

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

NOTE: In order to score the maximum marks within the question paper, candidates should answer all the questions. All work you do not want to be marked must be clearly crossed out.

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. Marks will be allocated for neat work that is well set out and organised.
 5. Marks will also be allocated for line quality and labelling of drawings.
 6. Write neatly and legibly.
-

QUESTION 1

Draw the orthographic views of the attached sheet FIGURE 1.

[16]**QUESTION 2**

Draw four rectangles 750 mm × 500 mm evenly spaced showing the following hatching symbols in the rectangles.

Earth undisturbed
 Planed timber
 Plywood
 Fibre board

SCALE 1 : 10

[16]

NOTE: Arrange the rectangles neatly and allow a space of 25 mm between the rectangles.

QUESTION 3

Draw an isometric view of a king closer.

NOTE: Your preferred view may be illustrated.
 Do NOT show any hidden detail.

SCALE 1 : 2

[12]**QUESTION 4**

Draw the following common types of roof trusses used in building.

NOTE: Make use of single line diagrams.
 The span of the trusses are 6 meter.
 Do NOT show roof covering

SCALE 1 : 100

- | | | |
|-----|-------------------------------------|-------------|
| 4.1 | Lean to truss | (6) |
| 4.2 | Closed couple roof | (6) |
| 4.3 | South African roof truss | (8) |
| 4.4 | W or Fink roof truss (Trussed-type) | (8) |
| | | [28] |

QUESTION 5

Draw the front elevation of a one brick wall in stretcher bond six course high. The bottom course must be seven bricks long.

Show a stopped end on the left and a raking back on the right side.

SCALE 1 : 10

[8]

QUESTION 6

Draw a vertical cross section through a suspended wooden floor which is supported by a half brick sleeper wall and a half brick honey comb wall.

Show the following details:

700 mm × 300 mm concrete foundation

Half brick sleeper wall

Half brick honey comb wall

One brick external foundation wall built in face brick.

114 mm × 76 mm wall plate × 2

100 mm surface bed concrete supported on the foundation.

250 mm × 50 mm floor joists

Ant guard

100 mm × 22 mm tongue and groove floor boarding.

Damp proof course.

22 mm x 75 mm skirting.

19 mm Internal plaster

150 mm hard core

Ground level

SCALE 1 : 10

[20]

TOTAL: 100

DIAGRAM SHEET

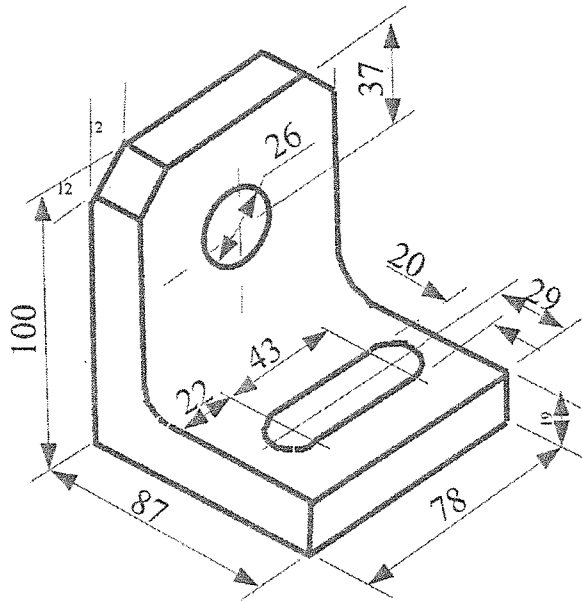
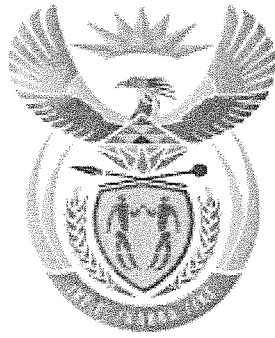


FIGURE 1

SCALE 1 : 1



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

BACKUP EXAMINATION

BUILDING DRAWING N1

BACKUP 2015

This marking guideline consists of 16 pages.

