higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

AUTOMOTIVE REPAIR AND MAINTENANCE
NQF LEVEL 2

28 NOVEMBER 2023

This marking guideline consists of 5 pages.

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QUESTION 1

1.1
1.1.1 False
1.1.2 True
1.1.3 False
1.1.4 True
1.1.5 True
(5 × 1) (5)

1.2 positive (+) RED✓
negative (-) BLACK✓
The positive pole is larger✓ than the negative pole. ✓ (4)

1.3
- Cools the engine.
- Cleans the engine.
- Prevents rust.
- Lubricates the engine.
- Reduces engine noise. (Any 4 × 1) (4)

1.4
- Prevents accidents.
- Promotes safety in the workshop.
- Good for business.
- Improves productivity (Any 2 × 1) (2)

1.5 Tools that are not stored properly✓/ poor housekeeping✓/horseplay✓/working at unsafe speeds✓/incorrect use of tools and equipment ✓ (any 1) (1)

1.6
1.6.1 Inside
1.6.2 Outside
1.6.3 Inside
1.6.4 Outside
1.6.5 Inside
(5 × 1) (5)

1.7 To ensure the health and safety of person working in any industry, big or small. (1)
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QUESTION 2

2.1
- Gear oil pump
- Eccentric rotor pump
- Internal gear-type oil pump
- Vane-type oil pump (Any 3 × 1) (3)

2.2
- To identify the causes of accidents
- To implement action plans to prevent accidents and incidents (2)

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2.3
- Oil filter remover
- Socket wrenches/set of spanners
- Set of screwdrivers
- Allen keys
- Oil drain container
- Timing light
- Computer/manual for vehicle data (Any 5 × 1) (5)

2.4 To protect you from acid burns (1)

2.5
- Two-stroke petrol engine
- Two-stroke diesel engine
- Four-stroke petrol engine
- Four-stroke diesel engine
- Rotary engine (Any 4 × 1) (4)

2.6
2.6.1 Aluminium
2.6.2 Battery
2.6.3 Anti-freeze
2.6.4 Radiator
2.6.5 Thermostat
(5 × 1) (5)

2.7
- Engine
- Steering
- Brakes
- Drive line
- Transmission
- Suspension
- Body (Any 4 × 1) (4)

2.8
- It saves time.
- Prevents injuries.
- Improves productivity.
- Lift large quantities of goods in a single load. (Any 3 × 1) (3)

[27]

QUESTION 3

3.1 3.1.1
A – outer race
B – inner race
C – cage
D – roller ball (4 × 1)l (4)

3.1.2 Reduces friction. (1)

3.2
- Tyres transmit acceleration and braking force to the road surface.
- Carry/support a motor/vehicle weight.
- Change/maintain direction.
- Absorb shock from the road surface.
- Provide cushioning to the vehicle against uneven roads.
- Propel the vehicle without skidding. (Any 5 × 1) (5)

3.3
- Cleaning your workplace (2)
- Washing after using the rest room (Any appropriate answer)

3.4
3.4.1 Creates pressure during compression-stroke/transfers power from combustion chamber to conrod
3.4.2 Provides a constant turning force to the wheels/transfers power from conrod to flywheel
3.4.3 Connects the piston and the crankshaft
(3 × 1) (3)

3.5
- Check the casing for cracks
- Check whether the casing is swollen
- Check the electrolyte level
- Check the breather on the battery
- Check the battery terminals for damage (5)

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QUESTION 4

4.1
- To check the performance of the engine and that the vehicle has the proper power.
- To check that the engine idles smoothly.
- To check for abnormal noises from the suspension and brakes. (3)

4.2 Sparkplug socket (1)

4.3
4.3.1 Feeler gauge
4.3.2 Compression tester
4.3.3 Chain wrench/filter wrench
4.3.4 Torque wrench
(4 × 1) (4)

4.4
- Check the oil level
- Check the coolant level
- Check for oil leaks
- Check for water leaks
- Check power-steering oil level (5)

4.5 Make sure that there is nothing under the hoist (1)

[14]

QUESTION 5

5.1 To tighten bolts to the tightness specified by the manufacturer. (1)

5.2
- The depth
- External measurements
- Internal measurements (3)

5.3
1 – Petcock Drain
2 – Hoses
3 – Radiator Cap
4 – Belts
5 – Recovery Tank (5 × 1) (5)

5.4
5.4.1 (V) Volt✓✓
5.4.2 (I) Ampere✓✓
5.4.3 (R) Ohm✓✓
(3 × 2) (6)

5.5
- Flat
- Star (Philips)
- Pozi drive (Any 2 × 1) (2)

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TOTAL: 100