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higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

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AUGUST 2010

NATIONAL CERTIFICATE

QUANTITY SURVEYING N5

(2050015)

30 July (X-Paper)
09:00 – 13:00

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

The candidate can use his/her own umarked STANDARD SYSTEM OF MEASURING BUILDING WORK.

Calculators may be used.

This question paper consists 5 pages, 1 annexure and 1 diagram sheet.

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 AL the questions.
2. Read ALL the questions carefully.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Red ink is NOT allowed.
5. ALL the work in SECTION A must be done on the appropriate paper.
6. ALL the work in SECTION B must be done in the ANSWER BOOK.
7. Full marks = 100%.
8. Write neatly and legibly.

SECTION A

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

On DIAGRAM SHEET 1 (attached), the plan and section of a dwelling are shown.

SPECIFICATIONS

Brickwork:	Ordinary bricks built in stretcher bond in 1:4 cement mortar Facings externally Beam filling heights are 164 mm externally and 227 mm internally.
Carpentry and joinery:	38 mm x 114 mm sawn South African pine timber wall plate, treated carbolinium oil before fixing 38 mm x 114 mm nailed trusses spaced 700 mm apart 38 mm x 45 mm tile battens 25 mm x 280 mm wrought South African pine timber fascia and barge boards 100 mm overhang at gables
Roof covering:	Marseilles tiles with matching ridge and gable end stopped ends Insulation sheeting under tiling battens
Plumbing and drainage:	75 mm x 110 mm PVC gutter and outlets 75 mm diameter down pipe, swan neck and shoe

Refer to DIAGRAM SHEET 1 (attached) and specifications and measure the following work to be done in the roof construction:

QUESTION 1: CARPENTRY AND JOINERY

1.1	The wall plate and treatment	(5)
1.2	Calculate the amount of trusses	(3)
1.3	All the timber trusses	(10)
1.4	Planing of the timber rafter ends	(2)
		[20]

QUESTION 2: BRICKWORK

2.1 The beam filling on both sides (3)

2.2 The brickwork in the gable ends (4)

2.3 The external facing of the brickwork (3)
[10]

QUESTION 3: RAIN WATER GOODS

3.1 The gutters, outlets and stopped ends (5)

3.2 The down pipes, swan necks and shoes (5)
[10]

QUESTION 4: WORKING UP

You are required to present a bill for the rainwater goods.

Do the following activities:

4.1 Square all the items in QUESTION 3 (5)

4.2 Abstract all the items in QUESTION 3 (7)

4.3 Draw up the bills for the items in QUESTION 3 (8)
[20]

TOTAL SECTION A: 60

SECTION B

Use only the ANSWER BOOK to answer the question in SECTION B.

QUESTION 5

5.1 Name any FIVE services a quantity surveyor provides to the client. (5)

5.2 Name FIVE uses of the bills of quantities. (5)
[10]

QUESTION 6

State the TRADE and the UNIT of measurement laid down by the Standard System how the following should be measured:

6.1 6.1.1 Working space (2)

6.1.2 Painting of frames (2)

Explain the following terms:

6.2 6.2.1 Variation order (3)

6.2.2 Site instruction (3)
[10]

QUESTION 7: FINAL ACCOUNT

ANNEXURE A (attached), shows the draft of a final account for a shopping centre as prepared by the quantity surveyor. Study the contents and answer the following questions:

7.1 What is the original contract amount of the shopping centre?

7.2 What is the revised contract amount of the shopping centre?

7.3 What is original tender amount?

7.4 What is the amount allowed for variations to the original contract?

7.5 What is the total value of the calculated variations?

7.6 What is the total value to be paid to the nominated sub-contractors?

7.7 Why is the contingency sum subtracted?

7.8 What is the total value for savings?

7.9 What is the total value for extras?

7.10 What is the value of the final payment to the contractor? **[10]**

QUESTION 8

List TEN facts that will fully explain the working of the retention fund. **[10]**

