higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

MOTOR BODYWORK THEORY N1

22 NOVEMBER 2022

This marking guideline consists of 5 pages.

Copyright reserved

SECTION A

QUESTION 1

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

(10 × 1) **[10]**

QUESTION 2

2.1 True
2.2 True
2.3 True
2.4 False
2.5 False

(5 × 1) **[5]**

QUESTION 3

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

(10 × 1) **[10]**

QUESTION 4

4.1 tank
4.2 welding
4.3 rubber
4.4 Grease
4.5 upright

(5 × 1) **[5]**

TOTAL SECTION A: 30

Copyright reserved

SECTION B

QUESTION 5

5.1 Radiator (2)

5.2 Soldering iron, soldering lead, and a metal plate or patch. (3)

5.3 Carburising flame, oxidising flame and neutral flame (3)

5.4
- The radiator cracked during operation.✓
- The radiator started to rust and water leaked from it.✓✓ (3)

5.5
- Remove the radiator, clean it and prepare it for repair work.
- Select the correct tools for the task.
- Heat the soldering iron until it is hot enough to melt the soldering lead.
- Solder the patch onto the radiator body. (4)

[15]

QUESTION 6

6.1 Hydraulic oil (2)

6.2
(1) Metal foot
(2) Plunger extension
(3) Housing
(4) Guard ring
(5) Plunger
(6) Plunger extension socket
(7) Rubber head
(8) Handle
(9) Pump housing
(10) Control valve
(11) Hydraulic horse
(12) Coupling (12)

6.3 When the control valve is closed, the pump builds up hydraulic pressure. It uses hydraulic oil to operate. The ram will move in the direction of the force exerted on the ram. The choice of the ram determines the direction of movement. When the required work has been done, release the control valve. Ensure that all the pieces are stored correctly and safely. (8)

6.4 It pushes against the direction indicated by the arrow where the movement is far apart. (3)

[25]

QUESTION 7

Select the correct tools for the task. Wear protective clothes or PPE.
Cut the pieces to the correct sizes.
Adhere to the procedures for operating the equipment. It is often necessary to replace the door panel.
Rust occurs when water seeps into a door through the window rubbers. Water trapped inside a door can cause rust, which can severely damage it. This type of replacement is called partial panel replacement.
If a vehicle had been in a collision, a door may be so badly damaged that it has to be replaced. If the door panel is flat, a new sheet can be cut, bended an inserted. Alternatively, the entire panel can be replaced.
Before an old panel is cut, make sure that you assess the extent of the damage. Take out the door to repair it properly. Remove the inner panel.
Measure the part of the panel to be removed. Mark the part that has be cut. Clean the panel so that the work can be done properly. An electric cutter can be used. Bent to remove the old panel. Drill loose the spot-welded area. Remove it and place the new panel. Select the type of joint required. Weld the new panel. Adjust the flame to a limit. Clean, grind and sand the weld. If a door is badly damaged, it is advisable to replace it.

(Any relevant answers) **[20]**

TOTAL SECTION B: 60

SECTION C

QUESTION 8

8.1 A – radiator pressure cap
B – radiator filler hole
C – overflow pipe or coolant tank pipe or pressure relief pipe (3)

8.2 To seal the radiator filler hole
To relieve the pressure in the system or to control the pressure (2 × 2) (4)
[7]

QUESTION 9

9.1 **Advantages**
- Easy to repair✓✓
- Tubes do not get clogged easily ✓✓

Disadvantages
- Cooling is not effective✓✓
- Old type and too many modifications✓✓ (4 × 2) (8)

9.2
- Leftward welding is done on a section not chamfered with the space of 1,5 to 3 mm between the edges
- Rightward welding is employed for sections ranging from 3 mm to 5 mm (3 × 2) (6)

9.3
- A welding plant
- A block or planishing hammer
- A flat dolly
- A wet rag and water (4)

9.4
- Hacksaw
- Rubber block
- Spanners
- Scriber
- Screw driver
- Punch
- Hammer (Any relevant answers 5 × 1) (5)

9.5
- Butt joint (2)
- Lap joint

[25]

TOTAL SECTION C: 45
GRAND TOTAL: 150

Copyright reserved