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higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T2120(E)(N10)T
NOVEMBER 2010

NATIONAL CERTIFICATE

QUANTITY SURVEYING N4

(2050004)

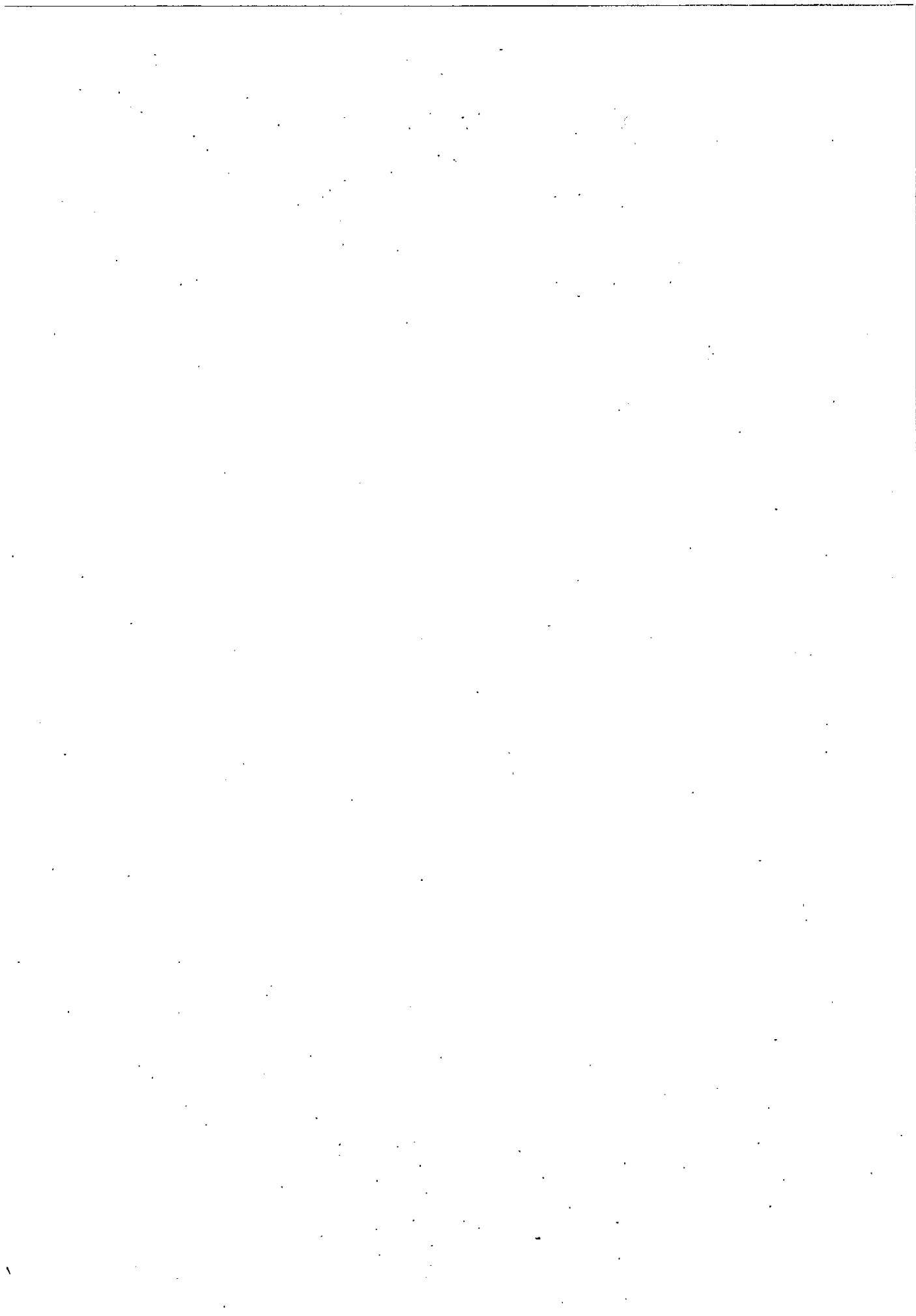
10 November (X-Paper)
09:00 – 13:00

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

Non-programmable calculators may be used.

The standard system must NOT be used.

This question paper consists of 6 pages and 2 diagram sheets.



DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
QUANTITY SURVEYING N4
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. ALL the work in SECTION A must be done on the appropriate paper.
4. ALL the work in SECTION B must be done in the ANSWER BOOK.
5. The work must be answered according to the standard system of measuring building work.
6. Red and green ink MUST NOT be used.
7. Do NOT staple the loose pages.
8. ALL work you do not want to be marked must be clearly crossed out.
9. In QUESTION 1 the word NIL must be used on the dimension paper.
10. Number the answers correctly according to the numbering system used in this question paper.
11. Full marks = 100%
12. Write neatly and legibly.

