higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

PLUMBING
NQF LEVEL 2

22 November 2024

This marking guideline consists of 5 pages.

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QUESTION 1: INTRODUCTION TO PLUMBING

1.1 Lead (1)

1.2
- Plumbing is the system of pipes that transport water to and from within the building.
- It also refers to the work of a plumber which involves the work of fitting and repairing water pipes, bath, toilets, and other plumbing fittings. (2)

1.3
- Solar Technology
- Medical plumbing (2)

1.4 Water cycle is the process or cycle that water goes through when it turns from water into gas and then into water again.✓✓ (2)

1.5 Colour, Smell and flavour/taste. (3 × 1) (3)

1.6 Disinfection: Chlorine is added to kill bacteria, viruses and other microbes in water, prevention of water borne diseases. (1)

1.7
- Planning for the job
- Briefing the plumbers
- Waiting in readiness
- Overseeing the project (4)

[10]

QUESTION 2: PLUMBING PRINCIPLES AND CODE OF PRACTICE

2.1
- Surface water
- Ground water
- The sea
- Storing water (Any 3 × 1) (3)

2.2
- It can be pulled
- It can be pushed (2)

2.3 A water reticulation system is a network of underground pipes that takes water to a different section of a town.✓✓ (2)

2.4 So that gravity can be used to get the water to flow from the treatment plant to the houses and buildings.✓✓ (2)

2.5
- The SANS-tested system
- The Joint Acceptance Scheme of Water Installation Components (JASWIC)
- Agreement Certificate (3)

2.6 Flow rate is the amount of water that flows through a pipe in a certain amount of time.✓✓ (1 × 2) (2)

2.7 Water Supply (1)

[15]

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QUESTION 3: MATERIALS TOOLS AND EQUIPMENT

3.1 3.1.1 Gas Plier
3.1.2 Hack Saw
3.1.3 Plunger
(3 × 1) (3)

3.2
- Soul water
- Waste water (2)

3.3 This is water from:
- Basins
- Baths
- Sinks
- Showers
- Dishwashing machines
- Washing machines (Any 3 × 1) (3)

3.4
- They must be secured so that they don't fall
- The equipment you use on the ladder can't fall to hurt anyone below (2)

[10]

QUESTION 4: SANATARY INSTALLATION

4.1 4.1.1 Elbow 90°
4.1.2 Male and female elbow
4.1.3 Union
4.1.4 Elbow 45°
4.1.5 Tee
4.1.6 Reducing bush
(6 × 1) (6)

4.2
- 460/1
- 460/2
- 460/3 (3)

4.3
- Capillary joint
- Compression joint (2)

4.4
- Centre to centre
- Back to inside
- Inside to back (3)

4.5
- Plastic pipes are cheaper
- Easy to cut
- Easy to install (3)

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4.6 4.6.1 True
4.6.2 True
4.6.3 True
4.6.4 False
4.6.5 False
4.6.6 True
(6)

4.7 Crimping tool (1)

4.8 Hacksaw (1)
[25]

QUESTION 5: CUT AND JOIN METALS

5.1 Flashing is a strip of material that will make a joint between the roof and brick work waterproof.✓✓ (2)

5.2
- Lead
- Copper (2)

5.3 Tin snip (1)

5.4
- Cover flashing
- Apron flashing
- Stepped flashing
- Raked flashing
- Eaves flashing
- Soakers (Any 5 × 1) (5)

[10]

QUESTION 6: BELOW GROUND DRAINAGE

6.1 Storm water is the water that lies on top of the ground or building.✓✓ (2)

6.2
- There should be enough pipes to lead the wastewater to the system
- The pipes must be as straight as possible between the places where they will be reached or accessed
- Pipes must be properly supported so they don't sag and cause dips in the middle or pull out of their joints
- Pipe must be laid so that the water will flow down and through them easily
- The joints and connections as well as the inspection covers must be watertight
- A drain should never run under a building (6)

6.3
- To provide an access point for clearing, cleaning and inspecting drains.✓✓
- Prevent unauthorized entry into the drainage system.✓✓ (2 × 2) (2)

6.4 The gully is the part of the drainage system which helps to prevent grease and dirt from entering the system✓✓ and stops the smell of used water from coming into the building.✓✓ (4)

6.5
A Waste pipe
B Gully hopper
C Trap
(3 × 1) (3)

6.6 Gradient is a slope or the degree of a slope (1)

6.7
- Hard ground
- Loose or wet ground (2)

6.8
- Dumpy level
- Spirit level
- Water level
- Theodolite
- Plum bob (Any 3 × 1) (3)

[25]

TOTAL: 100

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