



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

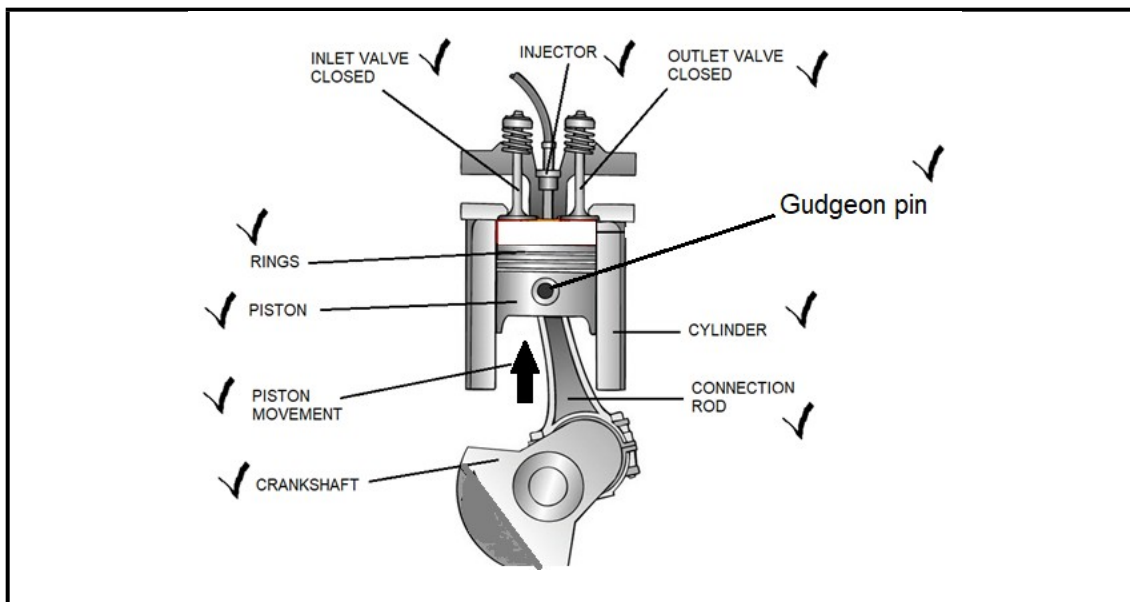
MAINTENANCE MANAGEMENT: FARMING N5

18 November 2022

This marking guideline consists of 5 pages.

QUESTION 1

1.1



(10)

[Source: www.google.co.za]

1.2

- The intake valve is closed.
- The outlet valve is closed.
- The piston moves upwards.
- The air is compressed at a high pressure.
- The temperature rises as soon as air is compressed in the cylinder.

(5)

1.3

- 1.3.1 D
1.3.2 E
1.3.3 B
1.3.4 A
1.3.5 G

(5 × 1)

(5)

1.4

- 1.4.1 True
1.4.2 True
1.4.3 False
1.4.4 False
1.4.5 False

(5 × 1)

(5)

[25]

QUESTION 2

- | | | | | |
|-----|--|-------|---------|--------------------------|
| 2.1 | 2.1.1 | B | | |
| | 2.1.2 | C | | |
| | 2.1.3 | D | | |
| | 2.1.4 | E | | |
| | 2.1.5 | F | | |
| | | | (5 × 1) | (5) |
| | | | | |
| 2.2 | 2.2.1 | False | | |
| | 2.2.2 | False | | |
| | 2.2.3 | True | | |
| | 2.2.4 | False | | |
| | 2.2.5 | True | | |
| | | | (5 × 1) | (5) |
| | | | | |
| 2.3 | 2.3.1 | False | | |
| | 2.3.2 | False | | |
| | 2.3.3 | True | | |
| | 2.3.4 | True | | |
| | 2.3.5 | False | | |
| | | | (5 × 1) | (5) |
| | | | | |
| 2.4 | <ul style="list-style-type: none"> • It stops the oscillation of the springs and the up and down movement of the suspension. • It ensures a safe drive. • It ensures a comfortable drive for passengers. • It prevents excessive wear on tyres, suspension bushes and ball joints. • It controls wheel hop and improves road holding. | | | (Any relevant 5 × 1) (5) |
| | | | | |
| 2.5 | <ul style="list-style-type: none"> • Steering loss and vibration • Excessive front-end drive under hard braking • Excessively body roll during cornering • Bold patches on tyres • Oil leaking from a worn or bent piston rod on the shock absorber • Vehicle veering excessively in strong winds • Bad road holding because of poor contact between tyres and road surface due to wheel bounce | | | (Any 5 × 1) (5) |

