higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T1450**(E)**(A11)T

NATIONAL CERTIFICATE

QUANTITY SURVEYING N5

(2050015)

11 April 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. Number the answers according to the numbering system used in this question paper.
4. Start each question on a new page.
5. Red ink is NOT allowed.
6. ALL the work in SECTION A must be done on the appropriate paper.
7. ALL the work in SECTION B must be done in the ANSWER BOOK.
8. All loose sheets must be numbered correctly and put in sequence inside the ANSWER BOOK.
9. Candidates must strictly apply the rules and methods as stipulated in the Standard System of Measuring Building Work.
10. Candidates must insert their EXAMINATION NUMBER on each loose sheet handed in.
11. Write neatly and legibly.

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SECTION A

ADDENDUM B (attached) shows a horizontal plan view and a vertical sectional view through the foundation of a dwelling. ALL the measured items (the drawings and the specifications) must be done strictly in accordance with the standard system of measuring building work.

SPECIFICATIONS

Earthwork:	Clean the building site 3 m beyond the external brick walls. Excavated soil must be used for filling.
Concrete:	15 MPa
Masonry:	Ordinary brickwork built in 1 : 4 cement mortar. Face brickwork externally to a depth of TWO brick courses below ground level (one brick course = 75 + 10 mm).
Waterproofing:	Damp-proof sheeting reference must be laid between the hardcore filling and the concrete surface bed.

NOTE: Marks are allocated for waste calculations prior to the taking-off process or for side casts done during the taking-off process.

Calculated dimensions may be used in more than ONE question if applicable. Marks will be allocated only ONCE for a calculation.

This section must be done on the dimension, abstract or billing paper.

QUESTION 1

Measure ALL the earthwork items using the following measuring list:

1.1	Site clearance	(2)
1.2	Excavations	(6)
1.3	Risk of collapse	(4)
1.4	Water	(2)
1.5	Backfilling	(3)
1.6	Hardcore	(3)
		[20]

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QUESTION 2

Measure ALL the concrete work items using the following measuring list:

2.1	600 × 250 mm concrete strip foundation	(3)
2.2	400 × 250 mm concrete strip foundation	(3)
2.3	100 mm thick concrete surface bed	(4)
		[10]

QUESTION 3

Measure ALL the masonry items using the following measuring list:

3.1	220 mm thick foundation walls	(3)
3.2	110 mm thick foundation walls	(3)
3.3	External facing	(2)
3.4	Damp-proof sheeting	(2)
		[10]

QUESTION 4

Prepare a bill of quantities for the masonry trade with reference to each of the following activities only:

4.1	Squaring	(6)
4.2	Abstracting	(7)
4.3	Billing	(7)
		[20]

TOTAL SECTION A: 60

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SECTION B

This section must be done in the ANSWER BOOK.

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 bills of quantities as set out on ADDENDUM A (attached).

The following adjustments need to be made:

- Prime cost and provisional sums = R160 000,00
- Net extra on variation orders = R40 678,55
- Remeasurement of foundations = R75 978,89
- Remeasurement of plumbing and drainage = R105 587,79
- Remeasurement of site works = R125 440,60
- Increased cost = R100 785,35
- Payments previously received = R1 106 345,00 **[15]**

QUESTION 6

Contingencies is a term used in the bill of quantities to make provision for changes to the original contract.

Explain the steps to be taken to establish the financial implication for each of the following variation orders:

6.1 The client requests that work already executed be demolished and replaced by new work.

6.2 The client requests that work that cannot be related to measured work in the original bill of quantities be executed, which results in the extension of the contract period.

6.3 Work done on day works.

(3 × 5) **[15]**

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QUESTION 7

7.1 Give the main reason for a client appointing a quantity surveyor. (1)

7.2 State THREE main duties a quantity surveyor must perform that will give a client financial peace of mind. (3)

7.3 At the end of the project, the quantity surveyor must prepare a final account giving a full breakdown of the financial state of the project.

State SIX areas the quantity surveyor must consider to prepare the final account. (6)
[10]

