



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE QUANTITY SURVEYING N4

(2050004)

**2 December 2022 (X-paper)
09:00–13:00**

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

**Nonprogrammable calculators and an unmarked copy of the
Standard System of Measuring Building Work may be used.**

This question paper consists of 6 pages and 1 addendum.

322Q1E2202

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
QUANTITY SURVEYING N4
TIME: 4 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. The use of correction fluid (Tipp-Ex) is not allowed.
 5. Start each section on a new page.
 6. Use only a black or blue pen.
 7. Write neatly and legibly.
-

SECTION A**QUESTION 1**

The ADDENDUM (attached) shows the foundation plan view and a vertical sectional view through the foundation wall of a holiday hut.

**SPECIFICATIONS:**

- Earthworks: Clear site 1,5 metres all round beyond the foundation walls
Excavated materials to be used for filling
- Masonry: 220 mm brick wall foundation built in English in 1:3 cement mortar
External facings to two courses below the GL
- Concrete: 15 MPa
- Waterproofing: Plastic damp-proof sheeting under concrete surface bed. Damp-proof course membrane in brick walls

Measure all the work to be carried out to the underside of the concrete surface bed.
Measure strictly according to the instructions below.

- | | | | | |
|-----|-------|--|---------|-------------|
| 1.1 | 1.1.1 | Calculate the dimensions of the area to be cleared. | | (4) |
| | 1.1.2 | Take off the site clearance. | | (3) |
| 1.2 | 1.2.1 | Calculate the centre line of the foundation footing. | | |
| | 1.2.2 | Take off the items for the foundation trenches. | | |
| | 1.2.3 | Take off the risk of collapse. | | |
| | 1.2.4 | Take off the concrete footing. | | |
| | 1.2.5 | Take off the foundation brick wall. | | |
| | 1.2.6 | Take off the backfilling. | (6 × 3) | (18) |
| 1.3 | 1.3.1 | Calculate the external perimeter of the brick wall. | | |
| | 1.3.2 | Take off the external facings. | (2 × 3) | (6) |
| 1.4 | | Take off the hard-core filling. | | (3) |
| 1.5 | | Take off the damp-proof sheeting. | | (3) |
| 1.6 | | Take off the damp-proof course in the brick walls. | | (3) |
| | | | | [40] |



QUESTION 2

Do the working up process on the EARTHWORKS items.

- | | | |
|-----|----------|-------------|
| 2.1 | Square | (3) |
| 2.2 | Abstract | (3) |
| 2.3 | Bill | (4) |
| | | [10] |



TOTAL SECTION A: 50

SECTION B**QUESTION 3**

3.1 Write down the following abbreviations in full:

3.1.1 D.P.M.

3.1.2 E.o.o.b.

3.1.3 E.c.p.

3.1.4 l.c.p.

3.1.5 o/a

(5 × 1) (5)

3.2 State the unit of measurement of the following:

3.2.1 Site clearance

3.2.2 Skirting

3.2.3 One brick wall

3.2.4 Damp-proof course

3.2.5 Hard core filling

(5 × 1) (5)
[10]

**QUESTION 4**

Describe FIVE functions of a quantity surveyor.

(5 × 2) **[10]**

QUESTION 5

Explain the following quantity surveying terminology:

5.1 Casting up

5.2 Reducing

5.3 Checking

5.4 Taking off

5.5 Checklist

(5 × 2) **[10]**

QUESTION 6

Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (6.1–6.10) in the ANSWER BOOK.

6.1 The architect prepares the bill of quantities.

6.2 The bill of quantities forms the basis for the tenders that contractors submit.

6.3 During the construction phase the contractor can use the bill of quantities to order the correct materials.

6.4 An advantage of a bill of quantities is that it can be used for cost control and cost planning.

6.5 The bill of quantities is prepared during the concept and feasibility stage.

6.6 Preambles do not provide rates and prices and do not affect the contractor's costs.

6.7 The final summary is where each section in the bill of quantities is summarised together with the total quantities for each section.

6.8 Taking off involves squaring the measured dimensions and transferring the lengths, areas and volumes to the abstract for abstracting.

6.9 The process during which all the items, including their quantities, are rewritten on billing paper is called billing.

6.10 Billing paper is used for abstracting.

(10 × 1) **[10]**

QUESTION 7

7.1 Briefly explain the following terms:



7.1.1 Cost estimation

(3)

7.1.2 Productivity rate

(2)

7.1.3 Earnings

(2)

7.2 List THREE types of profit.

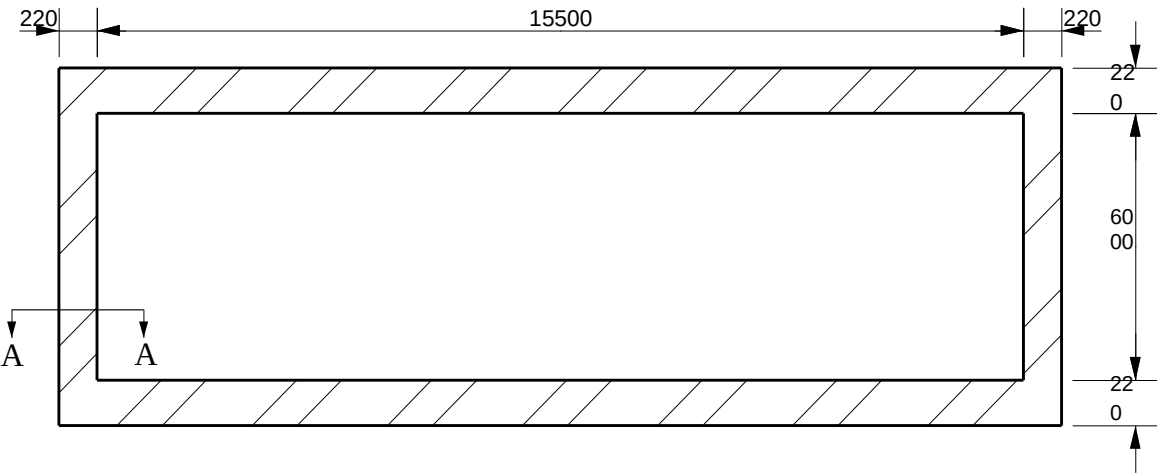
(3)

[10]

TOTAL SECTION B: 50
GRAND TOTAL: 100



ADDENDUM 1



FOUNDATION PLAN

