higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

MASONRY
NQF LEVEL 3

21 November 2024

This marking guideline consists of 5 pages.

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QUESTION 1

1.1 1.1.1 Is a wall that consists of two leaves separated✓ by a space between them and the leaves are tied together by means of wall ties.✓

1.1.2 Is a beam of concrete built around the perimeter at the top of a wall and goes right around✓ the house and strengthens the wall if there are openings.✓

1.1.3 Connects leaves of cavity walls together✓ and assists in mutual support.✓

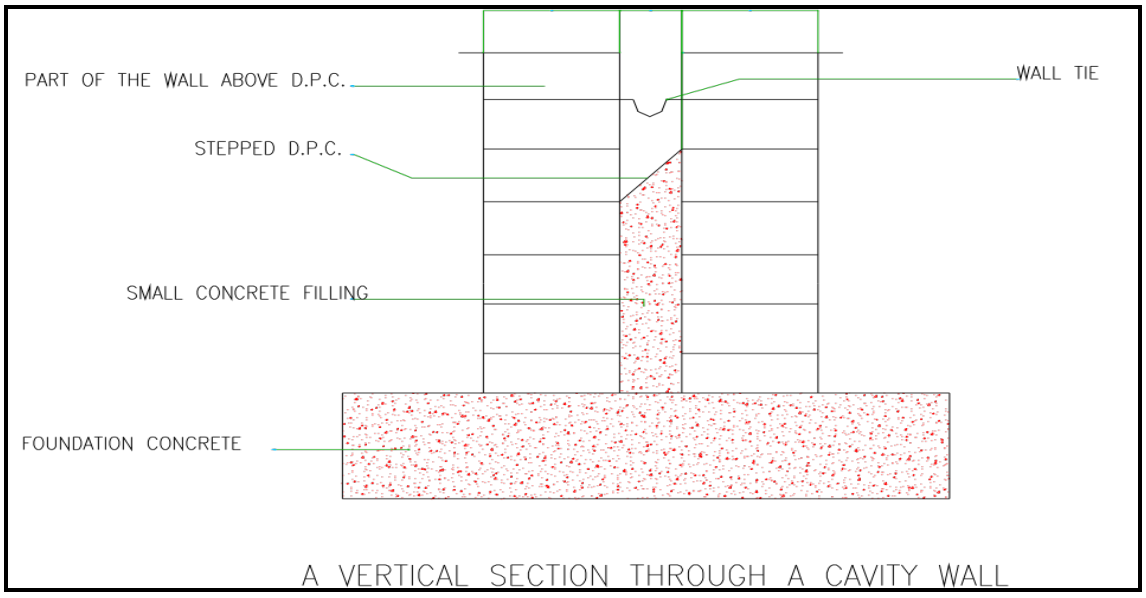
1.1.4 Is concrete that is manufactured with reinforced wire and left to cure.✓ When cured, it is sold in meters at hardware shops and usually used above openings.✓

1.1.5 Usually galvanised straps installed on the roof✓ of the building to support the roof structure during heavy winds.✓

1.1.6 Is a post✓ that forms both sides of a door or window.✓

(6 × 2) (12)

1.2



Overall correctness	4 marks
Labelling as per specifications	6 marks
Title of overall drawing	2 marks
TOTAL MARKS	**12 MARKS**

(12)

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1.3 Temporary openings called clean-out holes can be used to remove mortar droppings from the bottom of the cavity.✓ Timber battens can be used to clean the inside of the wall inclusive of the droppings and debris.✓ Openings can be made low down the wall.✓ Cavities should be cleaned on a daily basis so that the mortar droppings do not set.✓ (4)

1.4
1.4.1 False
1.4.2 True
1.4.3 True
1.4.4 True
1.4.5 True
1.4.6 True
1.4.7 True

(7 × 1) (7)
[35]

QUESTION 2

2.1
2.1.1 Thumbprint hard
2.1.2 (390 × 190 × 190 mm)
2.1.3 (290 × 190 × 190 mm)
2.1.4 (190 × 190 × 190 mm)
2.1.5 (90 × 190 × 190 mm)
2.1.6 Bed joint reinforcement
2.1.7 200 mm

