



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

NOVEMBER EXAMINATION

MOTOR TRADE THEORY N1

17 NOVEMBER 2016

This marking guideline consists of 5 pages.

QUESTION 1

- | | | | | |
|-----|----------------------------|----------------------|----------|-------------|
| 1.1 | 1.1.1 | C | | |
| | 1.1.2 | D | | |
| | 1.1.3 | A | | |
| | 1.1.4 | A | | |
| | 1.1.5 | D | | |
| | 1.1.6 | D | | |
| | 1.1.7 | C | | |
| | 1.1.8 | D | | |
| | 1.1.9 | D | | |
| | 1.1.10 | C | | |
| | | | (10 × 1) | (10) |
| 1.2 | A–exhaust stroke | | | |
| | B–power stroke | | | |
| | C–spark plug | | | |
| | D–exhaust port/outlet port | | | |
| | E–crankshaft | | | |
| | F–mixture of air and fuel | | | |
| | G–inlet port | | | (7) |
| 1.3 | 1.3.1 | Diamond point chisel | | |
| | 1.3.2 | Torque wrench | | |
| | 1.3.3 | Feeler gauge | | |
| | | | (3 × 1) | (3) |
| | | | | [20] |

QUESTION 2

- | | | | | |
|-----|-------------------|---|---------|-----|
| 2.1 | A–Ring gear | | | |
| | B–Flywheel | | | |
| | C–Clutch face | | | |
| | D–Attaching hole | | | |
| | E–Spigot hole | | | |
| | F–Balancing holes | | | |
| | | | (6 × 1) | (6) |
| 2.2 | 2.2.1 | To connect the piston to the crankshaft. | | |
| | 2.2.2 | To drive air through the radiator core. | | |
| | 2.2.3 | To maintain a minimum operating temperature. | | |
| | 2.2.4 | It circulates engine oil under pressure to the rotating bearings, the sliding pistons and the camshaft. | | |

2.2.5 It ignites the compressed fuel/air by an electric spark. (5 × 1) (5)

2.3

- Gear type
- Eccentric rotor
- Internal gear type
- Sliding type
- Plunger type

(Any 4 × 1) (4)

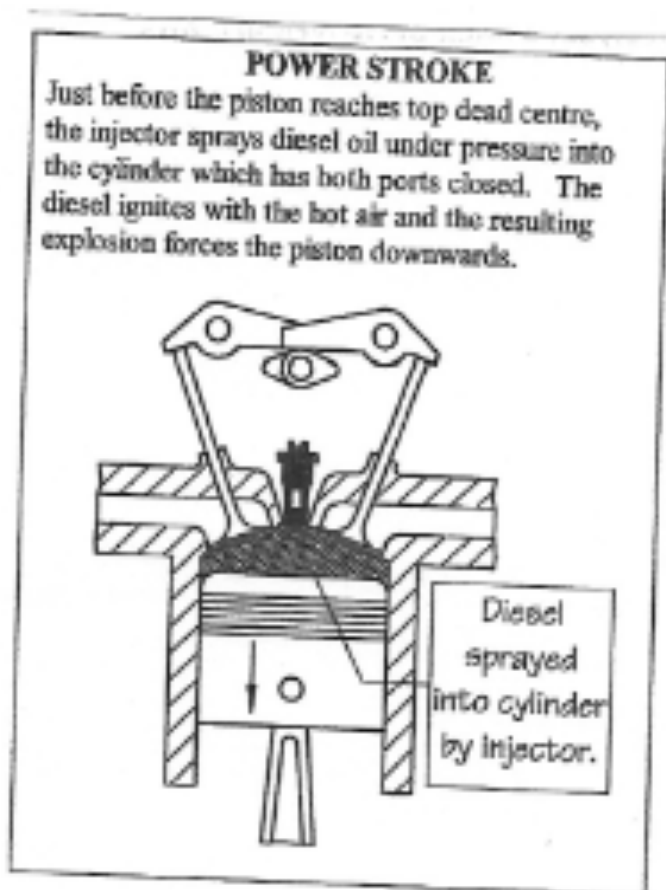
2.4

A–Outer rotor
 B–Drive shaft
 C–Inner rotor
 D–Casing
 E–Outlet

(5 × 1) (5)
[20]

QUESTION 3

3.1



(3 marks for sketch and 4 for labels and explanation) (7)

3.2 Oil clearance is the small space/gap ✓ between moving engine parts ✓ for lubricating oil film. ✓ (3)

- 3.3
- Defective gauge
 - Worn bearings
 - Stuck regulator valve
 - Clogged pump inlet
- (Any 3 × 1) (3)
- 3.4
- A–Flywheel
B–Clutch plate
C–Crankshaft
D–Pressure plate
E–Release lever
F–Thrust bearing
G–Spring
- (Any 7 × 1) (7)
[20]

QUESTION 4

- 4.1
- 4.1.1 False
4.1.2 False
4.1.3 True
4.1.4 False
4.1.5 True
- (5 × 1) (5)
- 4.2
- Unsafe actions
 - Unsafe conditions
 - Fooling about/playing around
- (3 × 1) (3)
- 4.3
- To help the engine reach its normal running temperature.
 - To maintain its running temperature whatever the weather conditions.
 - To meet the requirements of the car's interior heating conditions.
- (3)
- 4.4
- A–Radiator
B–Drain plug
C–Overflow bottle
D–Top hose
E–Cap
- (5 × 1) (5)
- 4.5
- Rust or scale
 - Stuck thermostat
 - Low coolant level
 - Slipping of fan belt
 - No fan shroud
 - Retarded ignition timing
 - Bad water pump
 - Collapsed water hose
- (Any 4 × 1) (4)
[20]

QUESTION 5

- 5.1
- Cut slowly using full length of the blade.
 - Do not apply too much downward pressure on the blade.
 - Insert the blade with the teeth pointing to the front.
 - The blade must be properly tensioned.
 - After use, slack the blade.
 - Use the correct blade for the job.
- (Any 3 × 1) (3)
- 5.2
- Safety goggles must be used at all times.
 - A work rest must always be in place; gap between is ± 2 mm.
 - Grading wheels must be balanced.
 - Work piece should not be knocked.
 - Permanent transparent shield should be mounted above work area.
 - Sides of the grinding wheels should not be used for grinding.
 - Work piece should not be pressed too hard against the grinder.
- (Any 2 × 1) (2)
- 5.3
- Negligence of a person involved
 - Ignorance of the danger involved
 - Fooling about, playing, jokes
 - Tiredness or daydreaming
 - Failure to take adequate precaution
 - Lack of skills through inadequate training
 - Untidy or obstructed working area
- (Any 3 × 1) (3)
- 5.4
- Assures vehicle safety.
 - Ensures comfortable ride.
 - Prevents excessive heat build up.
 - Ensures full tread area of the tyre touching the road.
 - It ensures good balance of the vehicle.
- (5 × 1) (5)
- 5.5
- | | | | |
|-------|----------------------|--|-------------|
| 5.5.1 | External circlip | | |
| 5.5.2 | Soldering iron | | |
| 5.5.3 | Taps and dies | | |
| 5.5.4 | Feeler gauge | | |
| 5.5.5 | Hone | | |
| 5.5.6 | Diamond-point chisel | | |
| 5.5.7 | Socket spanner | | |
| | | | (7 × 1) (7) |
| | | | [20] |

TOTAL: 100