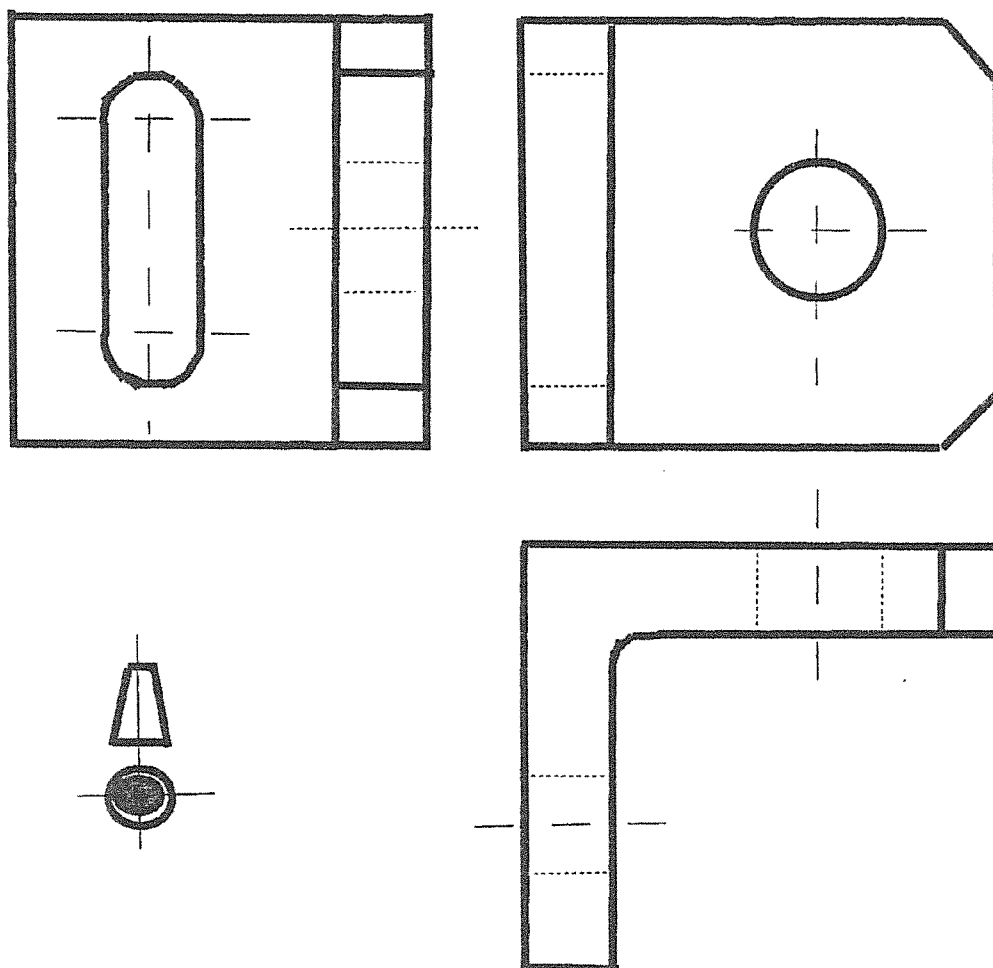


FIGURE 1

QUESTION 1 FIGURE 1 DIAGRAMSHEET			
MARKING CRITERIA	POSSIBLE MARK	MARKER MARK	MOD MARK
CORRECT POSITION	6		
SIZE CORRECT	5		
LINEWORK	2		
NEATNESS LAYOUT	1		
TITLE SCALE	2		
TOTAL	16		

