water increases the friction between the sandpaper and the surface.

2.4 The sanding machine usually leaves an edge where the paint has been removed.

2.5 To prevent the new paint from showing an edge on the old paint it is not advisable to sand a much bigger surface than the surface to be painted.

(5 × 1) **[5]**

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QUESTION 3

Choose a term from COLUMN B that matches a description in COLUMN A. by writing only the letter (A–L) next to the question number (3.1–3.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1	It is a change which takes place in the measurement of material when such material is subjected to external forces.	A	basic colours
3.2	When the materials are often subjected to external loads.	B	stain
3.3	It must only be used to cover small scratches or sanding marks but not to fill up dents in the body.	C	earth pigments
3.4	Stir well before using it.	D	pigments
3.5	They are necessary for the manufacture of paint.	E	stress
3.6	It is a yellow pigment with good colourability.	F	titanium white
3.7	When heated to a dull red it becomes redder and darker.	G	ochre
3.8	It has a red appearance caused by the presence of iron and manganese.	H	spot putty
3.9	It is a very inactive pigment and resists alkalis, acids and industrial gases.	I	umber brown
3.10	The number of different colours obtained from it is very limited therefore it is necessary to use chemical processes to increase the variety.	J	sienna
		K	composition
		L	blue

(10 × 1) **[10]**

QUESTION 4

Complete the following sentences by writing only the missing word or words next to the question number (4.1–4.5) in the ANSWER BOOK.

4.1 … is a comparatively new material which is fast gaining ground against materials such as wood and sheet metals.

4.2 A great variety of … and fibre glass combinations are used in the manufacture of laminated plastics

4.3 The resin must be mixed with a … to be transformed from a liquid into a solid.

4.4 The presence of heat expedites the hardening …

4.5 A … is important to smooth out the fibreglass to get rid of air bubbles and to ensure that the fibre mat is impregnated with resin.

(5 × 1) **[5]**

TOTAL SECTION A: 30

SECTION B

QUESTION 5

State the 10 components high pressure welding equipment is comprised of. **[10]**

QUESTION 6

6.1 An object fell on the roof of a motor car, denting and stretching the material.

Describe in detail, step by step how this stretched section will be shrunk off using the hot shrinking process. (10 × 1) (10)

6.2 State THREE uses of the sanding machine. (3)

6.3 State SEVEN precautionary measures to be observed when using a sanding machine. (7)

[20]

TOTAL SECTION B: 30

SECTION C

QUESTION 7

7.1	State FIVE rules to be observed when installing an air compressor	(5)
7.2	State FIVE characteristics of a good paint pigment	(5)
7.3	State FIVE measures in respect of the care of the air pressure system	(5)
7.4	Briefly describe how a repaired panel must be prepared before the first coat of primer is applied. (5 × 1)	(5)
		[20]

QUESTION 8

8.1	State FOUR basic rules to be complied with when mixing colour	(4)
8.2	State THREE metallic paint pigments	(3)
8.3	State FIVE causes of spray fluttering.	(5)
8.4	State FOUR causes of an orange peel effect in a paint finish	(4)
8.5	State the FOUR most important components of the spray gun.	(4)
		[20]

TOTAL SECTION C: 40
GRAND TOTAL: 100

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