higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

# MARKING GUIDELINE

## NATIONAL CERTIFICATE

## JUNE EXAMINATION

## PERSONNEL MANAGEMENT N4

## 3 JUNE 2016

**This marking guideline consists of 6 pages.**

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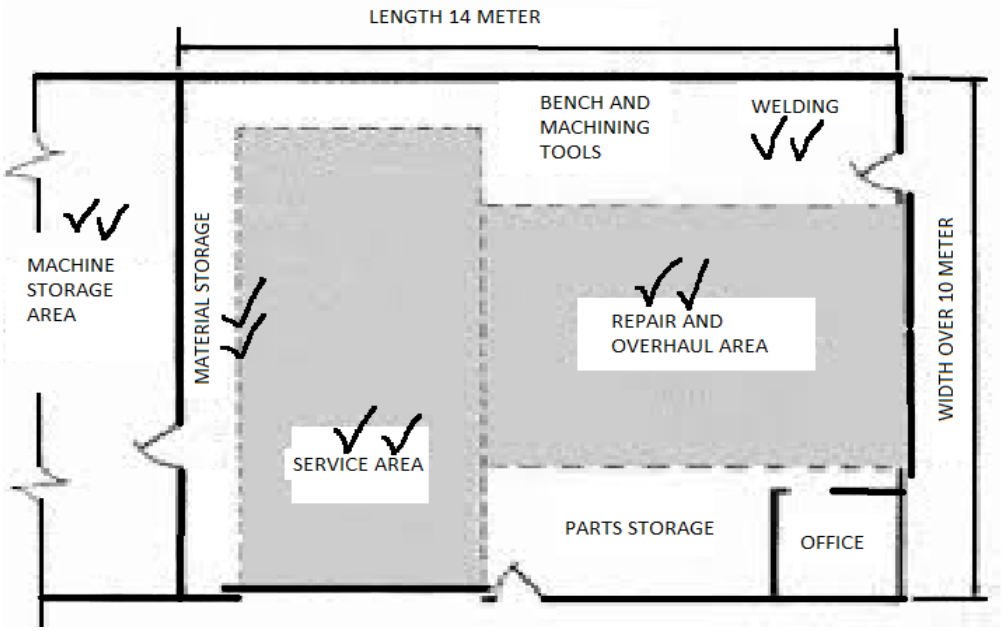
## QUESTION 1

1.1




Any Five of the following should be shown and labelled in the diagram.

- Purpose of the building
- Location
- Type of maintenance to be carried out
- Size and height of the building (width and length)
- Type of structure
- Type of implements
- Floor
- Water and electricity
- Wind direction considerations
- Type of floor
- Ventilation considerations (windows) etc.
- Ablution
- Safety (Any 5 × 2) (10)

1.2

- Set of metric spanners
- Set of metric sockets
- Set of screwdrivers
- Applicable hammers
- Chisels
- Measuring equipment
- Punches
- Electric tools (Hand and floor type)
- Workshop press
- Gas welding and cutting equipment
- Electric arc welder
- Lifting equipment
- High pressure washers
- Toolbox (Lock-up type) (Any 10 × 1) (10)

**[20]**

## QUESTION 2

2.1 2.1.1 It stores up energy during the power event and returns it during remaining events. (1 × 2) (2)

2.1.2
- Seal the combustion space
- Control lubrication of the cylinder walls
- Transfer heat from the piston to the cylinder wall (Any 1 × 2) (2)

2.1.3
- Improves compression ratios
- Creates a vacuum
- Compresses the air-fuel mixture
- Forces exhaust gases out (Any 1 × 2) (2)

2.1.4
- Connects the engine piston with the crankshaft
- Holds the big-end bearings
- Holds the gudgeoned pin (Any 1 × 2) (2)

2.1.5
- It houses the cylinders
- Houses the crankshaft etc. (Any 1 × 2) (2)

2.2 2.2.1 Flywheel/Ring gear
2.2.2 Valve
2.2.3 Piston
2.2.4 Cylinder block
2.2.5 Head

(5 × 1) (5)
**[15]**

## QUESTION 3

3.1
- Identify all the potential hazards.
- Establish precautionary measures that are necessary to protect his/her workers against the identified hazards.
- Provide the means to implement these precautionary measures.
- Provide the necessary information, instructions, training and supervision.
- To not permit anyone to carry on with any task unless the necessary pre-cautionary measures have been taken.
- To take steps to ensure that every person under his/her control complies with the requirements of the act.
- To enforce the necessary control measures in the interest of health and safety.
- To see to it that the work being done and the equipment being used is under the general.