[25]

QUESTION 3

- 3.1 Oxyacetylene welding (3)
- 3.2
- Gas welding is a melting process.
 - No flux is needed.
 - The gas provides the heat.
 - Oxygen gas is used to add heat to the flame.
 - Acetylene gas is used as fuel.
 - Filler metal is used to join metals.
 - A filler rod is held and fed by hand.
 - This process is slow.
- (Any 5 × 1) (5)
- 3.3
- | | | |
|-------|---|--|
| 3.3.1 | F | |
| 3.3.2 | E | |
| 3.3.3 | D | |
| 3.3.4 | B | |
| 3.3.5 | A | |
| 3.3.6 | C | |
| 3.3.7 | G | |
- (7 × 1) (7)
- [15]**

QUESTION 4

A three-phase 100 kVA transformer will be at land rate 3. By using the costing for land rate 3, the following costs can be calculated:

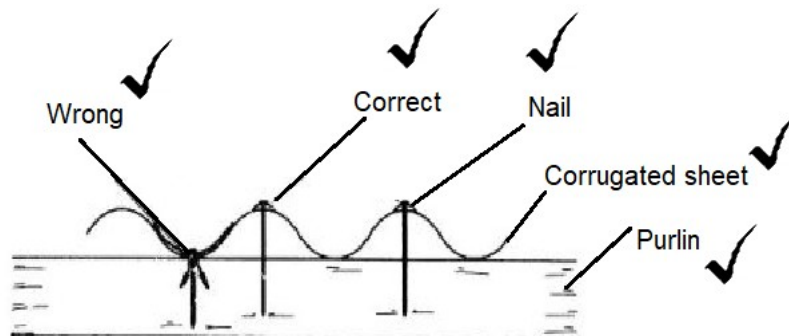
Service and administration charge (R/POD/day) VAT incl.	@ R25,50 per day for 31 days	R790,50
Network access charge (R/POD/day) VAT incl.	@ R63,50 per day for 31 days	R1 968,50 ✓✓
Network demand charge (c/kWh) VAT incl.	4 100 kWh @ R0,35/kWh	R1 435,00 ✓✓
Reliability service charge (c/kWh) VAT incl.	4 100 kWh @ R0,120/kWh	R4 920,00 ✓✓
Energy charge (c/kWh) VAT incl.	4 100 kWh @ R0,9015/kWh	R3 696,15 ✓✓
Total charges for billing period		R12 810,15 ✓✓

[10]

QUESTION 5

- 5.1
- This reduces the danger of the sheets being blown away as they are laid on the roof.
 - It prevents water from being blown into the lap of the sheets.
- (Any relevant 2 × 2) (4)

5.2



(5)

- 5.3
- It strengthens the outside walls by keeping them together.
 - It provides a firm base for the trusses and distributes their weight evenly.
 - It is a place to anchor the trusses to the wall keeping the roof safe in wind.
- (3 × 2) (6)

- 5.4
- Type, breed and age of the animals
 - Type of grazing available
 - Season of grazing
 - Locality of the farm's rainfall figures
 - Number of camps served by the watering scheme
 - Grazing system being practised
 - Carrying capacity of the veld
- (Any 3 × 2) (6)

- 5.5
- | | |
|-------|------|
| 5.5.1 | True |
| 5.5.2 | True |
| 5.5.3 | True |
| 5.5.4 | True |
- (4 × 1) (4)

[25]**TOTAL: 100**