



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
QUANTITY SURVEYING N5
(2050015)

21 April 2021 (X-paper)
09:00–13:00

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

**Candidates will require their own unmarked Standard System of
Measuring Building Work.**

Calculators may be used.

This question paper consists of 4 pages and 2 addenda.

287Q1A2121

**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. QUESTIONS 1 must be answered in the ANSWERBOOK.
 4. QUESTIONS 2,3 and 4 must be answered on the paper provided.
 5. Number the answers according to the numbering system used in this question paper.
 6. Loose sheets must be placed in the correct order in the back of the ANSWER BOOK. Do NOT use a stapler.
 7. Start every answer on a new page.
 8. In marking the answers, particular attention will be paid to systematic and orderly methods of taking-off and working-up techniques, well-referenced measurements with side casts, neatness and clear description of work.
 9. Sketches must be large and neat and may be done in pencil.
 10. Except the sketches, only a blue or black pen may be used.
 11. Apply the rules and methods of the Standard System of Measuring Building Work precisely.
 12. Write neatly and legibly.
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SECTION A

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

ADDENDUM B shows the plan and sectional view of an open stand. The area must be excavated or filled to an even ground level of 87,5 m.



Measure the bulk excavations as required. Clearly show all waste calculations for the average depth of each section. Show the reference sketch for each depth calculated.

SPECIFICATIONS

- Excavated materials to be used for filling and remainder to be carted off site.
- Allow 10% for soft rock.
- Allow 5% for hard rock.

QUESTION 1

- 1.1 Measure all the earthwork items.
Clear waste calculations and reference notes are essential.
All the work must be done on dimension paper.
All the filling must be done in layers of 200 mm and well-compacted to a density of 100% MOD.
Cart filling onto site if required.  (45)
- 1.2 Square and abstract the dimensions in QUESTION 1.1. (8)
- 1.3 Draw up a bill for all the earthworks items. (7)
- [60]**

TOTAL SECTION A: 60

SECTION B

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

QUESTION 2

A solid casement window with sashes and fanlights opening outwards is built into the centre of a one-brick wall plastered only on the inside.

SPECIFICATIONS



- Top rails, bottom rails and stiles are 52 mm × 38 mm.
- Sill and transom are 114 mm × 76 mm.
- Head is 76 mm × 52 mm.

Sketch vertical sections, to any reasonable scale, through window head, transom, top rail, soldier arch and surrounding construction.

[10]

QUESTION 3

Refer to the summary of the bill of quantities on ADDENDUM A (attached) and compile the 8th partial payment to the contractor based on the following information:

- The contract period is 12 months.
- All the earthwork is complete.
- 100% of the concrete work is complete.
- 90% of the masonry is complete.
- 80% of glazing is complete.
- 55% of ironmongery is complete. 
- A further amount of R7 000,00 for plumbing and drainage pipes is allowed.
- The value of the unfixed material on site is R8 600,00.
- Allow for a 10% deduction for the retention fund.
- Round off all calculated amounts to the nearest ten rand (R10).
- Contractor was paid R824 420,75 previously.

[15]**QUESTION 4**

Chronologically describe the processes involved in preparing the bill of quantities.

[10]**QUESTION 5**

5.1 State FOUR items that fall under the general and preliminary items in the Standard System of Measuring Building Work.

(4)

5.2 State the unit of measurement.

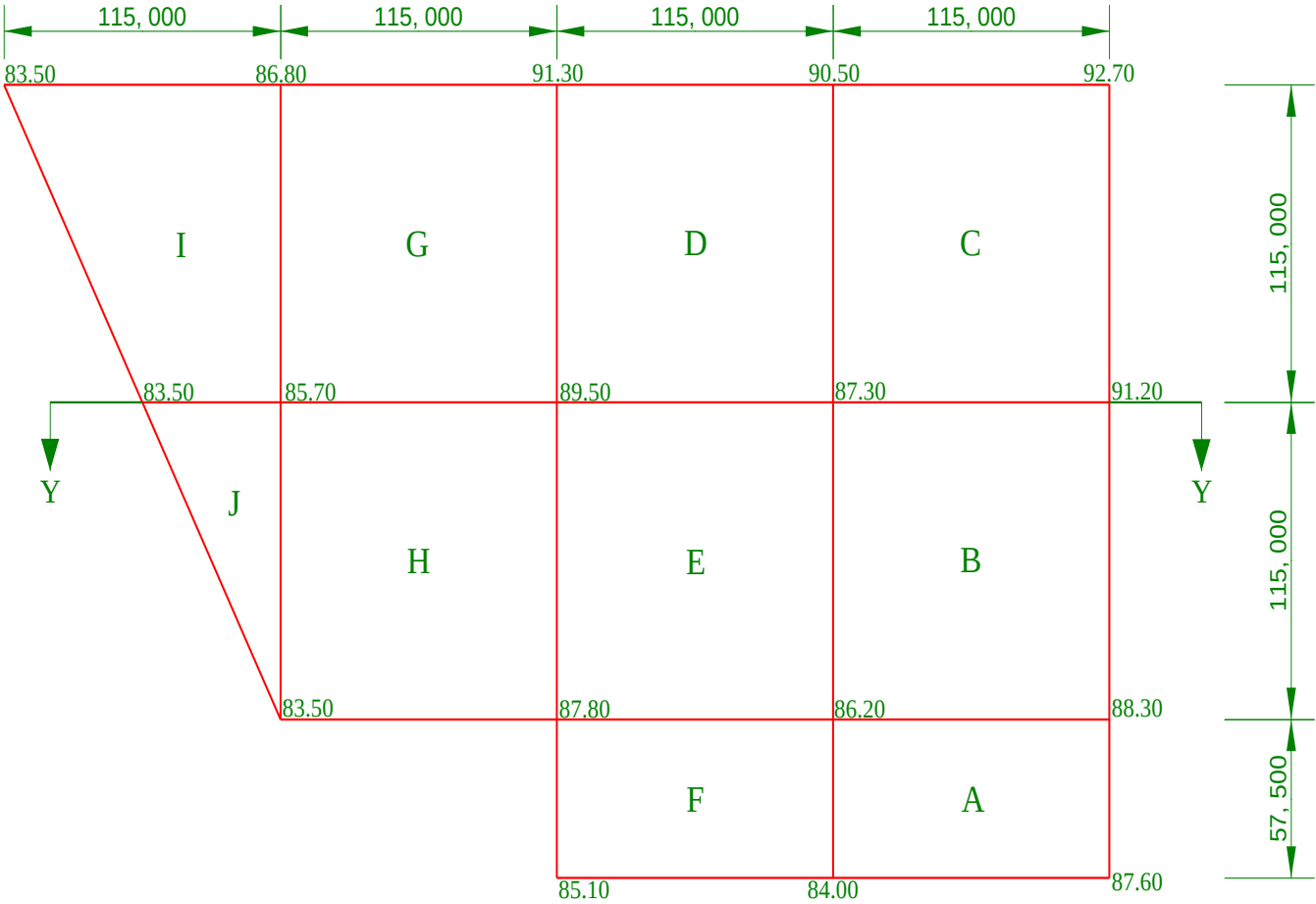
**(1)****[5]**

TOTAL SECTION B: 40
GRAND TOTAL: 100

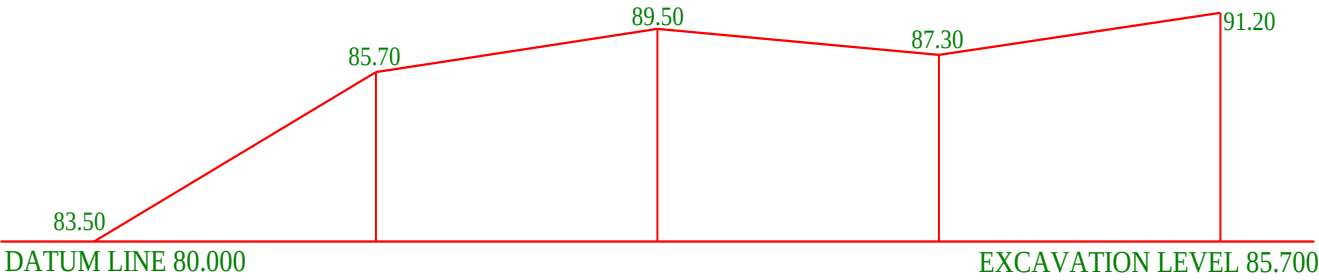
ADDENDUM A

BILL OF QUANTITIES		
SUMMARY		
1.	Preliminaries	R150 000,00
2.	Earthworks	R85 300,00
3.	Concrete, formwork and reinforcement	R550 220,00
4.	Masonry	R220 500,00
5.	Waterproofing	R20 310,00
6.	Roof covering	R150 220,00
7.	Carpentry and joinery	R65 300,00
8.	Ceilings	R25 300,00
9.	Floor coverings	R41 500,00
10.	Ironmongery	R8 520,00
11.	Metalwork	R25 000,00
12.	Plastering	R25 350,00
13.	Plumbing and drainage	R55 350,00
14.	Glazing	R24 300,00
15.	Painting	R55 300,00
16.	External works	<u>R62 155,00</u>
		<u>R1 539 275,00</u>

ADDENDUM B



PLAN



SECTION Y-Y