higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

MOTORBODYWORK THEORY N2

24 November 2022

This marking guideline consists of 5 pages.

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SECTION A

QUESTION 1

1.1 C
1.2 A
1.3 D
1.4 C
1.5 C
1.6 A
1.7 C
1.8 B
1.9 D
1.10 D

(10 × 1) **[10]**

QUESTION 2

2.1 True
2.2 True
2.3 False
2.4 True
2.5 False

(5 × 1) **[5]**

QUESTION 3

3.1 B
3.2 E
3.3 H
3.4 A
3.5 D
3.6 G
3.7 I
3.8 J
3.9 F
3.10 C

(10 × 1) **[10]**

QUESTION 4

4.1 Fibreglass
4.2 Polyester resins/Epoxy resins
4.3 Catalyst
4.4 Process
4.5 Roller

(5 × 1) **[5]**

TOTAL SECTION A: 30

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SECTION B

QUESTION 5

- Acetylene cylinder
- Oxygen cylinder
- High-pressure welding torch
- Acetylene regulator with gauges
- Oxygen regulator with gauges
- Two 5 m lengths of 10 mm, high-pressure rubber canvas hose with clips
- Acetylene flashback arrester
- Oxygen flashback arrestor
- Keys to fit cylinder and spanners for gland nuts
- Pair of welding goggles
- Cylinder trolley (Any 10 × 1) **[10]**

QUESTION 6

6.1
- Always analyse the extent of the stretched area
- Select all the required tools e.g., welding plant, planishing or block hammer, a flat dolly, water, and wet rags ✓
- The surface area must be panel beaten before the stretched section can be shrunk
- The soundproofing material must be removed from the inside.
- If the stretched area is about the size of the palm of your hand, then heat only one spot.
- Use neutral flame when shrinking.
- The tip of the flame must not be held too close to the metal.
- The metal is heated to a red-hot spot.
- The dolly is held underneath, and the metal is hammered around.
- The excess metal is now concentrated on the centre, and then the metal is cooled slowly in a circle with a wet rag from the outside towards the centre.
- The process is repeated until the level is obtained. (Any 10 × 1) (10)

6.2
- To clean the job properly before filling it.
- To grind off the existing paint or unnecessary material.
- To finish off a computed panel properly. (3)

6.3
- Do not apply too much pressure while sanding.
- The machine should be used at a 20 degrees angle to the surface.
- About 50mm of the sanding disc must contact the panel being ground.
- The sanding machine should be moved in the right direction.
- Never lay the machine on its back while still turning.
- Always wear safety goggles to protect your eyes.
- Do not use torn or broken discs. (7)

[20]

TOTAL SECTION B: 30

SECTION C

QUESTION 7

7.1
- It must be level with the floor.
- It should be in a separate building.
- It must be placed 300mm away from the wall for air circulation.
- The distance between the inlet and the compressor must be as short as possible.
- The compressor must be as close as possible to the spray-painting booth. (5)

7.2
- It must possess good covering properties.
- The colour must be as stable and permanent as possible.
- The pigment must mix with other materials.
- The pigment must dissolve in the required oils and thinners.
- It must be possible to grind to a fine powder. (5)

7.3
- The oil in the compressor must be regularly changed.
- The intake filter on the compressor must be cleaned.
- Always blow over the cooling fin to remove dust.
- Drain the water from the supply tank at regular intervals.
- Check the drive belt tension regularly.
- Lift the safety valve regularly to prevent it from sticking. (Any 5 × 1) (5)

7.4
- If a disc sander has been used on a panel, a ridge will be formed, and this must be sanded off.
- It should be sanded with 150-grit water paper until the ridge cannot be felt.
- Plentiful supply of clean water produces a smooth finish.
- The final finishing is done using 220 grit paper.
- Use 320400 grit water paper to remove all polish, gloss etc.
- The surface is cleaned and dried off using a clean cloth.

(Any 5 × 1) (5)
[20]

QUESTION 8

8.1
- Choose the basic colour which is as near as possible to the required colour.
- The number of mixing colours must be kept at a minimum.
- Colours must be matched in bright daylight but not in direct sunshine.
- Stir the basic colours well before using them. (4)

8.2
- Zinc powder.
- Aluminium powder.
- Bronze powder. (3)

8.3
- The spray piece is loose.
- There is not enough paint in the container.
- The tube of the paint control needle is obstructed.
- More thinners should be added to the paint
- The gland packing of the paint control needle is dry or the gland nut is loose. (5)

8.4
- Paint is too thick.
- Paint dries too quickly.
- Spray gun is held too far from the job.
- The air pressure is too high or too low. (4)

8.5
- The spray piece.
- The spray nozzle.
- The fluid control needle.
- The air control valve.
- The trigger. (Any relevant answers 4 × 1) (4)

[20]

TOTAL SECTION C: 40
GRAND TOTAL: 100

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