higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

PLANT AND EQUIPMENT
NQF LEVEL 2

24 November 2023

This marking guideline consists of 5 pages.

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QUESTION 1

1.1
- Circular saw
- Electric drill
- Electric screwdriver
- Jigsaw (Any 2 × 1) (2)

1.2
- Specific construction operation
- Specification requirements
- Construction site condition
- Project time schedule
- Mobility required of the equipment (Any 3 × 1) (3)

[5]

QUESTION 2

2.1
- Personal protective equipment (PPE)
- Scaffolding ladders
- Health and welfare matters
- Electrical equipment
- Tools
- Trestles
- Ramps (Any 5 × 1) (5)

2.2
- Carelessness of co-workers
- Insufficient lighting
- Working at heights
- Moving objects
- Not enough ventilation
- Noise from plant and equipment
- Slippery surface
- Faulty and unreliable machinery (Any 3 × 1) (3)

2.3
- The names and positions of the people involved
- The names of witnesses
- The time and date
- Where the incident occurred
- A description of the incident
- Actions taken to aid the affected individuals (Any 5 × 1) (5)

2.4
- Must be properly planned and organised
- Must take account of weather conditions
- Those working at heights must be properly trained
- The area must be safe
- Must have a clear vision of the work area (Any 2 × 1) (2)

[15]

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QUESTION 3

3.1 3.1.1 E
3.1.2 C
3.1.3 A
3.1.4 G
3.1.5 B

(5 × 1) (5)

3.2
- Wear protective barriers in case of excessive bleeding.
- Start by assessing the situation.
- Check on consciousness.
- Check respiration rate.
- Control any bleeding by applying direct pressure.
- Seek medical assistance immediately. (Any 5 × 1) (5)

3.3
- First-degree burn
- Second-degree burn
- Third-degree burn (3)

3.4 3.4.1 Artificial respiration
3.4.2 Cardiopulmonary resuscitation

(2 × 1) (2)
[15]

QUESTION 4

4.1 4.1.1 Crowbar✓ – used as a lever to force two objects apart or to remove nails✓

4.1.2 Vernier scale✓ – used for very accurate measurements or determining the diameter of round objects✓

4.1.3 Block brush✓ – used to wet the surface of a wall before plastering✓

4.1.4 Bolster chisel✓ – used to cut clay bricks✓

4.1.5 Chalk line✓ – used to set out walls or mark gridlines✓

(5 × 2) (10)

4.2
- Pipe vice
- Pipe cutter
- Water pump pliers
- Basin wrench
- Tap reseating tool
- Flexible drain-cleaning rod
- Tin snips
- Deburring tool
- Guillotine (Any 3 × 1) (3)

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4.3
- Pentagon
- Hexagon
- Octagon (3)

4.4 Consult the building plans✓ to obtain all the information needed.✓ Obtain the framework and support work specification✓ from the engineer.✓ Make sure that you have all the materials,✓ equipment and tools✓ that you will need to mark, set out and prepare the shuttering for the formwork.✓ Use the traditional slab formwork technique,✓ which entails erecting form faces from the outside using pegs.✓ As the wet concrete is very heavy, the formwork must be able to withstand the pressure✓ that the wet concrete puts on it.✓ (10)

4.5
- Design
- Smoothen rough surfaces
- Chop out corners
- Sharpen materials
- Cut off marked pieces (Any 4 × 1) (4)

[30]

QUESTION 5

5.1
- Two-legged or stepladders
- Straight ladders (2)

5.2
- The ladder must at least 1 m above the top workface.
- Lash the stiles to the workface.
- Put the top of the stiles against a solid support. (3)

5.3 The ladder has no visible defect.✓ Check for any signs of corrosion.✓ Make sure that all rivets, joints, nuts and bolt are tight.✓ Ensure that all parts are in a good working condition.✓ Check that the brace locks are working correctly for A-frame ladders.✓ Check all the rungs and stiles for any defects such as cracks, breaks or not correctly binding. (5)

[10]

QUESTION 6

6.1
6.1.1 True
6.1.2 True
6.1.3 False
6.1.4 False
6.1.5 True
6.1.7 True
6.1.8 True
6.1.9 False
6.1.10 True

(10 × 1) (10)

6.2 Observe safety measures.✓ Start at the top and work your way down.✓ Remove ladders and ties once you have reached the required heights where they can be removed safely.✓ Never throw components down.✓ (4)

6.3
6.3.1 South African National Standards
6.3.2 Safe working load
6.3.3 Occupational health and safety
6.3.4 Personal protective equipment
6.3.5 Design working load

(5 × 1) (5)

6.4
- General worker
- Assistant to scaffold
- Scaffold erector
- Scaffolding team leader
- Inspector of scaffold (5)

6.5 The vertical component of a scaffold used to support it (1)

[25]

TOTAL: 100

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