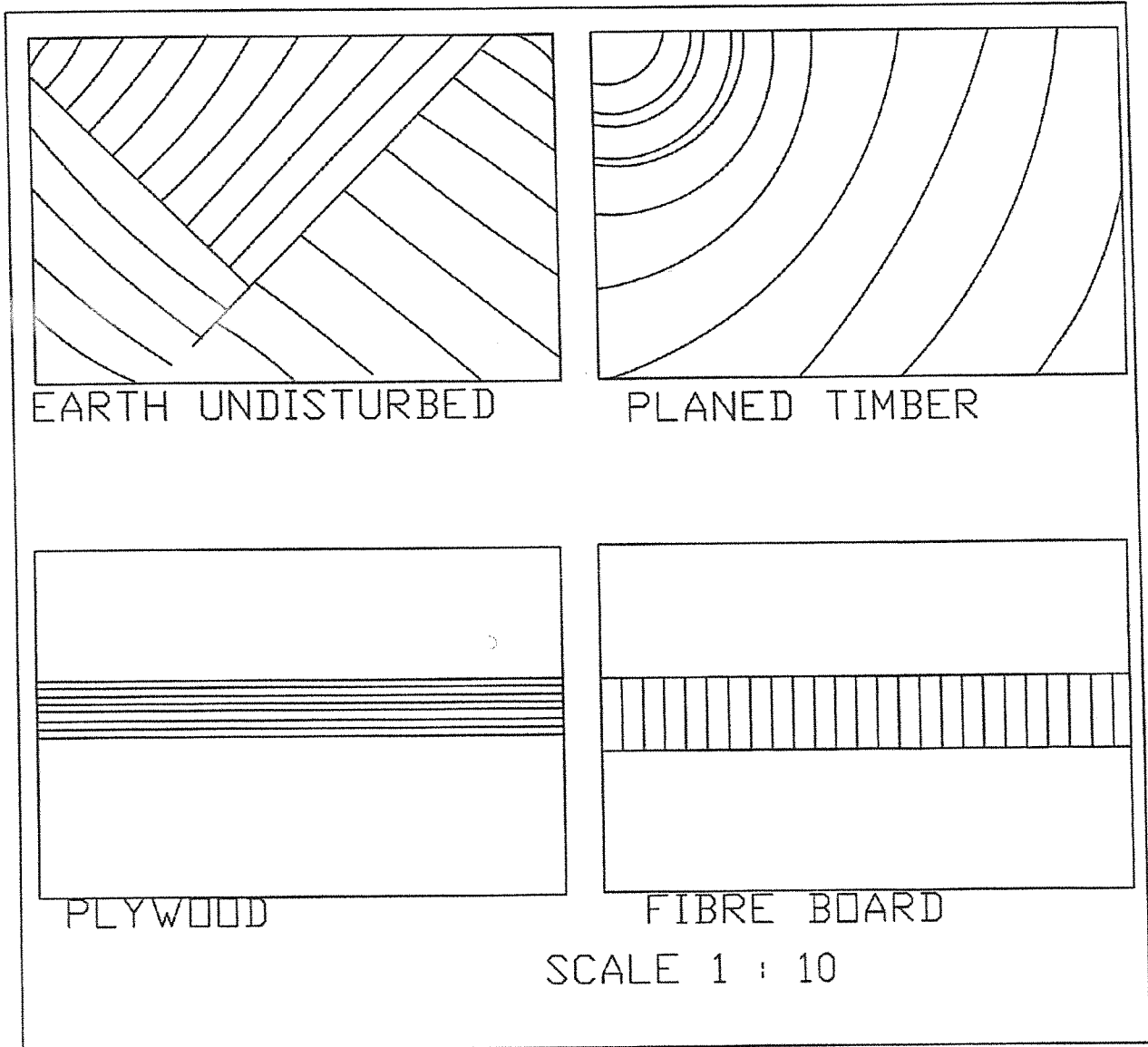
QUESTION 2 EARTH UNDISTURBED			
CORRECTNESS	1		
ACCURACY	1		
NEATNESS	1		
TITLE / SCALE	1		

