



# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

T1460(E)(A13)T

## **NATIONAL CERTIFICATE QUANTITY SURVEYING N6**

(2050026)

**13 April 2018 (X-Paper)  
09:00–13:00**

**REQUIREMENTS:** Dimension paper (OE 8/12)  
Abstract paper (OE 8/10) not required  
Billing paper (OE 8/11) not required

Calculators may be used.

**Each candidate will need his/her own unmarked STANDARD SYSTEM OF  
MEASURING BUILDING WORK.**

**This question paper consists of 4 pages and 4 addenda.**

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
NATIONAL CERTIFICATE  
QUANTITY SURVEYING N6  
TIME: 4 HOURS  
MARKS: 100

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**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. Red ink is not allowed.
  5. QUESTION 1 must be done in the ANSWER BOOK.
  6. ALL the work for QUESTIONS 2 to 4 must be done on the appropriate sheets provided.
  7. ALL loose sheets must be numbered correctly and placed in sequence inside the ANSWER BOOK.
  8. Candidates must strictly apply the rules and methods as stipulated in the Standard System Of Measuring Building Work.
  9. Write neatly and legibly.
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**QUESTION 1**

- 1.1 State in which unit of measurement each of the following items should be measured:
- 1.1.1 Stripping of vegetable soil
  - 1.1.2 Working space
  - 1.1.3 Open-face excavations
  - 1.1.4 Formwork to risers
  - 1.1.5 Fabric reinforcement
  - 1.1.6 Brickwork in closing of cavities
  - 1.1.7 Bagging
  - 1.1.8 Structural timbers
- (8 × 1) (8)
- 1.2 Write explanatory notes on:
- 1.2.1 Provisional quantities (5)
  - 1.2.2 Nominated subcontractor (5)
- 1.3 Many people use and read the bills of quantities during the course of a building project. It is therefore very important that the quantity surveyor pays special attention to the presentation of these bills.
- List the basic principles a quantity surveyor should adhere to during the preparation of the bills of quantities. (7)
- [25]**

**QUESTION 2**

ADDENDUM A (attached) shows a section and a schedule of augered reinforced concrete piles. Consult your Standard System of Measuring Building Work and measure only the items as listed below.

**SPECIFICATIONS:**

- Earthworks in firm ground
- 25 MPa concrete

**Measuring list:**

- Establishment
- Setting up
- Reinforcement
- Testing
- Auger drilling
- Under-reaming for enlarged feet
- Concrete in piles
- Concrete bulbs
- Carting away of excavated materials

**[25]**

**QUESTION 3**

ADDENDUM D (attached) shows the front, vertical and horizontal sectional views of a timber casement window with two side lights and one fixed light.

**SPECIFICATIONS:**

- All the timber components to be of meranti timber.
- Prime backs of timber frame and apply two coats clear varnish to exposed timber areas.
- 3 mm thick clear float glass.
- 63 mm brass concealed hinge. Two per casement.
- 300 mm brass stay and pegs. One per casement.

Two of these windows are required.

Measure all the timbers, paint, glazing and ironmongery for these windows.

**[25]****QUESTION 4**

ADDENDUM B (attached) shows the plan and vertical sectional view of a garden brick wall with a door opening as the entrance.

ADDENDUM C (attached) shows the measurements of the brick wall and the adjustments for the entrance opening.

Measure the variation order as per the architect's site instruction.

Before any work was carried out, a site instruction was issued by the architect requesting the following variation order:

The face brick finish to the wall to be replaced by a plaster and paint finish.

