



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1390(E)(A12)T
APRIL EXAMINATION

NATIONAL CERTIFICATE

QUANTITY SURVEYING N4

(2050004)

12 April 2016 (X-Paper)
09:00–13:00

REQUIREMENTS: Dimension paper (OE 8/12)
Abstract paper (OE 8/10)
Billing paper (OE 8/11)

Nonprogrammable calculators and drawing instruments may be used.

This question paper consists of 6 pages and 1 diagram sheet.

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REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
QUANTITY SURVEYING N4
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
 2. SECTION A must be answered on the dimension, abstract and billing papers.
 3. SECTION B must be answered in the ANSWER BOOK.
 4. Read ALL the questions carefully.
 5. The work must be answered according to the Standard System of Measuring Building Work.
 6. Number the answers according to the numbering system used in this question paper.
 7. Do not staple the loose pages.
 8. Do not use a red or green pen.
 9. In QUESTION 1 the word NIL must be used on the dimension paper.
 10. Write neatly and legibly.
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SECTION A**QUESTION 1**

Refer to the attached DIAGRAM SHEET.

The foundation plan and a section of an outbuilding are given (not to scale).

SPECIFICATIONS:

Clear site 1.5 m beyond the external walls.

15 MPa concrete

Brickwork in stretcher bond in 1: cement mortar

Stock bricks internally

Face bricks externally TWO courses below ground level

Depth of footing 0,730 to bottom of footing from ground level

Footing width is 600 mm.

Earth filling 200 mm thick

Assume any specification not shown.

- | | | |
|-----|---|-------------|
| 1.1 | Take off the foundation up to the underside of the surface bed. | (24) |
| 1.2 | Square, abstract, reduce and bill the earthworks only. | (16) |
| | | [40] |
| | TOTAL SECTION A: | 40 |

SECTION B**QUESTION 2**

- | | | |
|-------|---|-------------|
| 2.1 | State TWO advantages of using abbreviations in quantity surveying. | |
| 2.2 | Name TWO instances when abbreviations are not permitted. | (2 x 2) (4) |
| 2.3 | State the unit of measurement for the following quantity surveying terms: | |
| 2.3.1 | Tie beam | |
| 2.3.2 | Offset pipe | |
| 2.3.3 | Rainwater gutter | |
| 2.3.4 | Fascia board | |
| 2.3.5 | Ridge piece | |
| 2.3.6 | Steel door frame | |

- 2.3.7 Roof covering
- 2.3.8 Damp-proof course
- 2.3.9 Barge board
- 2.3.10 Rhino-board ceiling
- 2.3.11 Concrete in footings
- 2.3.12 Hardcore

(12 x ½) (6)

2.4 Sketch a neat sketch of a vertical section through the eaves of a roof and top part of a one-brick external wall.

Use the following specifications:

- 38 x 114 mm rafter and tie beam
- 38 x 114 mm wall plate
- 50 x 76 mm purlins
- Corrugated-iron roof covering
- 12 x 225 mm fascia board
- 300 mm overhang at eaves
- Plaster internally and externally
- 30° pitch

(10)
[20]

QUESTION 3

3.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (3.1.1–3.1.10) in the ANSWER BOOK.

- 3.1.1 Roof gutters and rainwater pipes shall be given in metres and descriptions shall be deemed to include jointing.
- 3.1.2 Angles, stopped ends, outlets, offsets, and shoes shall be given in number extra over.
- 3.1.3 Plaster finishes shall be given in square metres and shall be measured over the net area to be covered.

- 3.1.4 Finishes not exceeding 300 mm wide - except for treads and risers of stairs, columns, beams, troughed, ribbed and coffered work - and that flush face caused by projections and openings, shall be described as narrow widths and shall be given separately in square metres, with no distinction being made for different elements.
- 3.1.5 No deductions shall be made for openings not exceeding 0,5 m² when applying a plaster finish.
- 3.1.6 Paintwork shall generally be in square metres.
- 3.1.7 Painted profiled surfaces may be measured over a flat area stating the work has been measured on flat.
- 3.1.8 Painted gates, grills, burglar bars, screens, and balustrades may be measured over the full flat area of both sides.
- 3.1.9 Unless otherwise stated paintwork not exceeding 300 mm wide in girth and not adjoining similarly painted work, shall be given separately in metres.
- 3.1.10 The quantity surveyor pays the contractor in intermediate stages. (10 x 1) (10)
- 3.2 Give the standard abbreviations for the following terms:
- 3.2.1 Not exceeding
- 3.2.2 One-and-half brick wall
- 3.2.3 Foundations
- 3.2.4 Deduct
- 3.2.5 Cubic metres
- 3.2.6 External cement plaster
- 3.2.7 Polyvinyl acetate
- 3.2.8 Polyvinyl chloride
- 3.2.9 Knot prime and stop
- 3.2.10 Clear sheet glass (10 x 1) (10)
[20]

QUESTION 4

- 4.1 Explain the function of the *abstract*. (5)
- 4.2 Describe the function of preliminary and general items in the bill of quantities. (5)
- 4.3 Explain what a provisional sum is, and describe its purpose. (5)
- 4.4 Give the principles in the Standard System on how the following should be measured:
- 4.4.1 Excavations (2)
- 4.4.2 Carting away surplus earth (3)

[20]

TOTAL SECTION B: 60
GRAND TOTAL: 100

DIAGRAM SHEET