QUESTION 2 PLANED TIMBER			
CORRECTNESS	1		
ACCURACY	1		
NEATNESS	1		
TITLE / SCALE	1		

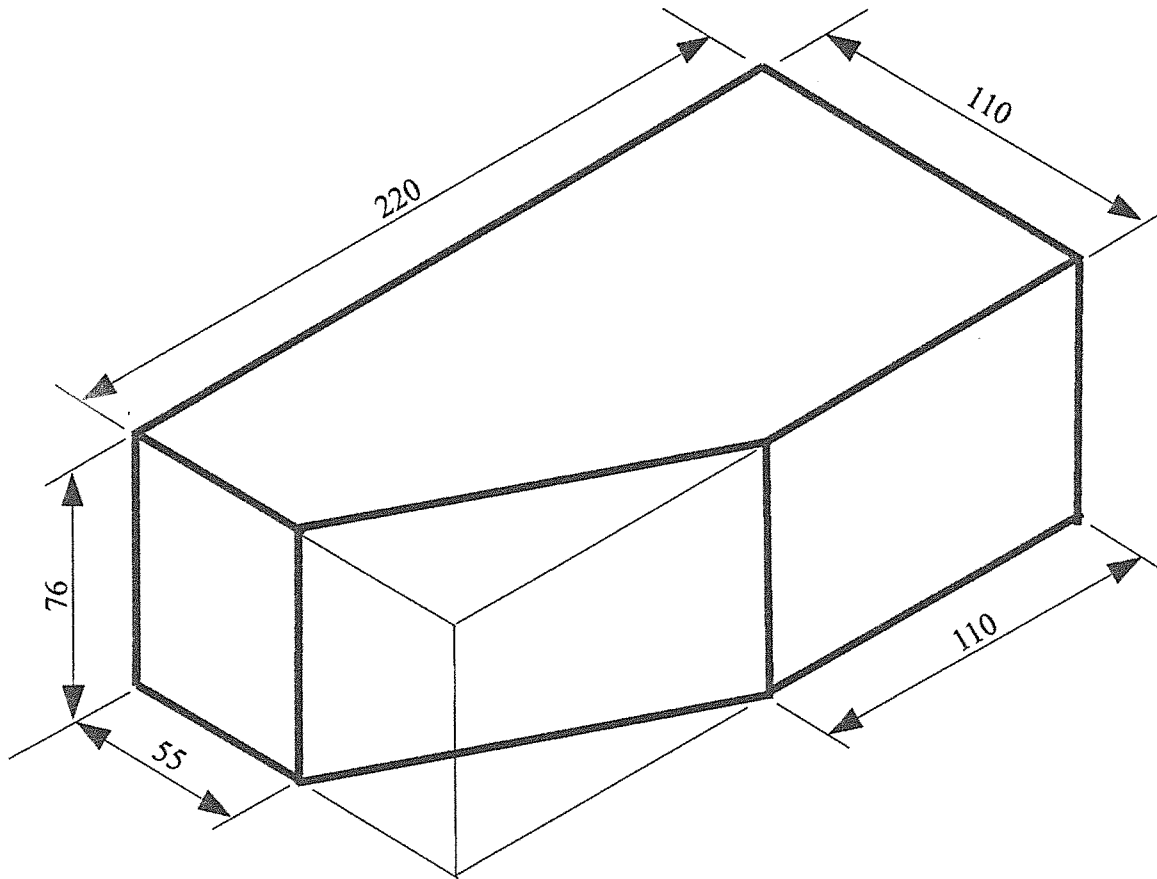
QUESTION 2 PLYWOOD			
CORRECTNESS	1		
ACCURACY	1		
NEATNESS	1		
TITLE / SCALE	1		