TOTAL SECTION B: 40
GRAND TOTAL: 100

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ADDENDUM A

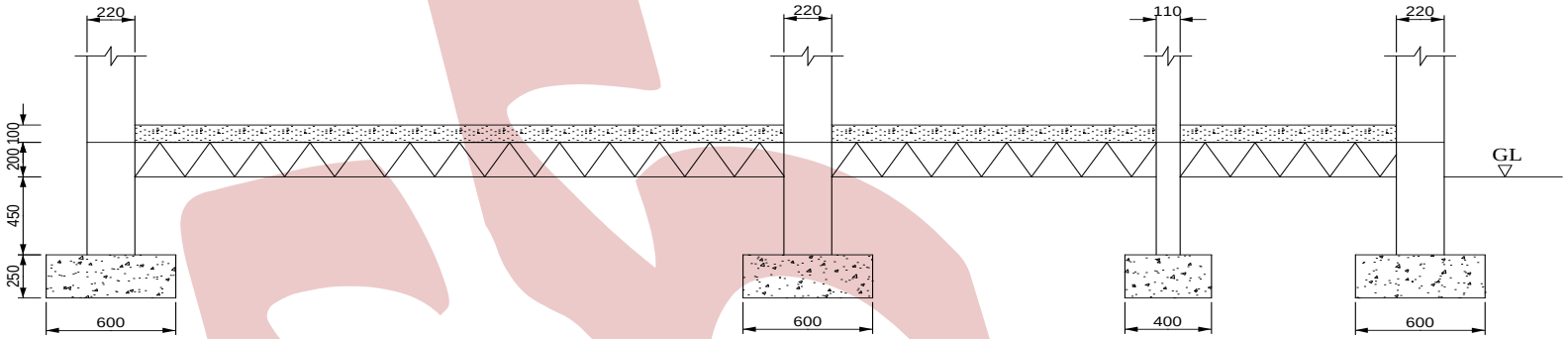
SHOPPING CENTRE

FINAL SUMMARY

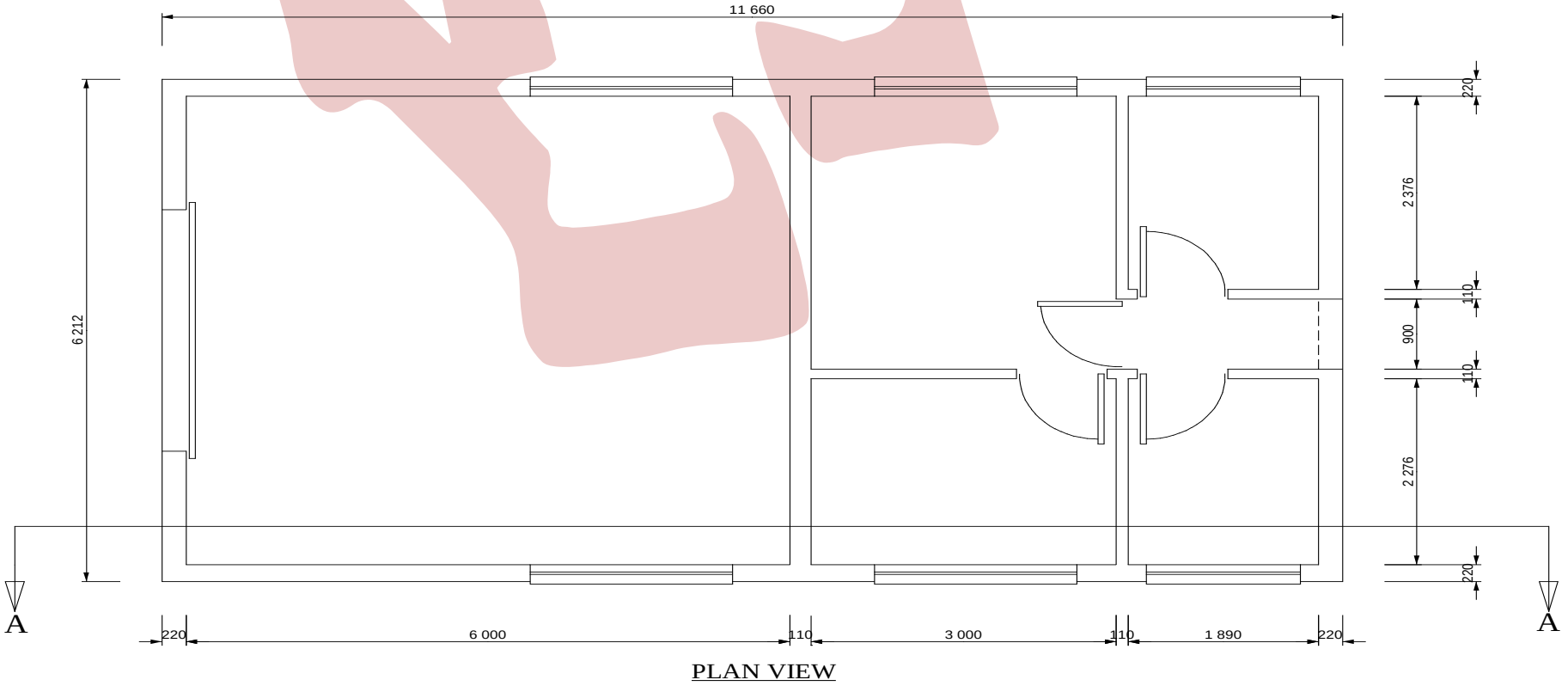
Bill no	Description	Page	Amount
1.	Preliminary and general	80	R88 575,00
2.	Foundations	96	R121 241,33
3.	Concrete, formwork and reinforcement	100	R90 500,25
4.	Masonry	112	R126 667,84
5.	Waterproofing	115	R10 345,99
6.	Carpentry and joinery	123	R77 546,00
7.	Floor coverings	154	R49 699,98
8.	Ironmongery	162	R6 700,00
9.	Metalwork	168	R72 678,78
10.	Plastering	175	R45 765,00
11.	Tiling	185	R4 587,00
12.	Plumbing and drainage	190	R89 692,99
13.	Glazing	198	R45 034,99
14.	Painting	203	R23 435,87
15.	Site work	213	R132 435,96
16.	Prime cost and provisional sums	220	R135 259,45
17.	Contingency sum		R55 500,00
	FINAL TENDER PRICE		R1 175 666,43

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ADDENDUM B



SECTION A-A



PLAN VIEW

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