**SPECIFICATIONS:**

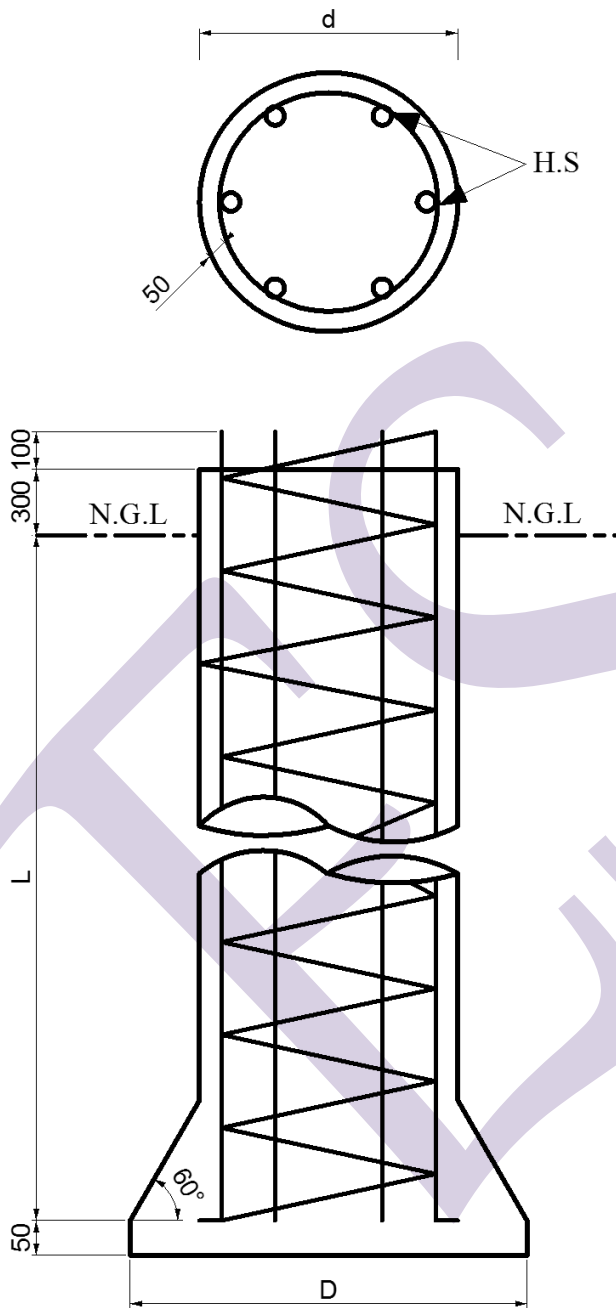
- Plaster : 15 mm thick 1 : 4 cement mortar mix  
 Painting : One coat filler coat  
           Two coats pva paint

Measure according to the following:

4.1	Omissions	(9)
4.2	Additions	(16)
		<b>[25]</b>

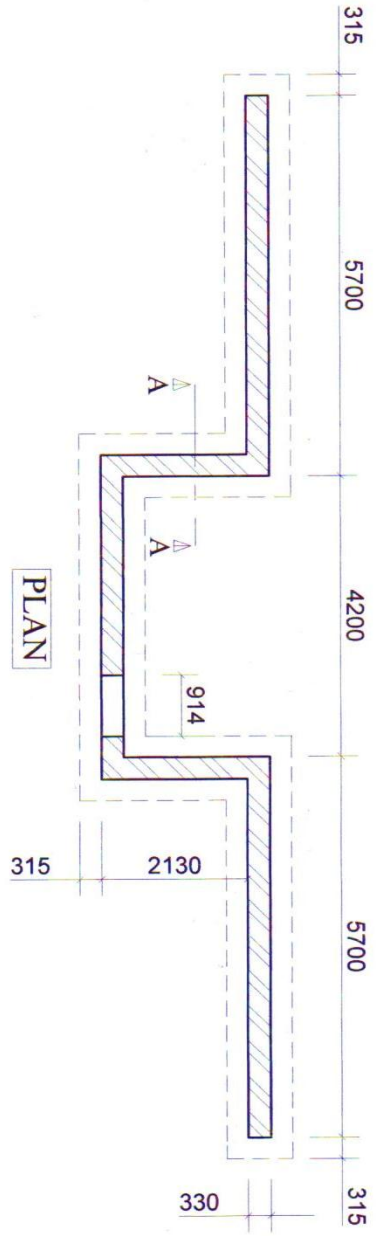
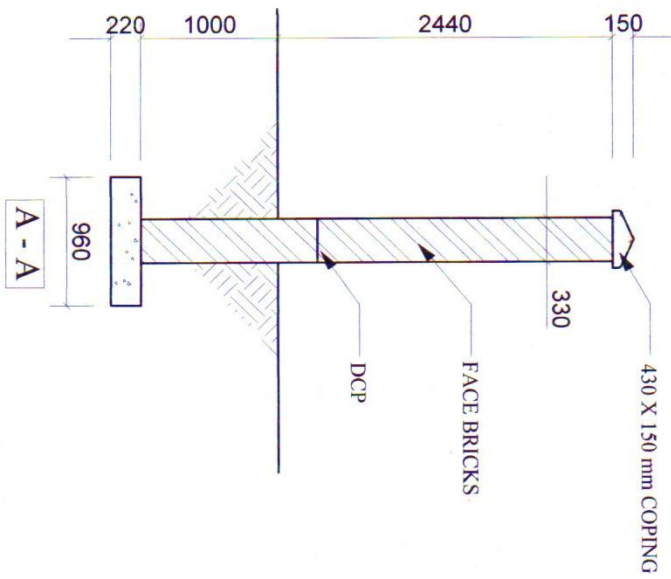
**TOTAL: 100**