QUESTION 2 FIBRE BOARD			
CORRECTNESS	1		
ACCURACY	1		
NEATNESS	1		
TITLE / SCALE	1		
TOTAL MARKS	16		

QUESTION 2



QUESTION 3

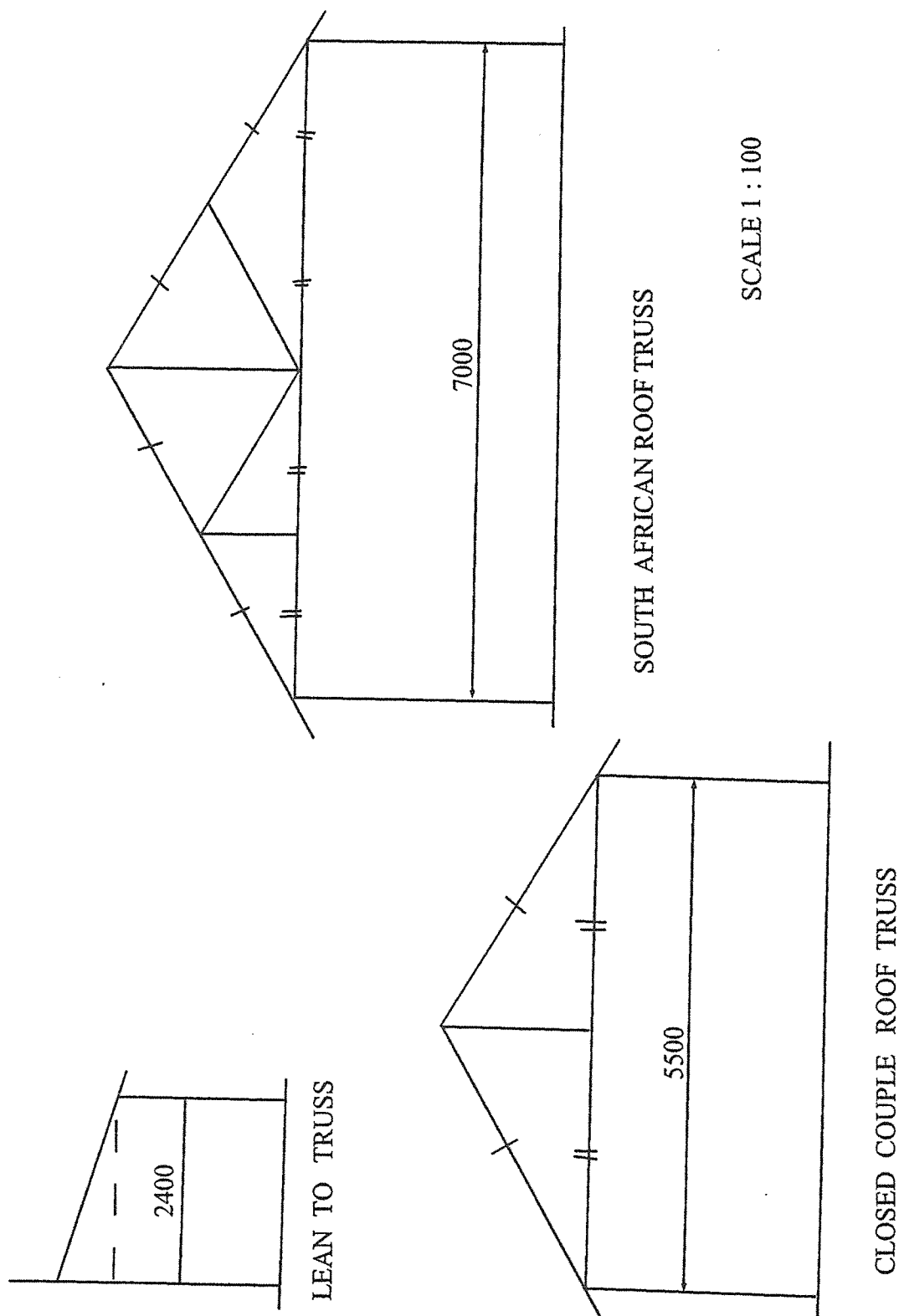


ISOMETRIC VIEW OF A KING CLOSER
SCALE 1 : 2

