higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

BUILDING DRAWING N1

(8090001)

9 April 2021 (X-paper)
09:00–13:00

REQUIREMENTS: ONE A2 drawing paper

Drawing instruments and calculator may be used.

This question paper consists of 5 pages and 1 diagram sheet.

096Q1A2109

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
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NATIONAL CERTIFICATE
BUILDING DRAWING N1
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. All the drawings must be drawn to the required scale.
5. All drawings, as well as the candidate information, must be done in pencil.
6. The drawings must be neat, reasonably large in proportion and fully labelled in CAPITAL letters.
7. A balanced layout is very important and candidates will be penalised for poor planning.
8. All drawings must comply with the relevant SANS (SABS) recommended codes.
9. Use your own discretion where dimensions are not given.
10. All work you do not want to be marked must be clearly crossed out.
11. Work neatly and legibly.

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QUESTION 1

Show with aid of neat drawings, the difference between the following roofing terms:

1.1 Rafter and tie beam (5)

1.2 Fascia board and barge board (5)

1.3 Cornice and cover strip (5)

1.4 Wall plate and brandering (5)

[20]

QUESTION 2

Draw to scale 1:10, an isometric view of the TWO alternate plan courses of a one-brick T-junction wall built in English bond with stopped ends on both sides.
Show at least two courses of brickwork on each alternate plan course. Make sure all views are drawn directly below one another. **[20]**

QUESTION 3

Draw to scale 1:1 a polygon with five equal sides of 90 mm long. **[10]**

QUESTION 4

4.1 Professional draughtsmen make use of drawing equipments to do their drawings. Below are those different types of equipments.

Choose the correct answer given in the box below to match with the statement. Write only the word(s) next to the question number (4.1–4.10) in the DRAWING PAPER.

stencils; french curves; harder eraser; compass; masking tape; drawing board; scale ruler; flexible curves; set squares; protractor; t-square; clutch pencil; soft eraser; drawing paper; erasing shield

4.1 Used to draw lines perpendicular to the horizontal

4.2 It is used to draw horizontal lines. It is made mostly with plastic-edged wood blades

4.3 The most commonly used is the 0,5 mm and 0,3 mm

4.4 It is used for general cleaning purposes

4.5 It is used for marking off measurements on a drawing

4.6 It is used to accurately draw circles, arches and radiuses

4.7 It is used to assist in erasing a section of work without erasing an adjacent

4.8 Are used to fix the drawing sheet to the surface of the drawing board

4.9 It is used for rubbing of prominent lines

4.10 It is used to mark off or measure various angles

(10 × 1) **[10]**

QUESTION 5

The DIAGRAM SHEET (attached) shows the front elevation of a ledged, braced and battened door.

- Top rail 110 mm × 22 mm
- Stiles 110 mm × 44 mm
- Middle rail 220 mm × 44 mm
- Bottom rail 220 mm × 22 mm
- Battens 75 mm × 22 mm
- Brace 100 mm × 44 mm

5.1 Draw to scale 1:2, the top view of the door on the attached diagram sheet. Clearly label the sections of the door. (10)

5.2 Draw to scale 1:2, the vertical section through the lock rail. Clearly show and label all the details. (10)

[20]

QUESTION 6

Draw to scale 1:10, a vertical section through the suspended wooden floor, external wall and clearly show the following:

- One-and-half-brick foundation wall: 600 mm high
- One-brick external wall: stock bricks inside and face bricks outside
- Concrete foundation: 650 mm × 220 mm
- Floor joist: 114 mm × 38 mm
- Tongue and groove floor boards: 100 mm × 22 mm
- Skirting: 76 mm × 22 mm
- Wall plate: 114 mm × 38 mm
- Bearer: 150 mm × 75 mm
- One brick pier: 488 mm high
- Pier concrete foundation: 450 mm × 220 mm
- Air brick: 220 mm × 150 mm × 50 mm
- Air ventilation: 170 mm × 150 mm
- Ant proofing: 150 mm below all timbers
- Ground level: 150 mm
- Plaster: 19 mm
- Damp proof course 375 micron polyethylene sheeting. **[20]**

