higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

MASONRY
NQF LEVEL 4

(12020524)

12 March 2018 (X-Paper)
09:00–12:00

This question paper consists of 6 pages.

NCV

TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Write neatly and legibly.

NC(V)

QUESTION 1: GENERAL

Complete the following sentences by using the word or words in the list below. Write only the missing word or words next to the question number (1.1–1.10) in the ANSWER BOOK.

topping; laitance; scoring; floating; substrate; grout; hydration; wall chase; slump test; control joint; curing; retemper

1.1 … is the process of applying a surface finish to a topping or screed.

1.2 We use … to fill the spaces between tiles and to provide support in the tile joints.

1.3 … is the chemical reaction that occurs when you mix water and cement.

1.4 A ... is used on construction projects to isolate or limit cracking caused by internal or external stress on the structure.

1.5 … is a concrete mix that forms part of the slab.

1.6 … is the process of creating a mechanical key by scratching lines 5 mm deep into the plaster undercoat.

1.7 A … is used to test the consistency of a screed or topping mix.

1.8 The process of keeping concrete under specific environmental conditions until hydration is relatively completed is called ...

1.9 To ... is to add water to mortar which is starting to stiffen (usually not allowed).

1.10 … is the frothy scum of cement formed on top of concrete as a result of bleeding.

(10 × 1) **[10]**

QUESTION 2: PLASTERING

2.1 Explain how to score undercoat plaster. (2)

2.2 Explain when and how to test the surface to determine its readiness for floating. (8)

2.3 State SIX steps on how to check the substrate surface for planeness using a straight edge. (6)

2.4 What is a mortar joint? (2)

2.5 What are the TWO important roles of water in concrete? (2)
[20]

QUESTION 3: SCREED AND TOPPINGS

3.1 What is an intercoat? (2)

3.2 Give TWO ways of creating a mechanical key on concrete substrate. (2)

3.3 Intermediate joints in bonded toppings should be cut halfway through the slab or must be placed as butt joints.

Make sketches to show joints in action through butt joints, saw-cut joints and keyed joints. (12)

3.4 Complete the following sentences by writing down in the missing word or words next to the question number (3.4.1–3.4.8) in the ANSWER BOOK.

3.4.1 A ... is a mix made from sand and cement that is laid on a concrete ... to provide a smooth, flat surface. (2)

3.4.2 A ... ... is a rich layer of sand, cement and water mix used to form a bonding layer between the base and the screed or topping. (1)

3.4.3 ... is a surface which the plaster bonds onto. (1)

3.4.4 ... is the development of a network of fine random cracks in the screed or topping. (1)

3.4.5 A ... vibrator is used to compact topping, which is more efficient and removes more air. (1)

3.4.6 The … is used to test the strength of the topping. (1)

Copyright reserved

3.4.7 ... is the process of finishing off the mortar joint between bricks and compacting or removing the mortar to a depth of 10mm. (1)

3.4.8 A slush coat is a liquid mixture that is applied to the substrate when a bonding layer is needed between the ... and the … (2)

[26]

QUESTION 4: PLANNING AND PREPARATION FOR TILING

4.1 Choose a description from COLUMN B that matches an item in COLUMN A. Write only the letter (A–J) next to the question number (4.1.1–4.1.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
4.1.1	Ground squeegee	A	thick white liquid usually used for making rubber, paint, glue and other types of adhesives
4.1.2	Tile spacers	B	used to apply and smooth out grout
4.1.3	Popping	C	pattern made by fitting together small pieces of tiles of glass
4.1.4	Grout	D	construction material used to fill the spaces between tiles and to provide support in tile joints
4.1.5	Latex	E	the appearance of pop-out conical fragments that break out of the surface of the plaster leaving holes that vary in size
4.1.6	Tolerance	F	amount by which something may differ from the set standard
4.1.7	Delamination	G	separation of layers from one another
4.1.8	Mosaic	H	these make sure that the tiles are laid to the correct distance apart and that there are straight lines between the tiles
4.1.9	Plaster board	I	composition of two paper liners sandwiching a core containing gypsum and some adhesive
4.1.10	Grid	J	a pattern of straight lines that cross each other and form squares

(10 × 1) (10)

4.2 Name FIVE tiling tools. (5)

4.3 Briefly explain the use of each tool named in QUESTION 4.2. (5)

4.4 State what type of grout you would select for each of the following:

4.4.1 A factory in which food is prepared

4.4.2 A high-traffic workshop

4.4.3 A bathroom

(3 × 1) (3)
[23]

QUESTION 5: TILING ACTIVITIES

5.1 Describe how to clean organic growth from the surface to be tiled. (4)

5.2 State THREE factors to take into account when selecting a tile adhesive or bonding mortar. (3)

5.3 Describe how to use a chalk line and spirit level to mark a truly horizontal line on a wall to be tiled. (5)

5.4 What is the minimum space allowed between tiles? (1)

5.5 Name FOUR types of sealer for tiles and state the properties or uses thereof.

(4 × 2) (8)
[21]

TOTAL: 100

Copyright reserved