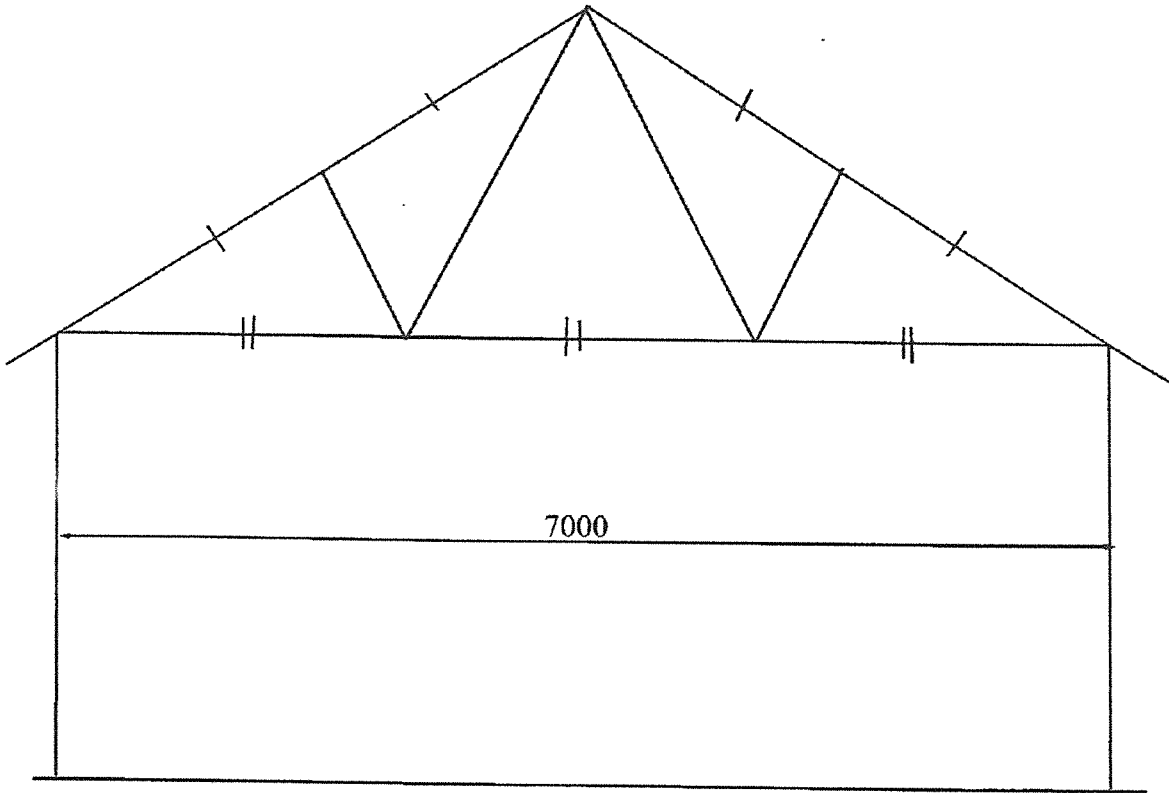
QUESTION 3 ISOMETRIC VIEW OF A KING CLOSER			
MARKING CRITERIA	POSSIBLE MARK	MARKER MARK	MOD MARK
AXIS	2		
CORRECTNESS	4		
ACCURACY	3		
LINEWORK/NEATNESS	2		
TITLE/SCALE	1		
TOTAL MARKS	12		

