higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

WORKSHOP PRACTICE
NQF LEVEL 2

20 November 2024

This marking guideline consists of 6 pages.

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QUESTION 1

1.1 1.1.1 C
1.1.2 F
1.1.3 A
1.1.4 B
1.1.5 D

(5 × 1) (5)

1.2 1.2.1 Safety is the state of being free from danger or risk. (1)

1.2.2
- It is important for the well-being of employees in the workplace
- It enhances the reputation of employees
- It improves the profitability of the business (Any 2 × 1) (2)

1.3 Injury is any physical harm to a person. (1)

1.4
- General administrative regulations
- General safety regulations
- Environmental regulations for the workplace
- General machinery regulations
- Electrical machinery regulations
- Electrical installation regulations (Any 5 × 1) (5)

1.5 1.5.1
- Air emissions and ambient air quality
- Energy conservation
- Waste water and ambient water quality
- Water conservation
- Hazardous material management
- Waste management
- Noise management (Any 2 × 1)

1.5.2
- General facility design and operation
- Communication and training
- Physical hazards
- Chemical hazards
- Biological hazards
- Radiological hazards
- Personal protective equipment (Any 2 × 1)

1.5.3
- Water quality and availability
- Structural safety of project infrastructure
- Life and fire safety
- Transport of hazardous materials
- Disease prevention
- Emergency preparedness and response (Any 2 × 1)

(3 × 2) (6)
[20]

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QUESTION 2

2.1 2.1.1 True
2.1.2 False
2.1.3 False
2.1.4 False
2.1.5 True

(5 × 1) (5)

2.2
- Reassure the casualty that expert medical help is on the way
- Keep the casualty warm
- Place the casualty in a position that encourages the flow of blood to the brain
- If the casualty has broken bones, judge which position will be best for the fractures and shock
- A casualty with a fractured spine must be completely immobilised before being transported (5 × 2) (10)

[15]

QUESTION 3

3.1 3.1.1 A draw tape/fish tape✓ is used to draw conductors through PVC or metal conduit.✓

3.1.2 A bending spring✓ is used to bend PVC pipes into the required shape.✓

3.1.3 A wire stripper✓ is used to remove insulation from the cut end of an insulated wire without damaging the wire itself.✓

3.1.4 A crimping tool✓ is used to secure connections between wires and connectors.✓

(4 × 2) (8)

3.2
- Wooden ladder
- Fibreglass ladder
- Aluminium ladder (Any 2 × 1) (2)

3.3 A reamer is a cutting tool✓ used for enlarging previously drilled holes.✓ (2)

3.4
- Squared shank
- Shank diameter
- Threads
- Taper threads (Any 3 × 1) (3)

[15]

QUESTION 4

4.1 A machine used for drilling in the workshop,✓ which can also be used for reaming, tapping, counterboring and countersinking.✓ (2)

4.2 Gears✓ and bearings✓ (2)

4.3
- Periodically lubricate the gear and rack table elevation mechanism, the splines (grooves) in the spindle and the rack (teeth on the quill).
- Ensure that the base is properly secured to the workshop floor.
- Always keep the table and column clean. (3)

4.4
- Wood
- Metal (Any 1 × 1) (1)

4.5
- Avoid cutting nails with a jigsaw
- Do not use a jigsaw on hollow pipes
- Do not cut oversize workpieces
- Ensure that the blade is not in contact with the workpiece before you turn the switch on
- Always use sharp saw blades
- Unplug the jigsaw before changing blades and before cleaning or maintenance
- Check that the intended path of the blade below the workpiece is clear
- Ensure that the power cord is behind the saw and never in front of the blade
- Do not curl your fingers around the workpiece near the line of cut
- Switch off the jigsaw and wait until the blade has stopped moving before putting the saw down
- Secure the workpiece firmly before using the saw
- Select the appropriate blade (Any 4 × 1) (4)

4.6
- Teeth milled, side set
- Teeth milled, wavey set
- Teeth ground, side set
- Teeth ground, taper ground set (Any 3 × 1) (3)

[15]

QUESTION 5

5.1	5.1.1	Vernier calliper		(1)
	5.1.2	• Equipment • User • Time interval • Environment • Dirt • Excessive force • Method • Support	(Any 4 × 1)	(4)
5.2	5.2.1	Spirit level		(1)
	5.2.2	• Handle a spirit level carefully • Clean it before and after use • Oil the reference surface when necessary • Hang it on the tool board after use • Do not store it with other tools as the vials may crack, affecting its accuracy • Do not drop the instrument • Do not use the instrument as a lever or scraper • Store in a dry place to avoid oxidation	(Any 4 × 1)	(4)
5.3	5.3.1	Measuring tape		(1)
	5.3.2	• Choose measuring instruments carefully • Reduce random errors by taking several readings and computing the average value • Check the equipment for zero errors • Avoid the error of parallax • Familiarise yourself with the operating instructions of the measuring instrument • Comply with all safety precautions when measuring • Know the limitations of measuring equipment	(Any 4 × 1)	(4) **[15]**

QUESTION 6

6.1 6.1.1 Operational procedures
6.1.2 Before
6.1.3 Informative signs
6.1.4 Orange
6.1.5 Dry power, carbon dioxide and halogen gas

(5 × 1) (5)

6.2
- The name of the user who takes the tools or equipment
- The condition of the tools or equipment
- The date issued
- The condition of tools or equipment when they are returned
- The user's signature (5)

[10]

QUESTION 7

- Do not touch the tip of the heating element of the soldering iron
- Hold wires to be heated with tweezers or clamps
- Always keep the cleaning sponge wet during use
- Always return the soldering iron to its stand when not in use
- Never put it dawn on your workbench
- Switch off the soldering iron when not in use
- Keep electrical cords away from heated tips
- Work on a non-flammable surface (Any 5 × 2) **[10]**

TOTAL: 100

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