**ADDENDUM A**



VERW REF	AANTAL NUMBER	d	D	L	HS dia.	LENGTE HS LENGTH
A	4	450	755	19.50	12	20.00
B	5	610	970	24.00	16	24.00

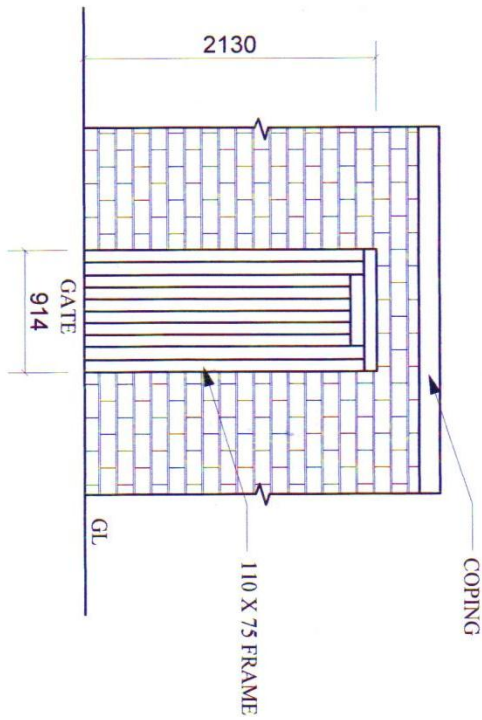
**ADDENDUM B**



SCALE 1:100

PLAN

SCALE 1:50



ADDENDUM C

	19,86 3,44	<p>330 mm thick bk. wl.</p> <p><u>Length</u>  <math>2 \times 5,700 = 11,400</math>  4,200  <math>2 \times 2,130 = 4,260</math>  <u>19,860</u></p> <p><u>Height</u>  1,000  <u>2,440</u>  <u>3,440 m</u></p>	2	0,91 2,13	<p>Ddt.</p> <p>E.o ord. bks. for fcgs.</p>
	19,86 2,59			2	
2	0,33 2,59	<p>E.o. Bkwrk. for fcgs.</p> <p><u>Height</u>  2,440  <math>2 \times 0,75</math> <u>0,150</u>  <u>2,590 m</u></p>	2	0,06 0,91	<p>Ditto, but to head</p>
	19,86	<p>430 x 150 mm P.c. conc. lintel.</p>	3	19,86	<p>Bk. reinf. over opning to suite 330 mm thick wl.</p>
	0,91 2,13	<p><u>Adjustments</u></p> <p>Ddt.</p> <p>330 mm thick bk. wl. a.b.</p>			

**ADDENDUM D**

