higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

MASONRY
NQF LEVEL 4

XX February 2020

This marking guideline consists of 5 pages.

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QUESTION 1

1.1 True
1.2 False
1.3 False
1.4 False
1.5 False
1.6 True
1.7 True
1.8 True
1.9 False
1.10 True

(10 × 1) **[10]**

QUESTION 2

2.1
- Wet the wall using a block brush to flick water over the substrate.
- Apply screed strips before plastering the wall.
- Plaster the prepared wall in one single application.
- Collect the plaster mix from the hawk with a plastering trowel or float and press onto the substrate with pressure in a sweeping stroke.
- Spread the plaster evenly onto the substrate until you have covered the whole area to be plastered.
- As soon as plaster begging to set, use a straight edge to screed it to the correct plane.
- Score the area with a trowel to provide a key for the next layer.
- Use a straight edge to make sure that the surface is even and smooth. (8)

2.2 So that plaster can be stronger,✓ more impermeable✓ durable✓ and free of cracks✓ (4)

2.3
- No water is absorbed.✓ This is not good for bonding, as a certain amount of absorption is necessary for the bonding of plaster to the substrate.✓
- Some water is absorbed, but most runs off.✓ This is good for bonding as some suction is necessary to draw the plaster into the substrate, making the bond stronger.✓
- Most of the water is absorbed.✓ This means that the substrate is too dry and it will have to be presoaked and allowed to dry before plastering.✓

(3 × 2) (6)

2.4 To help prevent cracks from forming✓ should the plaster contract or shrink after it has dried.✓ (2)

2.5 Seven days (1)

2.6
- At the edge of a damp course (DPC)
- Next to columns
- Where substrate has been laid in sections (3)

2.7 Curing begins as soon as there is a chance of drying out so that the plaster sets.✓ Curing affects mainly the outer 50 mm of plaster known as the cover zone.✓ Curing need a consistent environment to be successful (not too dry or not too wet).✓ The best way to do this is to place a plastic sheet over the surface and leave it for seven days.✓ Then remove the plastic sheeting and leave it for another 28 days.✓ After this process you can paint or tile the surface.✓ (6)
[30]

QUESTION 3

3.1 3.1.1 To test the workability✓ of a fresh concrete mix or if correct amount of water is used✓

3.1.2 To test the compressive strength of concrete✓ at 28 days✓
(2 × 2) (4)

3.2
- Keep formwork in place, especially on columns and beams.
- Use frequent ponding of water on areas exposed to the elements.
- Cover the surface with sand, straw, sawdust, sacking, which is then moistened with water.
- Spray water onto the concrete at frequent intervals.
- Cover the exposed surface with plastic sheeting.
- Spray a liquid sealant (colourless) on the surface. (Any 5 × 1) (5)

3.3 If condensation is visible, the floor is not yet ready.✓ Gentle tapping with a small hammer or metal rod will produce a hollow sound when debonding has occurred.✓ Use the BRE screed test made up of a 4 kg weight raised a fixed distance on a vertical shaft and allowed to free fall onto a collar that transfers the energy to the end of the shaft.✓ Use once screeds are 14 days old.✓ Test one spot four times.✓ Scatter a handful of coarse sand or fine stone particles over an 800 mm^2 area. Cover and leave for 24 hours.✓ The cube test is used to test topping strength 28 days after casting a sample of the concrete mix into a metal cube as prescribed by the civil engineer.✓ (7)

3.4 3.4.1 Cement and sand mix laid on a concrete slab✓ to provide a smooth, flat finish✓

3.4.2 Development of a network of fine random cracks✓ in screed or topping✓

3.4.3 Frothy scum of cement✓ formed on top of concrete as result of bleeding✓

3.4.4 Two materials bonded to each other separate,✓ either in a small isolated area or over a large area✓

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3.4.5 Causes water to accumulate✓ on the top surface of the fresh concrete✓

(5 × 2) (10)

3.5 To produce a flat and smooth surface (1)

3.6
- Cement
- Sand
- Water
- Stone

(Any 3 × 1) (3)
[30]

QUESTION 4

4.1 4.1.1 Horizontal joints lineup
4.1.2 Tiles
4.1.3 Batten board
4.1.4 Screw
4.1.5 Corner

(5 × 1) (5)

4.2 Wood floating gives a rougher finish✓ which is better for bonding with the tile adhesive.✓ (2)

4.3 Clean any existing ceramic tiles with undiluted tile cleaner,✓ then rinse them thoroughly in cold water.✓ (2)

4.4 Chip away at least 80% of the old paint. (1)

4.5 Measure the wall from top to bottom and mark the midpoint.✓ Strike a horizontal line through this midpoint with the chalk to show the position of the starting course of tiles. Use a spirit level to make sure that this line is truly horizontal.✓ Measure the wall from side-to-side and mark the mid-point. Strike a vertical chalk line at 90° to the horizontal line. Use the spirit level to make sure that it is truly vertical.✓ Strike the position of the next course with the chalk line.✓ Do this by moving the required distance at an angle of 90° from the centre point of the first line.✓ Use the chalk line and spirit level to make sure that this line is also truly horizontal.✓ When starting on the area adjacent to the first wall you have tiled, make sure to align the horizontal joints.✓ The first level of tiles should be supported at the bottom by a straight batten of wood, which is nailed underneath as a support.✓ Do not drive the nails in deeply as you will have to remove this guide once the adhesive has dried and the tiles are secure on the wall.✓ Make sure that the batten of wood is completely level by using the spirit level and nail it into the wall.✓ (10)

4.6 3 mm (1)

4.7 4.7.1 Nibbling away bits of tile to create various shapes

4.7.2 Tapping tiles firmly into adhesive

4.7.3 Smoothing off sharp edges on cut tiles

4.7.4 Toothed trowel with 10 mm notches for spreading adhesive on floors

4.7.5 Essential for finishing off edge of tiles

(5 × 1) (5)

4.8 Paper lining which is the skin of the plasterboard is unsuitable for the application of tiles,✓ as moisture in the adhesive will cause the paper to debond from the plaster-board.✓ This will cause the tiles to fall off and the plaster-board will begin to lose its board-like structure.✓ (3)

4.9
- Around the perimeter of the floor
- In all vertical corners
- Against obstructions fixed to the structural background, for example cupboards (Any 1 × 1) (1)

[30]

TOTAL: 100

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