NOTE: Any applicable answer is acceptable (Any 1 × 2) (2)

3.2
- Take care of his/her own health and safety
- Take care of other people who may be affected by his/her actions or negligence.
- Cooperate with the employer where the act imposes a duty or requirement on the worker.
- Give information to an inspector from the Department of Labour if and when required to do so.
- Carry out any lawful instruction which the employer or any other authorised person has given.
- Comply with the rules and procedures that the employer gives him/her.
- Wear the prescribed safety clothing or use the prescribed safety equipment where it is required.
- Report unsafe or unhealthy conditions to the employer or health and safety representative as soon as possible.
- Report an incident to the employer, any authorised person or the health and safety officer (Any 1 × 2) (2)

3.3 Health and Safety Act of 1993 (1)

3.4
- Remove alien plants because some alien plants contain natural oils that will fuel the fire.
- Remove branches that could cause power lines to short-circuit.
- Check electrical installations regularly.
- Restrict the use of farm machinery on days when the fire danger is high.
- Take great care when using welding, cutting and grinding equipment.
- Establish firebreaks between your land and roads or railways.
- Adopt safety standards for smoking, burning rubbish and the disposal of hot ash.
- Make sure all fires are extinguished properly before leaving – never leave a fire unattended.
- Have your own well-maintained fire-fighting equipment on the farm.
- Inform, instruct and train employees in fire precaution and fire-fighting techniques.
- Do NOT burn rubbish on a windy day. (Any 5 × 1) (5)

3.5 Accept any applicable answer where the student is able to explain recycling in terms of farm activities.

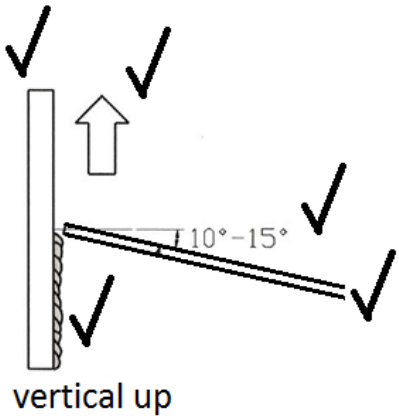
(5 × 1) (5)
**[15]**

## QUESTION 4

4.1.1 J
4.1.2 A
4.1.3 G
4.1.4 B
4.1.5 E
4.1.6 D
4.1.7 F
4.1.8 I
4.1.9 C
4.1.10 H

(10 × 1) (10)

4.2




(5 × 1) (5)
**[15]**

## QUESTION 5

5.1 P = V x I ✓
P = 250 x 4 ✓
P = 1 000 W = 1 kW ✓ (3 × 1) (3)

5.2
- Copper
- Aluminium
- Mild steel
- Water

(Any 2 × 1) (2)

5.3 Down ✓

Fleming's left hand rule for motors
- The thumb represents the direction of the thrust on the conductor/Motion of the conductor. ✓
- The forefinger represents the direction of the magnetic field. ✓
- The middle finger represents the direction of the current. ✓

(4 × 1) (4)

5.4
- Digital
- Analogue

(2)

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5.5
- Always observe all safety rules while taking measurements.
- When using an analogue meter make sure it is in the position that it is intended for. Some analogue meters can only be used when they are lying flat. Digital meters are not position-oriented.
- When using an analogue meter make sure that the pointer is at its zero-rest position. If it is not, it must be zeroed by turning a small screw on the meter.
- When the analogue meter is stowed, make sure it is not switched to the resistance position. If the lead touches, the battery will run flat.
- Always switch a digital multimeter off after use otherwise the battery will also run flat.
- Never let the multimeter get wet. (Any 4 × 1) (4)

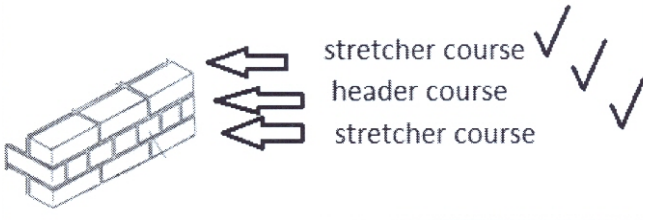
**[15]**

**QUESTION 6**

6.1
6.1.1 Folding ruler
6.1.2 Tape
6.1.3 Steel square
6.1.4 Straight-edge
6.1.5 Building line
6.1.6 Steel/Wooden pegs
6.1.7 Dumpy level

(7 × 1) (7)

6.2



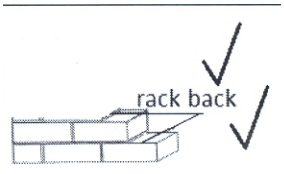

(3 × 1) (3)

6.3
- Stone
- Sand
- Cement
- Water (4 × 1) (4)

6.4
6.4.1 D
6.4.2 B
6.4.3 A
6.4.4 C

(4 × 1) (4)

6.5




(2 × 1) (2)

**[20]**

**TOTAL: 100**

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