



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

MASONRY NQF LEVEL 3

(12020353)

**7 December 2020 (X-paper)
09:00–12:00**

This question paper consists of 4 pages.

363Q1N2007



<p>TIME: 3 HOURS MARKS: 100</p>

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. Start each question on a new page.
 5. Use only a black or blue pen.
 6. Write neatly and legibly.
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QUESTION 1: GENERAL

Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.1–1.10) in the ANSWER BOOK.

- 1.1 DPC means damp-proof concrete. 
- 1.2 A leaf is a wall that consists of two walls with a space of 50 mm between them.
- 1.3 The foundation is the solid layer of concrete, bricks or stones that is put under a building to support it.
- 1.4 When you build a cavity wall, you must make weep holes at the roof level to drain the water outside.
- 1.5 Units that you will use in lintels are the shape of the letter U.
- 1.6 If you are using hollow units that are 190 mm in height, mark the profiles at intervals of 380 mm. 
- 1.7 Bond blocks are used as lintel blocks or to form ring beams to provide space for the reinforcement.
- 1.8 A conduit is a pipe or passage through which water, gas or a set of electrical wires can pass.
- 1.9 *In situ* means something is made in a factory and brought to the site.
- 1.10 A soffit is the distance between the spring line and the highest point of the arch.


(10 × 1) [10]

QUESTION 2: CAVITY WALL CONSTRUCTION


- 2.1 List SIX places where damp-proof course (DPC) must be placed when constructing a building. (6)
- 2.2 It often happens that mortar droppings and other debris fall into the cavity.
Explain how the mortar droppings and debris can be removed from the cavity. (7)
- 2.3 Illustrate with the help of neat sketches the TWO alternative methods of installing DPC to prevent moisture from penetrating the walls. (10)
- 2.4 State FIVE advantages of a cavity wall.  (5)
- 2.5 Explain the purpose of a wall tie. (2)

[30]

QUESTION 3: BASIC MASONRY WALL CONSTRUCTION WITH HOLLOW UNITS

- 3.1 Identify SIX different types of hollow masonry units and indicate where each unit will be used  (12)
- 3.2 List EIGHT steps to finish-off or rule the mortar joints to form a concave joint. (8)
- 3.3 Explain how you will check that the measurements of the foundation footings are of correct and that the foundation is truly horizontal. (4)
- 3.4 Briefly explain how to remove stiffened mortar to keep masonry clean. (6)
- [30]**

QUESTION 4: ADVANCED MASONRY WALL CONSTRUCTION

- 4.1 List 10 terms used for parts of an arch.  (10)
- 4.2 Explain how to clean hardened mortar droppings and smears off different types of masonry without scratching the bricks or units. (4)
- 4.3 Show with the aid of a sketch, the different between *Truss-type* and *ladder-type* brick force or bed-joint reinforcement. (6)
- 4.4 List THREE types of bond block lintels. (3)
- 4.5 Explain what brick force is and describe what it is made of. (4)
- 4.6 Explain why it is not common to reinforce hollow masonry work with conventional brick force or bed-joint reinforcing. (3)
- [30]**



TOTAL: 100