QUESTION 4

4.3



4.4



W OR FINK ROOF TRUSS

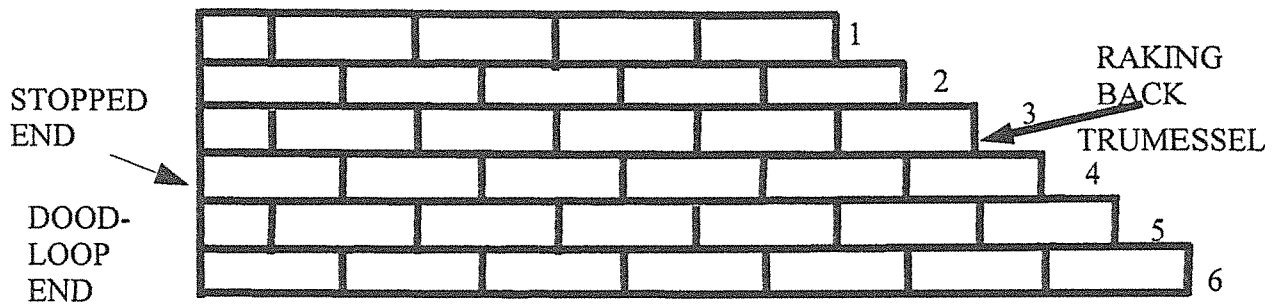
SCALE 1 : 100

QUESTION 4.1 LEAN TO TRUSS				QUESTION 4.2 CLOSED COUPLE ROOF			
MARKING CRITERIA	POSSIBLE MARK	MARKERS MARK	MOD MARK	MARKING CRITERIA	POSSIBLE MARK	MARKERS MARK	MOD MARK
ACCURACY	2			ACCURACY	2		
CORRECTNESS	2			CORRECTNESS	2		
LAYOUT NEATNESS	1			LAYOUT NEATNESS	1		
TITLE SCALE	1			TITLE SCALE	1		
TOTAL	6			TOTAL	6		

QUESTION 4.3 SOUTH AFRICAN ROOF TRUSS			
MARKING CRITERIA	POSSIBLE MARK	MARKERS MARK	MOD MARK
ACCURACY	3		
CORRECTNESS	2		
LAYOUT NEATNESS	2		
TITLE SCALE	1		
TOTAL	8		

QUESTION 4.4 W- ROOF TRUSS			
MARKING CRITERIA	POSSIBLE MARK	MARKERS MARK	MOD MARK
ACCURACY	3		
CORRECTNESS	2		
LAYOUT NEATNESS	2		
TITLE SCALE	1		
TOTAL	8		