TOTAL: 100

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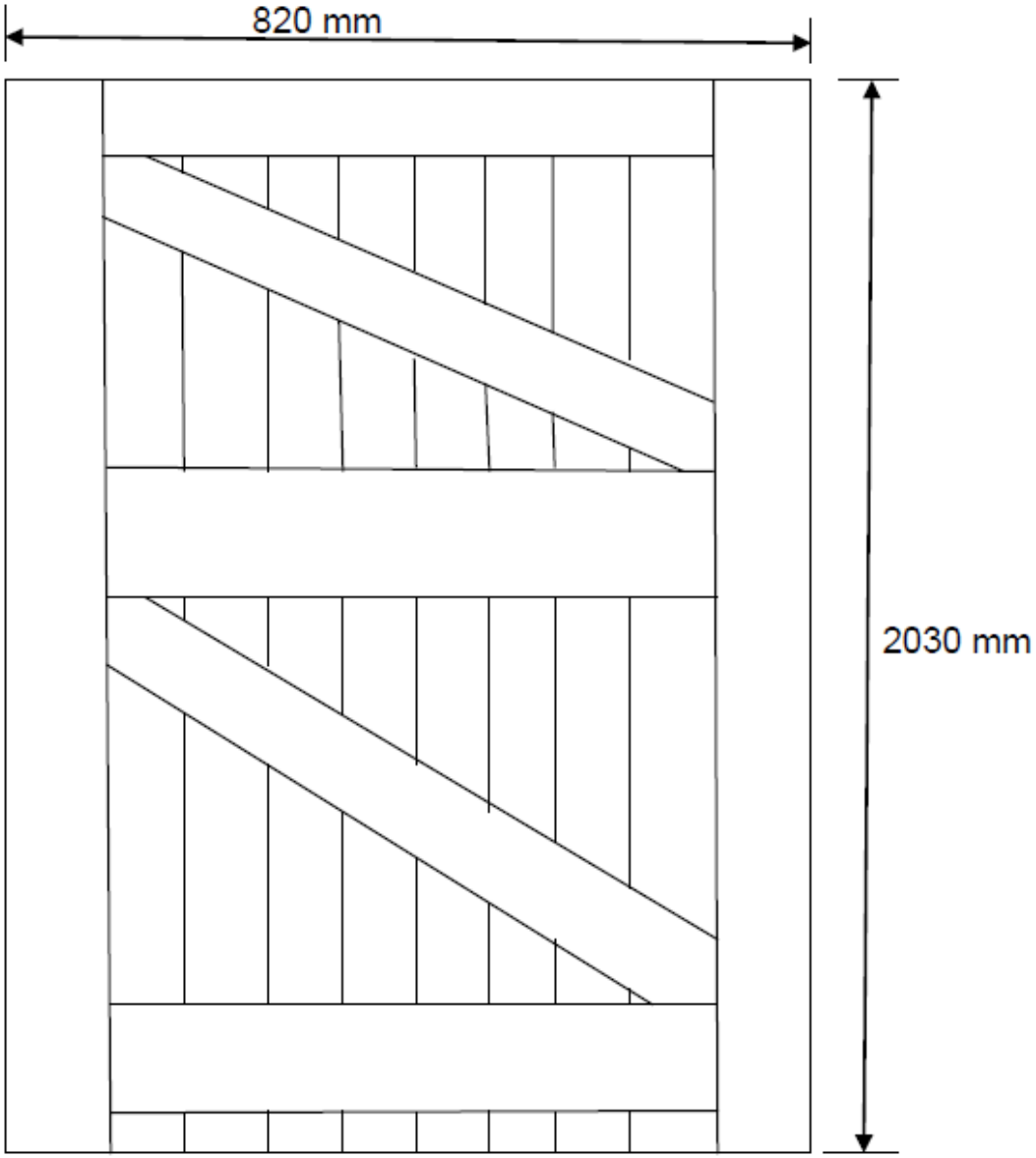
(8090001)

DIAGRAM SHEET



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