



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

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NATIONAL CERTIFICATE

BUILDING DRAWING N2

(8090012)

29 March (X-Paper)
09:00 – 13:00

REQUIREMENTS: A2 Drawing paper

This question paper consists of 4 pages and 1 diagram sheet.

**DEPARTMENT OF EDUCATION
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
BUILDING DRAWING N2
TIME: 4 HOURS
MARKS: 101**

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
 2. Read ALL the questions carefully.
 3. Number the answers correctly according to the numbering system used in this question paper.
 4. Use BOTH sides of the DRAWING PAPER.
 5. Drawings are to be fully dimensioned and neatly finished, with descriptive titles and notes, to conform with the SABS Recommendation Practice for Building Drawings.
 6. Write neatly and legibly.
-

QUESTION 1

- 1.1 Various types of lines are used in building drawings. Draw examples, approximately 80 mm long each, of the type applied to the following:

- 1.1.1 Dimension lines
- 1.1.2 Hidden detail
- 1.1.3 Centre line
- 1.1.4 Long break line
- 1.1.5 Irregular boundary line

(5)

- 1.2 There are recommended methods of indicating various building materials for building drawings, in order to avoid the possible confusion likely to occur in their interpretation.

Make neat sketches of the sectioning symbols used for the following:

- 1.2.1 Insulation
- 1.2.2 Blockwork
- 1.2.3 Face brick
- 1.2.4 Fibreboard
- 1.2.5 Hardcore

(10)

[15]

PTO

QUESTION 2

A room has one-brick external walls and one-and-a-half-brick foundation walls resting on a 650 mm × 220 mm concrete foundation. The walls are plastered internally only.

The room has a suspended timber floor with the underside of the floor joist SIX courses above the natural ground level, while the top of the foundation is THREE courses below the natural ground level.

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

- Part of the one-brick external wall
- One-and-a-half-brick foundation wall
- Concrete foundation
- 114 mm × 38 mm floor joist
- 100 mm × 22 mm flooring boards
- 76 mm × 22 mm skirting
- 114 mm × 38 mm wall plate
- 150 mm × 75 mm bearer
- 220 mm × 220 mm brick pier
- 450 mm × 220 mm pier foundation
- Damp proof courses
- 150 mm × 220 mm air brick
- Ground level
- Plaster

[20]

QUESTION 3

- 3.1 A 150 mm × 38 mm single-rebated timber casing is built into a half-brick wall plastered on BOTH sides.

Draw, to scale 1:2, a horizontal section through the door opening showing only ONE half of the opening and part of the door.

The drawing must include the following:

- 150 mm × 38 mm wooden casing
- 19 mm plaster
- Part of the wall
- 75 mm × 19 mm architrave
- 76 mm × 19 mm splayed ground
- Part of the door

(10)

PTO

- 3.2 When building with bricks, it is necessary to lay the bricks to some recognised bond in order to ensure stability of the structure.

Draw, to scale 1:10, the front view of a wall 1 320 mm long × 600 mm high, to illustrate the following bonds in brickwork:

- | | | |
|-------|--------------|-------------|
| 3.2.1 | English bond | (5) |
| 3.2.2 | Flemish bond | (5) |
| | | [20] |

QUESTION 4

FIGURE 1 on DIAGRAM SHEET (attached), shows a pitch roof with gables and valleys. Name the parts by writing (printing) the name of the part next to the number (i – x) on the A2 DRAWING SHEET.

[10]

QUESTION 5

- 5.1 Draw, to scale 1:10, the alternate plan courses of a right-angle corner between TWO one-brick walls built in Flemish bond.

NOTE: NO stopped ends are required. (10)

- 5.2 Draw, NOT to scale, the front view of a squared-snecked rubble stone wall built to course. (10)
- [20]**

QUESTION 6

Show, with the aid of neat sketches, the difference between the following window terms:

- | | | |
|-----|----------------------------------|-------------|
| 6.1 | A glazing bar and a glazing bead | (4) |
| 6.2 | A mullion and a transome | (4) |
| 6.3 | The head and top rail | (4) |
| 6.4 | A window sill and window board | (4) |
| | | [16] |

TOTAL: 101

DIAGRAM SHEET

PITCH ROOF WITH GABLES AND VALLEYS

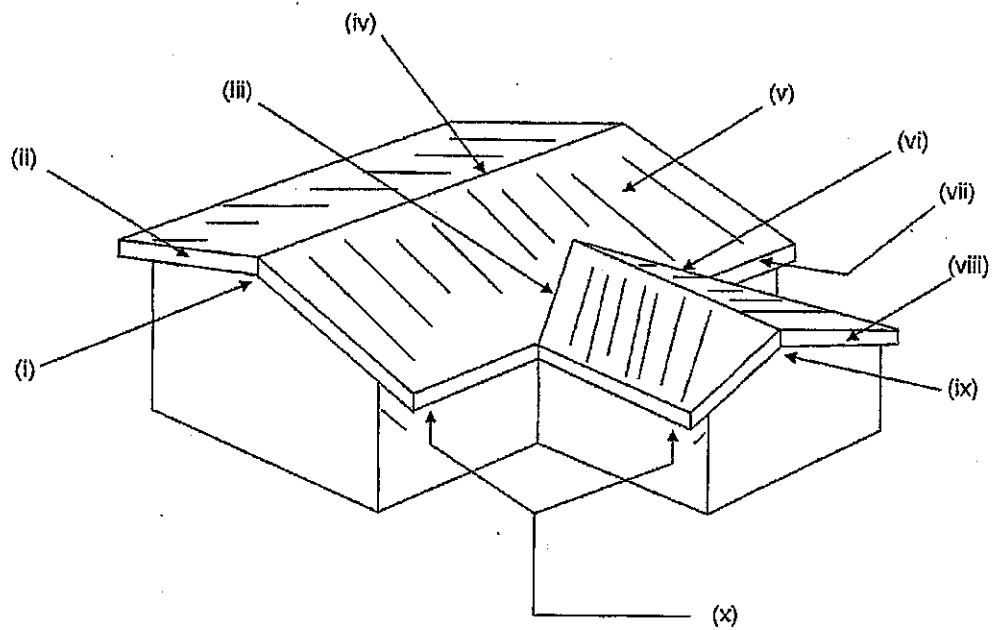


FIGURE 1