SECTION A

QUESTION 1

Refer to DIAGRAM SHEET 1 (attached). A plan of a roof and elevation of a truss of a dwelling are shown (not drawn to scale).

Scale: 1:20

SPECIFICATIONS:

Standard bricks in stretcher bond 1:4 cement mortar

Face bricks externally

SSAP timber, no paint

114 mm x 38 mm wall plate, creosoted paint

38 mm x 114 mm nailed trusses

25 mm x 152 mm fascia and barge board

Overhang is 300 mm for eaves and 100 mm for verges

Take off the quantities of the following work from the underside and including the wall plate:

1.1 Measure ALL the brickwork items including beam filling, face brickwork, wall plate and creosote (12)

1.2 Measure ALL the trusses at 950 mm centres (14)

1.3 Square, abstract, reduce and bill only the masonry (14)

TOTAL SECTION A: 40

[40]

SECTION B

QUESTION 2

2.1 Refer to the size 1,200 m x 2,100 m plain opening of the out building on DIAGRAM SHEET 2 (attached).

SPECIFICATION: bearing of lintel: 220 mm

Determine the following in metres and leave the answer in two decimal places:

2.1.1 The total length of brickwork to be deducted (1)

2.1.2 The length of flat brick arch (1)

2.1.3 The width of reveals (1)

2.1.4 The dimensions of the threshold (1)

2.1.5 The length of the pre-fabricated lintel (2)

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2.2 Write the following standard abbreviations used during measuring in full:

2.2.1 Ddt

2.2.2 Quad

2.2.3 Fmwk

2.2.4 c.sg

2.2.5 grano

2.2.6 bkwk

2.3 State the unit of measurement of the following:

2.3.1 Face brick soldier arches

2.3.2 Fabricated lintel

2.3.3 Face bricks in reveals

2.3.4 Steel window frame

2.3.5 Damp proofing under sills

2.4 Describe how glass and glazing in steel window panes are to be measured according to the principles of the standard system.

(3)

(5)

[20]

QUESTION 3

3.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (3.1.1 – 3.1.10) in the ANSWER BOOK.

3.1.1 Nailed and bolted roof timber trusses must be described and given in number.

3.1.2 Excavations for surface trenches are done in successive depth of 2 m.

3.1.3 Hardcore to underside of surface bed shall be measured in square metres.

3.1.4 Cover strips should be given in metres including mitres.

3.1.5 The quantity surveyor is appointed by the client on the architects' advice.

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- 3.1.6 The extra over brickwork for facing in beam filling must be given in square metres.
- 3.1.7 Preambles are specifications which cannot be shown on drawings.
- 3.1.8 Wall plates should be kept separate according to various lengths.
- 3.1.9 Two and a half brick foundation walls shall be given in cubic metres.
- 3.1.10 The Standard system lists all the building material available in South Africa.

(10)

3.2 Complete the following paragraph concerning the people involved in building construction by filling in the missing words. Write only the words next to the question number (3.2.1 – 3.2.10) in the ANSWER BOOK.

The (3.2.1) ... needs a certain building or just wants to invest money in any type of building which he/she can sell or let. The (3.2.2) ... advises the (3.2.3) ... on the design and will call in (3.3.4) ... to assist him/her in all financial matters. As soon as the sketches and estimates suit the client and his/her pocket, the architect starts drawing the working drawings. He/She may need the help of (3.2.5) ... to draw specialist drawings. Usually (3.2.6) ... is called in to give advice on reinforced concrete structure and (3.2.7) ... will design steel structures like stanchions and girders for factories. The (3.2.8) ... and (3.2.9) ... are called in to give advice on air conditioning, escalators and electrical work. From the completed drawings, the bill of quantities will be handed to (3.2.10) ... for pricing if they are interested in the project.

(10)

[20]

QUESTION 4

4.1 Discuss the relationship of the bills of quantities to the following people involved with the project:

- 4.1.1 Owner
- 4.1.2 Contractor
- 4.1.3 Clerk of works
- 4.1.4 Architect
- 4.1.5 Quantity surveyor

(10)

PTO

- 4.2 State FIVE purposes of the bill of quantities. (5)
- 4.3 Explain the following:
- 4.3.1 Working up (3)
- 4.3.2 Reducing (2)
- 120] (2)
- 60
- 100
- TOTAL SECTION B:
- GRAND TOTAL:

