higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T140**(E)**(A7)T
APRIL EXAMINATION

NATIONAL CERTIFICATE

BUILDING AND STRUCTURAL SURVEYING N6

(8060056)

7 April 2016 (X-Paper)
09:00–12:00

Calculators may be used.

This question paper consists of 4 pages, 1 formula sheet and 3 addenda.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
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NATIONAL CERTIFICATE
BUILDING AND STRUCTURAL SURVEYING N6
TIME: 3 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. ALL the diagrams, sketches and drawings should be large, in good proportion, fully and clearly labelled and done in pencil.
5. ALL ADDENDA should be handed in with the ANSWER BOOK. Remember to write your examination number on ALL ADDENDA.
6. Write neatly and legibly.

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QUESTION 1

1.1 Briefly explain when a temporary adjustment of a theodolite has to be done. (2)

1.2 State the THREE procedures required during the temporary adjustment of the theodolite. (3)

1.3 Combine the following circle-left and circle-right horisontal angle observations which were taken from P1 and find the oriented directions P1-A and P1-C.

Use the coordinates of P1and B.

At P1

	Circle-left	Circle-right
A	168:32:38	348:32:22
B	250:28:16	70:27:54
C	92:54:44	272:54:10
A	168:32:16	348:32:08

Coordinates

P1	- 1 831,48	+ 2 091,09
B	- 2 711,22	+ 2 876,55

(10)
[15]

QUESTION 2

2.1 Complete the tacheometric fieldbook page on ADDENDUM 1 (attached). (15)

2.2 Calculate the horisontal distance from B to K in the ANSWER BOOK. (5)
[20]

QUESTION 3

3.1 Calculate the coordinates of P2, P3 and P4 on ADDENDUM 2 (attached). Adjustments must be made according to the Bowditch rule. (20)

3.2 Plot the coordinates of P1, P2, P3, P4 and P5 to scale 1 : 5 000 in the ANSWER BOOK.

Clearly show the direction of true north. (8)
[28]

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