higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

# MARKING GUIDELINE

## NATIONAL CERTIFICATE

## MAINTENANCE MANAGEMENT: FARMING N5

## 13 October 2020

**This marking guideline consists of 5 pages.**

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## QUESTION 1

1.1
1.1.1 B
1.1.2 B
1.1.3 C
1.1.4 C
1.1.5 B
1.1.6 D
1.1.7 D
1.1.8 B
1.1.9 A
1.1.10 C

(10 × 1) (10)

1.2
1.2.1 True
1.2.2 True
1.2.3 False
1.2.4 False
1.2.5 True

(5 × 1) (5)

1.3 1.3.1
A – Needle valve and seat
B – Float
C – Float chamber
D – Throttle valve (butterfly)

(4 × 1) (4)

1.3.2 Carburettor (1)

1.4
- Keep away from sparks or open flames.
- Use in well-ventilated areas.
- Do not cause a short between the terminals/poles.
- Do not connect the charger cables on the battery when the charger is switched on.
- Beware of a short that can cause skin burn between the battery cables and a ring or wristwatch. (5)

**[25]**

## QUESTION 2

2.1

| | |
|---|---|
| 2.1.1 | B |
| 2.1.2 | D |
| 2.1.3 | F |
| 2.1.4 | H |
| 2.1.5 | A |
| 2.1.6 | C |
| 2.1.7 | E |
| 2.1.8 | G |
| 2.1.9 | I |
| 2.1.10 | K |
| 2.1.11 | J |

(11 × 1) (11)

2.2

| | | |
|---|---|---|
| 2.2.1 | plug | (1) |
| 2.2.2 | level | (1) |
| 2.2.3 | clean | (1) |
| 2.2.4 | bottom | (1) |
| 2.2.5 | recommended | (1) |
| 2.2.6 | over✓; strip✓ | (2) |

2.3
- Check oil level.
- Diagnose and repair all gearbox problems.
- Check clutch operation.
- Check for external oil leaks and secure.
- Do not stress gearbox. Shift down in time.
- Inspect condition of gearbox mountings.
- Align gearbox with engine and final drive. (Any relevant 3 × 1) (3)

2.4 Inspect each of the following and determine the necessary action:
- Front axles
- Kingpin, steering knuckle bushings, bearings, seals
- Shock absorbers, bushings, brackets, and mounts
- Leaf springs, centre bolts, clips, pins and bushings, shackles, brackets and mounts
- Stabiliser and torque bars, related bushings and mounts
- Tandem suspension equaliser components
- Air suspension pressure regulator and height control valves, lines, hoses, dump valves and fittings
- Air springs, mounting plates, springs, suspension arms and bushings
- Ride height
- Rough-ride problems
- Wheel alignment
- Wheel nuts or bolts
- Tires for unusual wear patterns (Any relevant 4 × 1) (4)

**[25]**

## QUESTION 3

3.1
3.1.1 G
3.1.2 D
3.1.3 A
3.1.4 B
3.1.5 F
3.1.6 E
3.1.7 C

(7 × 1) (7)

3.2
- Leather apron
- Leather gloves
- Dark safety glasses
- Spats
- Skull cap
- Overall or safety jacket

(Any relevant 5 × 1) (5)

3.3
- Butt joint
- Lap joint
- Tee joint
- Corner joint
- Edge joint

(Any 3 × 1) (3)
**[15]**

## QUESTION 4

4.1
A – Stator windings
B – Rotor
C – Shaft
D – Bearing

(4 × 1) (4)

4.2 AC induction motor (1)

4.3
- Name
- Type
- Speed
- Kilowatts
- Hertz
- Volt
- Amps
- Phase
- Allowable heat temperature
- Model
- Serial number

(Any relevant 5 × 1) (5)
**[10]**

## QUESTION 5

5.1 A – Wall plate
B – Struts
C – Cleat
D – Ridging
E – Roof covering
F – Purlin
G – Rafter
H – Tie beam

(8 × 1) (8)

5.2 Closed eaves (1)

5.3 114✓ × 38✓ mm (2)

5.4 76✓ × 50✓ mm (2)

5.5
- Gable-end roof
- Hipped roof (2)

5.6
- To spread the load of the trusses✓ more evenly over the top surface of the wall✓
- Trusses are nailed✓ to wall plate to fix roof✓ to wall (2 × 2) (4)

5.7 5.7.1 $V = l \times b \times h$
$V = 10 \times 0{,}7 \times 0{,}4$✓
$V = 2{,}8\ m^3$✓

5.7.2 Bags cement = 2,8 × 5,5✓
= 15,4
= 16 bags cement needed✓

5.7.3 Total cost of cement = 16 × R120
= R1 920

(3 × 2) (6)
**[25]**

**TOTAL: 100**

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