QUESTION 5

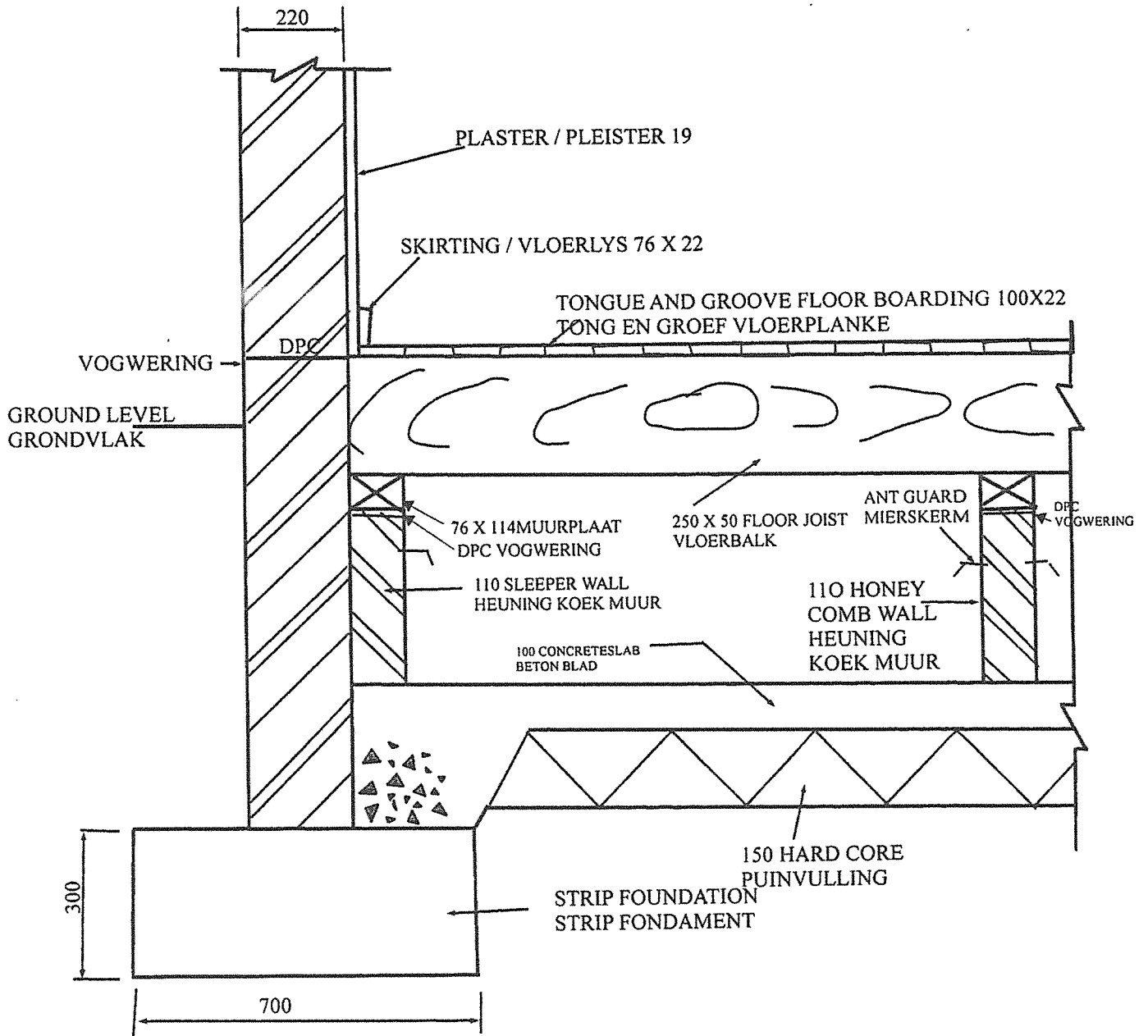


THE FRONT ELEVATION OF A WALL BUILT IN STRETCHER BOND

SCALE 1 : 10

QUESTION 5			
FRONT VIEW	ONE BRICKWALL	STRETCHER BOND	
MARKING CRITERIA	POSSIBLE MARK	MARKERS MARK	MOD MARK
ACCURACY	2		
CORRECTNESS	1		
SETTING OUT NEATNESS	2		
LABELS	2		
TITLE SCALE	1		
TOTAL	8		

QUESTION 6



VERTICAL CROSS-SECTION THRU' A SUSPENDED WOODEN FLOOR
WITH HALF BRICK SLEEPER WALL AND HONEY-COMB CONSTRUCTION

SCALE 1 : 10

QUESTION 6 SECTION THROUGH A SUSPENDED WOODEN FLOOR , SUPPORTED BY A HALF BRICK SLEEPER WALL			
PART OF THE DRAWING	MARKING CRITERIA	POSSIBLE MARK	REMARKS
WALL, PLASTER AND DPC	CORRECT POSITION NEATNESS	2	
FOUNDATION	CORRECT POSITION LABEL NEAT	2	
HARDCORE GROUND LEVEL	CORRECT POSITION LABEL NEAT	2	
SUSPENDED WOODEN FLOOR, WALL, PLATE, JOIST FLOOR BOARDS	CORRECT POSITION SHAPE LABEL NEATNESS	8	
SLEEPER WALL HONEYCOMB WALL	CORRECT POSITION SHAPE LABEL NEAT	2	
TOTAL		16	
OVERALL IMPRESSION		2	
TITLE	SCALE	2	
GRAND	TOTAL	20	