TOTAL SECTION B: 40
GRAND TOTAL: 100

ANNEXURE A

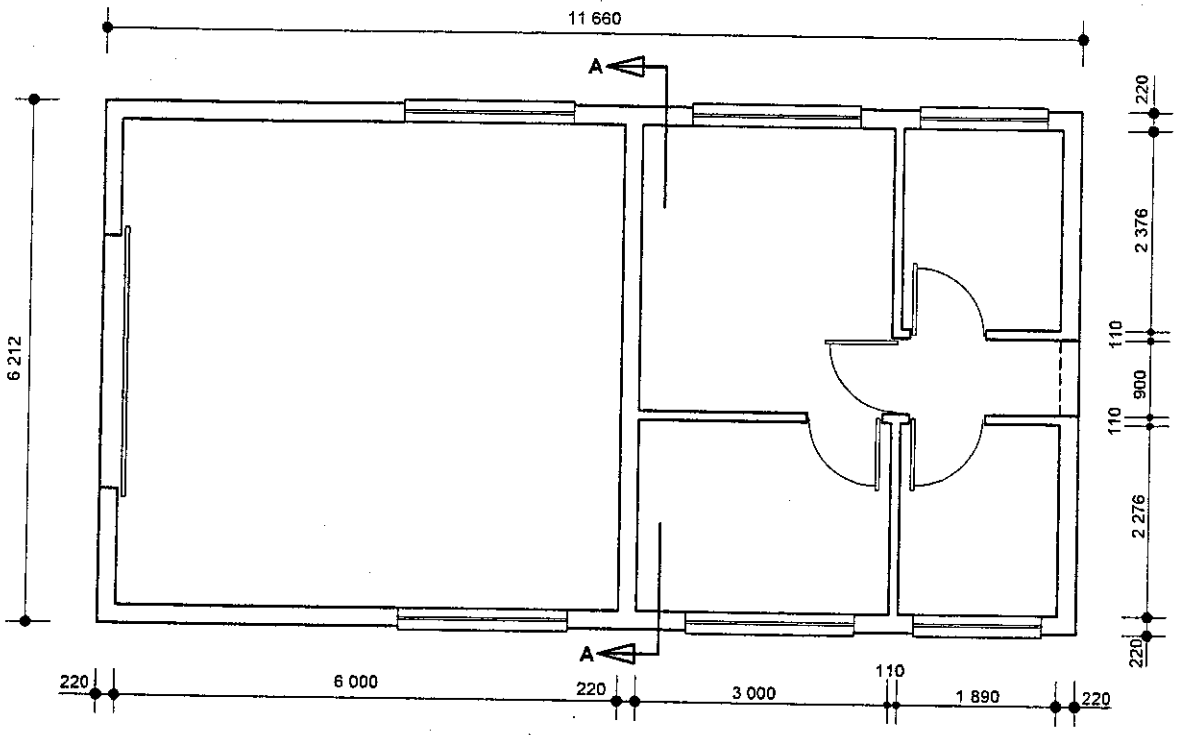
SHOPPING CENTRE

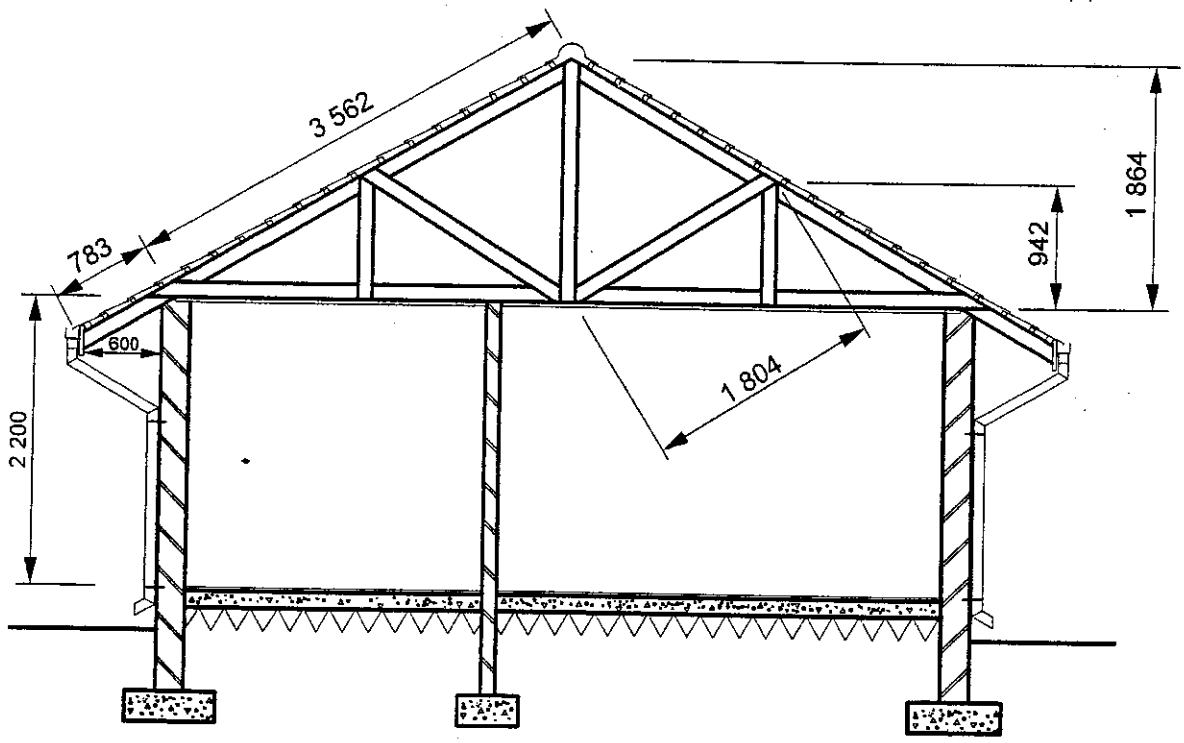
FINAL ACCOUNT SUMMARY

Original accepted tender:				R 1 150 140,00
Less contingencies:				R 35 000,00
				R 1 115 140,00
LESS: Savings on Provisional Bills:				
1) Foundations:	Omit	140 251,55		
	Add	125 354.10	14 897,45	
2) Masonry:	Omit	165 220,64		
	Add	154 670,88	10 549,76	
3) Provisional sums:	Omit	170 500,00		
	Add	166 355,25	4 144,75	R 29 591,96
				R 1 085 548,04
ADD: Extras on Provisional Bills:				
1) Plumbing and Drainage:	Add	99 510,66		
	Omit	112 315,25	12 804,59	
2) Increased costs:			75 220,88	
				R 113 181,38
3) Variation orders:			25 155,91	
TOTAL COST OF CONTRACT				R 1 198 729,42
LESS: Payments previously made to contractor:				R 1 110 440,00
Full and final payment due to contractor				R 88 289,42

DIAGRAM SHEET 1

Plan view





Section A - A