(7 × 1) (7)

2.2 Place the straight edge on two masonry units of the same measurements.✓ Take a long spirit level✓ or another straight edge and place on the top of the straight edge✓ and adjust the straight edge upwards or downwards✓ until the bubble is in the centre of the vial of the spirit level.✓ Measure the distance between the top of the straight edge and the bottom of the spirit level.✓ If the distance is greater than 6 mm, the foundations should be levelled✓ and if it is less than 6 mm, checks can be completed.✓ (8)

2.3
2.3.1 Concave✓ Vee✓
2.3.2 Weathered✓ Flush✓
2.3.3 Raked✓ Struck✓

(3 × 2) (6)

2.4 In hollow masonry it is better to reinforce the hollow blocks horizontally and vertically✓ or to fill the cavities in a cavity wall with concrete.✓ These methods strengthen the masonry and control any cracking in the wall.✓ Hollow units lie on a rather thin strip of mortar.✓ We strengthen these hollow walls with vertical reinforcements and concrete infill; we create sections that act like composite columns or ring beams.✓ Only units used in lintels are of this shape.✓ (6)

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2.5
- Walls that are incomplete should be covered daily
- Waterproof material should be used
- The waterproof material should extend a minimum of 600 mm around the wall
- Ensure that the waterproof material is placed firmly to avoid movement.

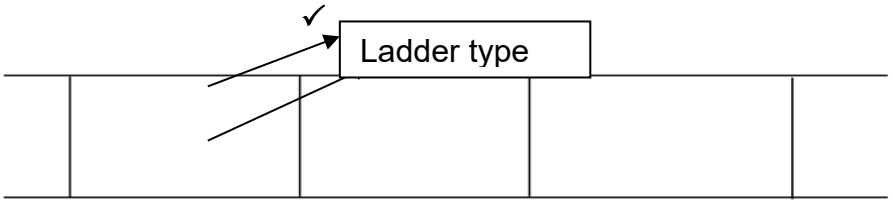
(Any 3 × 1) (3)
[30]

QUESTION 3

3.1
3.1.1 H
3.1.2 F
3.1.3 C
3.1.4 B
3.1.5 A
3.1.6 D

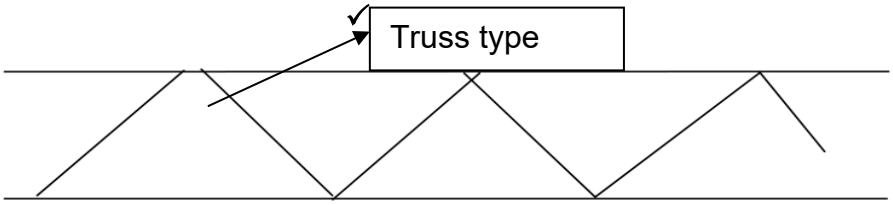
(6 × 1) (6)

3.2 3.2.1



✓✓

3.2.2



✓✓

(2 × 3) (6)

3.3 Make the opening in the hollow unit before laying the unit✓ into the wall and use a masonry saw to cut two vertical slots at the bottom of the exposed face of the block.✓ Remove the cut piece✓ and fix the plug box into the hole,✓ then insert mesh✓ under the unit to support the mortar. Use the mortar to hold the box in position.✓ Conduits can be passed through the hollow units connected to the plug box.✓ (7)

3.4
- Extrados
- Voussoirs
- Key brick/keystone
- Springer
- Springer line
- Intrados
- Arch soffit support
- Rise
- Crown (Any 8 × 1) (8)

3.5 Prevent mortar dropping on the wall during construction✓ and protect the base of the wall by laying sand, straw, saw dust or plastic sheeting, along the ground.✓ Also cover the walls at the end of each day's work or during rain.✓ Set scaffolding far enough away from the wall to allow mortar droppings to fall to the ground and away from the wall.✓ At the end of each working day, clean the boards closest to the wall.✓ Turn scaffold boards back to prevent rainfall from splashing mortar and dirt on the brickwork.✓ (6)

3.6 Roof anchors are required to anchor roofs against weather conditions✓ and act as strengthening in the installation of the roof.✓ (2)

[35]

TOTAL: 100

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