



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1400(E)(A6)T
APRIL EXAMINATION

NATIONAL CERTIFICATE

QUANTITY SURVEYING N5

(2050015)

6 April 2016 (X-Paper)
09:00–13:00

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

Candidates require their own unmarked STANDARD SYSTEM OF MEASURING BUILDING WORK.

Calculators may be used.

This question paper consists of 5 pages and 2 addenda.

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. Number the answers correctly according to the numbering system used in this question paper.
 4. ALL the work in SECTION A must be done on the appropriate paper.
 5. ALL the work in SECTION B must be done in the ANSWER BOOK.
 6. Use only BLUE or BLACK ink.
 7. Write neatly and legibly.
-

SECTION A

Use dimension, abstract and billing papers to answer the questions in SECTION A.

ADDENDUM A (attached) shows the plan and sectional view of a reinforced concrete basement.

The specifications are as follows.

- Earthworks:
- The site is to be cleared to an area that is 3 metres away from the basement wall.
 - Excavation is in ordinary earth and is to be partly filled up and rammed.
 - Excess material is to be carted away to a dumping site 2 kilometres from the building site.
- Concrete:
- 25 MPa
- Reinforcement:
- Allow a provisional amount of R 25 000,00
- Brickwork:
- Local stock bricks
 - 1 : 4 cement : mortar

QUESTION 1

Carefully study the drawings and specifications provided in ADDENDUM A (attached) and measure the EARTHWORKS items using the measuring list provided below.

- Site clearance
- Bulk excavation for the basement hole
- Risk of collapse
- Trench excavation for the concrete thickening
- Backfilling

[20]

QUESTION 2

Measure all the CONCRETE, FORMWORK, REINFORCEMENT and MASONRY items using the measuring list provided below.

- 20 MPa reinforced concrete base and thickening
- 30 MPa reinforced concrete floor and vertical walls
- Formwork to concrete walls
- Provisional sum for the provision of steel rod reinforcement
- 110 mm thick brick skin walls

[20]

QUESTION 3

Draw up a typical tender document for the provision of the following STEEL ROD REINFORCEMENTS only. Clearly show all the steps on the appropriate additional sheets that are provided.

- Squaring
- Abstracting
- Billing

[20]**TOTAL SECTION A: 60****SECTION B**

Use the ANSWER BOOK to answer the questions in SECTION B.

QUESTION 4

In many contract documents contractors' payments are subject to a retention fund clause.

Explain fully what a retention fund is and how it is implemented to work to the benefit of the client as well as the contractor and sub-contractors.

[10]**QUESTION 5**

Prepare the final account for the shopping centre and calculate the final payment due to the contractor based on the relevant items in the summary of the bill of quantities as set out on ADDENDUM B (attached).

The following adjustments need to be made.

Prime cost and provisional sums	R 120 450,00
Net extra on variation orders	R 27 678,00
Re-measurement of excavations	R 96 678,89
Re-measurement of plumbing & drainage	R 111 507,99
Re-measurement of site works	R 130 456,96

The increased costs amount to R 95 785,45 and the previously received payments amount to R 1 006 345,00.

[15]

QUESTION 6

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (6.1–6.5) in the ANSWER BOOK.

- 6.1 Omissions are variation orders.
- 6.2 The architect must sign the variation orders.
- 6.3 Day works are work done on day-to-day basis.
- 6.4 The term used in writing to keep from repeating long descriptions which are similar to the previous description is *ditto*.
- 6.5 The interim certificate that indicates the amount due and payable by the client to the contractor is issued by the architect.

(5 × 1)

