higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1450(**E**)(A6)T

NATIONAL CERTIFICATE

QUANTITY SURVEYING N5

(2050015)

6 August 2018 (X-Paper)
09:00–13:00

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

Candidates may use their own unmarked Standard System of Measuring Building Work.

Calculators may be used.

This question paper consists of 6 pages and 2 addenda.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
QUANTITY SURVEYING N5
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. ALL the work in SECTION A must be done on the appropriate paper.
4. ALL the work in SECTION B must be done in the ANSWER BOOK.
5. ALL work must be answered according to the Standard System of Measuring Builders Work.
6. Number the answers according to the numbering system used in this question paper.
7. Use only BLUE or BLACK ink.
8. ALL the loose sheets must be numbered correctly and placed in sequence inside the ANSWER BOOK.
9. Write neatly and legibly.

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SECTION A

ADDENDUM A (attached) shows a front view and vertical and horizontal sectional views of a purpose-made solid timber door and frame to be built in a 220 mm thick external wall.

The specifications for the different trades are as follows:

Concrete:	15 MPa
Masonry:	Ordinary bricks built in stretcher bond Face brick to external walls. Use 75 + 10 mm for brick course 1 : 4 cement mortar 114 × 75 mm precast concrete lintel Soldier arch externally over door opening
Plastering:	19 mm thick plaster to internal vertical wall 30 mm thick cement mortar screed
Carpentry and joinery:	2 032 × 1 100 × 44 mm framed, ledged, braced and batten meranti timber door 75 mm meranti timber skirting
Painting:	TWO coats PVA acrylic PVA paint to plaster walls TWO coats clear varnish to timber surfaces
Ironmongery:	Three-lever mortise lock Fixing lugs (THREE per side) THREE 100 mm brass hinges
Floor covering:	Ceramic floor-tile covering

QUESTION 1

Measure the items for the door and frame strictly according to the following measuring list:

- Door and varnishing
- Lock
- Hinges
- Timber door frame and varnishing
- Fixing lugs
- 150 mm wide damp-proof sheeting around timber door frame
- 10 mm diameter mild steel dowels **[20]**

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QUESTION 2

ALL the work to the superstructure was measured and no allowances were made for openings.

Create an opening to insert this door and clearly indicate the items to be omitted and to be deducted.

Use the following measuring list as a guide:

- 220 mm thick wall and facings
- Vertical plaster
- Paint to walls
- Timber skirting
- Concrete in threshold
- Screed and floor tiles in threshold
- Facings, plaster and paint to reveals
- Precast concrete lintel in opening head
- Soldier arch over the opening

[20]

QUESTION 3

Prepare a tender document for the carpentry and joinery trade only.

Clearly show ALL the steps under the following headings:

- Squaring (5)
- Abstracting (7)
- Billing (8)

[20]

TOTAL SECTION A: 60

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SECTION B

Answer ALL the questions in SECTION B in the ANSWER BOOK.

QUESTION 4

Prepare the interim valuation for the SEVENTH partial payment to the contractor.

ALL calculated amounts should be rounded off to the nearest R10.
The summary of the bills of quantities is shown on ADDENDUM B (attached).

- The contract period is 12 months.
- 100% of the earthwork is complete.
- 95% of the concrete work is complete.
- 80% of the masonry is complete.
- The value of unfixed material on site is R12 000,00.
- Calculated value of increased costs to date is R155 320,00.
- A retention fee of 10% is withheld.
- The contractor was paid a total amount of R755 324,00 to date. **[10]**

QUESTION 5

5.1 Define a *drawing register*. (1)

5.2 State FOUR information points recorded in a drawing register. (4)

5.3 Define a *query list.* (2)

5.4 State THREE uses of a query list. (3)
[10]

QUESTION 6

6.1 State TWO purposes of the bills of quantities. (2)

6.2 Name the THREE basic steps when a bill of quantities is prepared. (3)

6.3 Briefly explain the difference between a *taking-off list* and a *measuring list*. (2)

6.4 Give THREE reasons why preambles are used. (3)
[10]

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QUESTION 7

State the quantity surveying term for each of the following actions:

7.1 Collections done prior to the 'taking-off' procedure

7.2 Gathering together of similar items during abstracting

7.3 Referencing done during 'taking-off'

7.4 Adding similar items during 'taking-off'

7.5 The procedure when contractors compete for a contract

7.6 Rounding off decimal quantities to whole quantities

7.7 Calculations done during 'taking-off'

7.8 The document drawn up by the quantity surveyor for payments

7.9 The document issued by the architect for changes to the contract

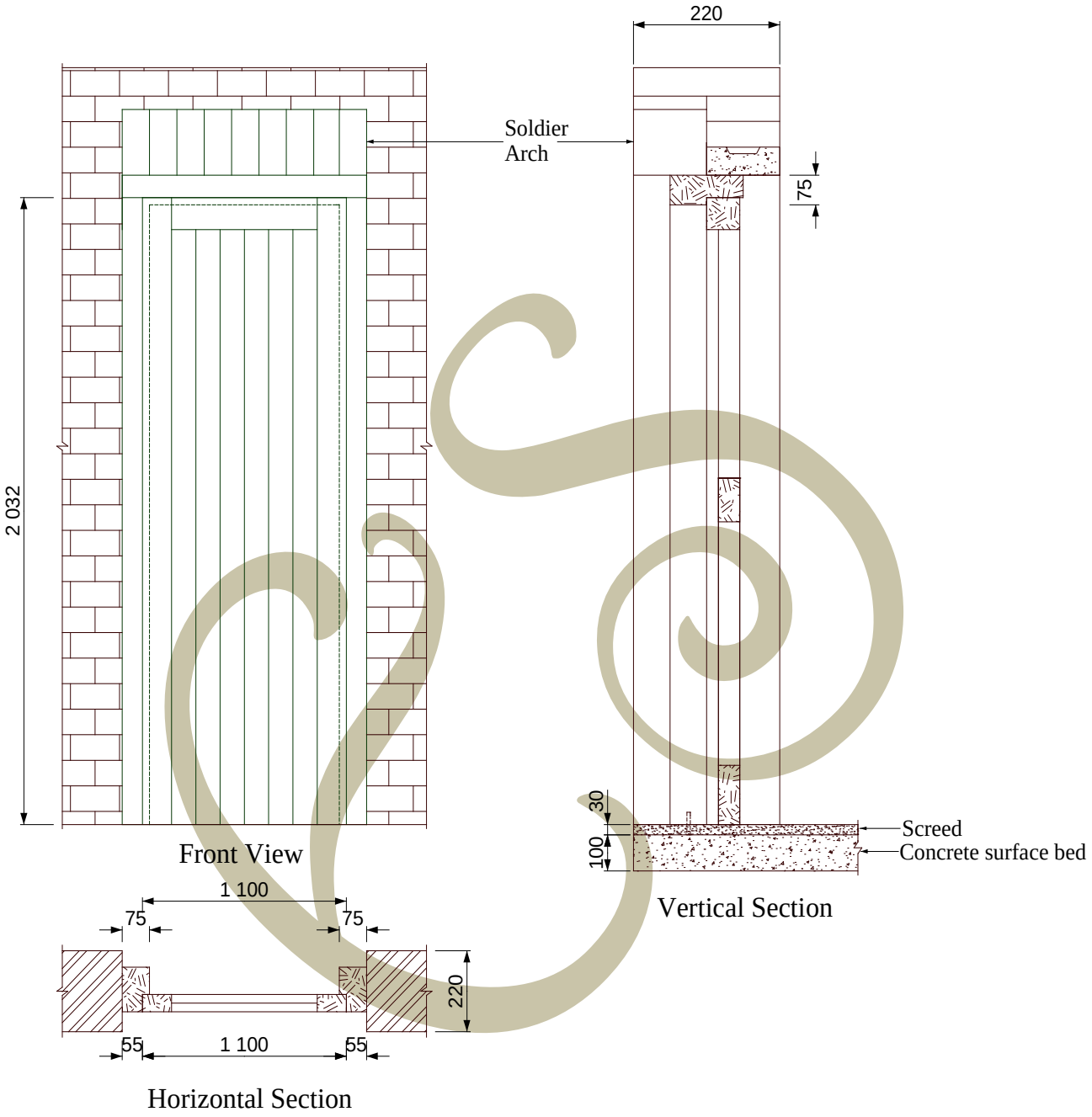
7.10 The document issued to the client to certify monthly payments to the contractor

(10 × 1) **[10]**

TOTAL SECTION B: 40
GRAND TOTAL: 100

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ADDENDUM A



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ADDENDUM B

BILLS OF QUANTITIES

SUMMARY

1.	Preliminaries	R125 300,00
2.	Earthworks	R 99 510,00
3.	Concrete, formwork and reinforcement	R457 678,00
4.	Masonry	R220 300,00
5.	Waterproofing	R17 453,00
6.	Roof covering	R205 321,00
7.	Carpentry and joinery	R60 443,00
8.	Ceilings	R25 308,00
9.	Floor coverings	R41 523,00
10.	Ironmongery	R6 789,00
11.	Metalwork	R42 834,00
12.	Plastering	R20 318,00
13.	Plumbing and drainage	R45 756,00
14.	Glazing	R15 909,00
15.	Painting	R45 778,00
16.	External works	R62 155,00
		R1 492 375,00

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