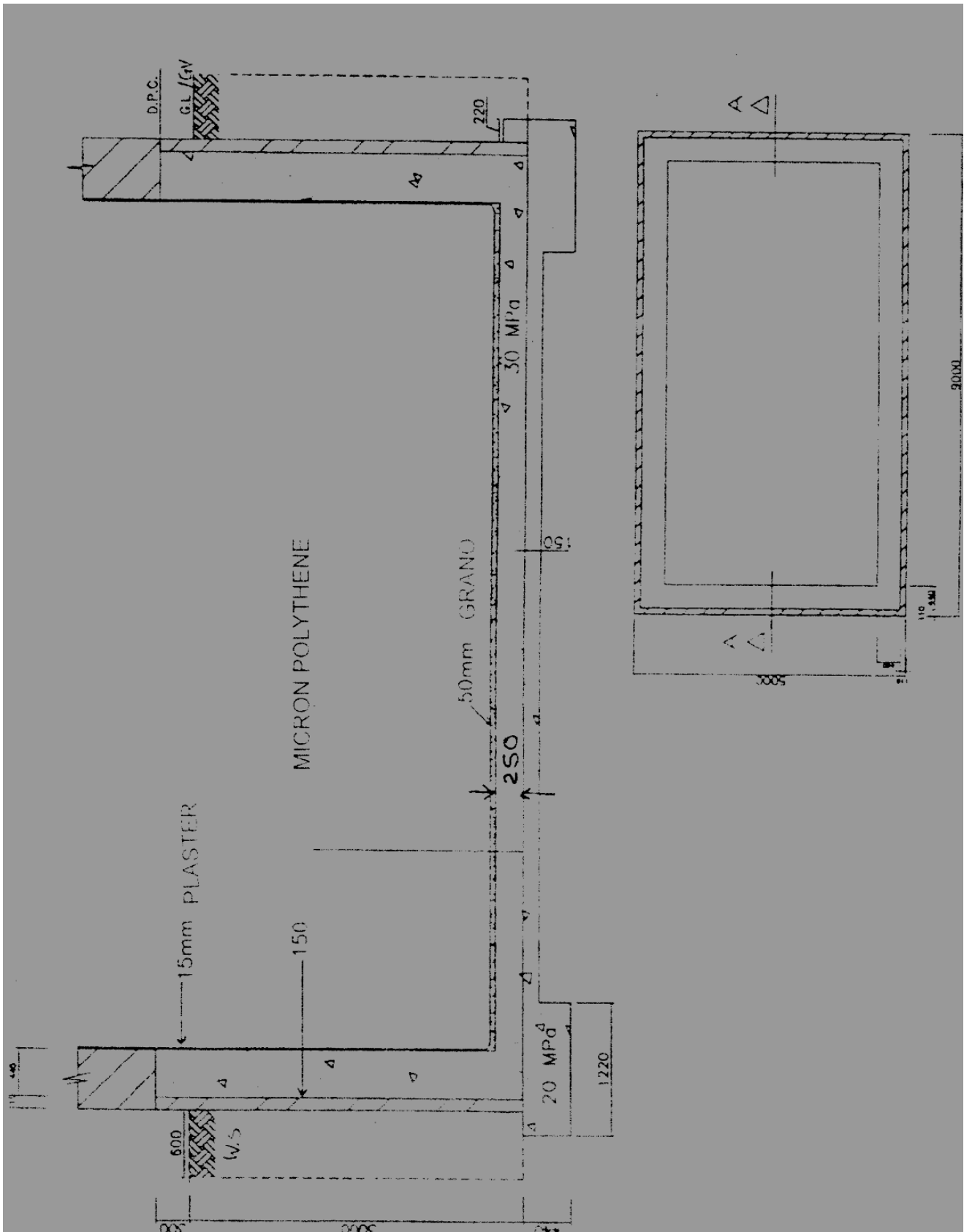
[5]**QUESTION 7**

Draw up a typical measuring list that a taker-off will use when measuring a solid timber door and frame to be built into a 220 mm thick wall that is faced externally and plastered and painted internally.

[10]

TOTAL SECTION B: 40
GRAND TOTAL: 100

ADDENDUM A



ADDENDUM B

**SHOPPING CENTRE
BILL OF QUANTITIES
SUMMARY**

Bill No.	Description	Page	Amount
1	Preliminary and general	80	R 70 575,00
2	Foundations	96	R 101 241,33
3	Concrete, formwork and reinforcement	100	R 90 500,25
4	Masonry	112	R 126 667,84
5	Waterproofing	115	R 10 345,99
6	Carpentry and joinery	123	R 67 546,00
7	Floor coverings	154	R 49 699,98
8	Ironmongery	162	R 6 700,00
9	Metalwork	168	R 72 678,78
10	Plastering	175	R 35 765,00
11	Tiling	185	R 4 587,00
12	Plumbing and drainage	190	R 89 692,99
13	Glazing	198	R 45 034,99
14	Painting	203	R 23 435,87
15	Site works	213	R 132 435,96
16	Prime cost and provisional sums	220	R 125 259,45
17	Contingency sum		<u>R 5 500,00</u>
	FINAL TENDER PRICE		<u>R 1 007 937,44</u>