higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING OFFICE PRACTICE

TECHNICAL ILLUSTRATION

(8090235)

21 November 2023 (X-paper)
09:00–13:00

CLOSED-BOOK EXAMINATION

REQUIREMENTS: **TWO A3 drawing sheets**
ONE A4 tracing paper and a grid

Calculators may be used.

Candidates require drawing instruments.

This question paper consists of 4 pages, 2 diagram sheets and 1 answer sheet.

038Q1E2321

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING
OFFICE PRACTICE
TECHNICAL ILLUSTRATION
TIME: 4 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. Answer QUESTION 1 on the ANSWER SHEET. Ensure that you enter your EXAMINATION NUMBER in the space provided.
5. Use only ONE side of the drawing and tracing paper.
6. A balanced layout is very important.
7. The question numbers must be clearly indicated.
8. All drawing work, including candidate information must be done in pencil.
9. All the construction lines must be shown.
10. Marks will be awarded for neatness and accuracy.
11. Write neatly and legibly.

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QUESTION 1

Complete the following sentences by filling in the missing word(s). Write only the word(s) next to the question number (1.1–1.3) on the ANSWER SHEET (attached).

1.1 Although technical illustration is simple to …, it is not simple to … .

1.2 Technical illustration is the technique of translating pure engineering drawings into …, accurate and easily recognisable illustrations by a process of … perspective projection.

1.3 By the end of these modules, the student will have a sound knowledge of …, two-point and … perspective.

(3 × 2) **[6]**

QUESTION 2: TWO-POINT PERSPECTIVE

Construct the following using the information provided:

Top view of situation

- An object resting on the ground with sides vanishing to the left at an angle of 45° (Refer to DIAGRAM SHEET 1 (attached) for dimensions.)
- All the measurements are given in millimetre
- Distance of the eye in front of PP is 130 mm
- Height of the eye above GL is 100 mm
- The object lies on GL with its leading edge, point A, 30 mm to the right of the CV **[16]**

QUESTION 3: OBLIQUE PERSPECTIVE

Construct a three-point perspective grid using the following information:

- Distance of the eye in front of the PP is 120 mm
- Height of the eye above GL is 104 mm
- Oblong 8 × 8 units, 16 units long, where each unit is 10 mm
- The oblong is 20° to the left of the PP and is elevated to the right at 45° to the ground

Point A, the leading edge of the oblong, is 40 mm to the left of the CV and 50 mm behind the P.P.

[22]

QUESTION 4: THREE-POINT PERSPECTIVE VIEW – ILLUSTRATION OF A MODEL ASSEMBLY

Construct a model as shown on DIAGRAM SHEET 2 (attached).

SCALE: TWO grid units equal 10 millimetres

NOTE: When the construction is complete, outline the object in bolder line treatment of 0,5 mm thick.

Do NOT show the dimensions on the final illustration. **[56]**

TOTAL: 100

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DIAGRAM SHEET 1

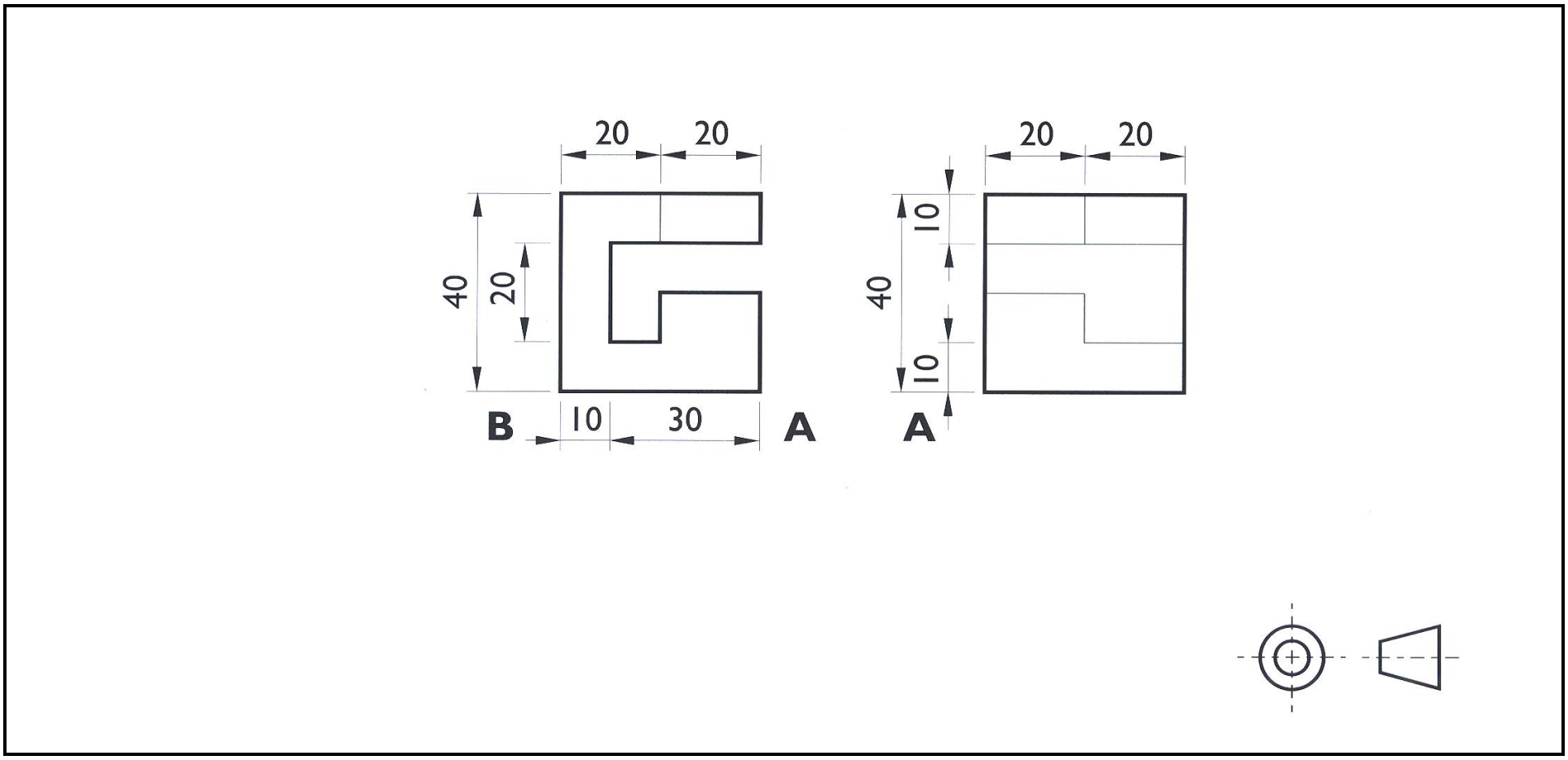

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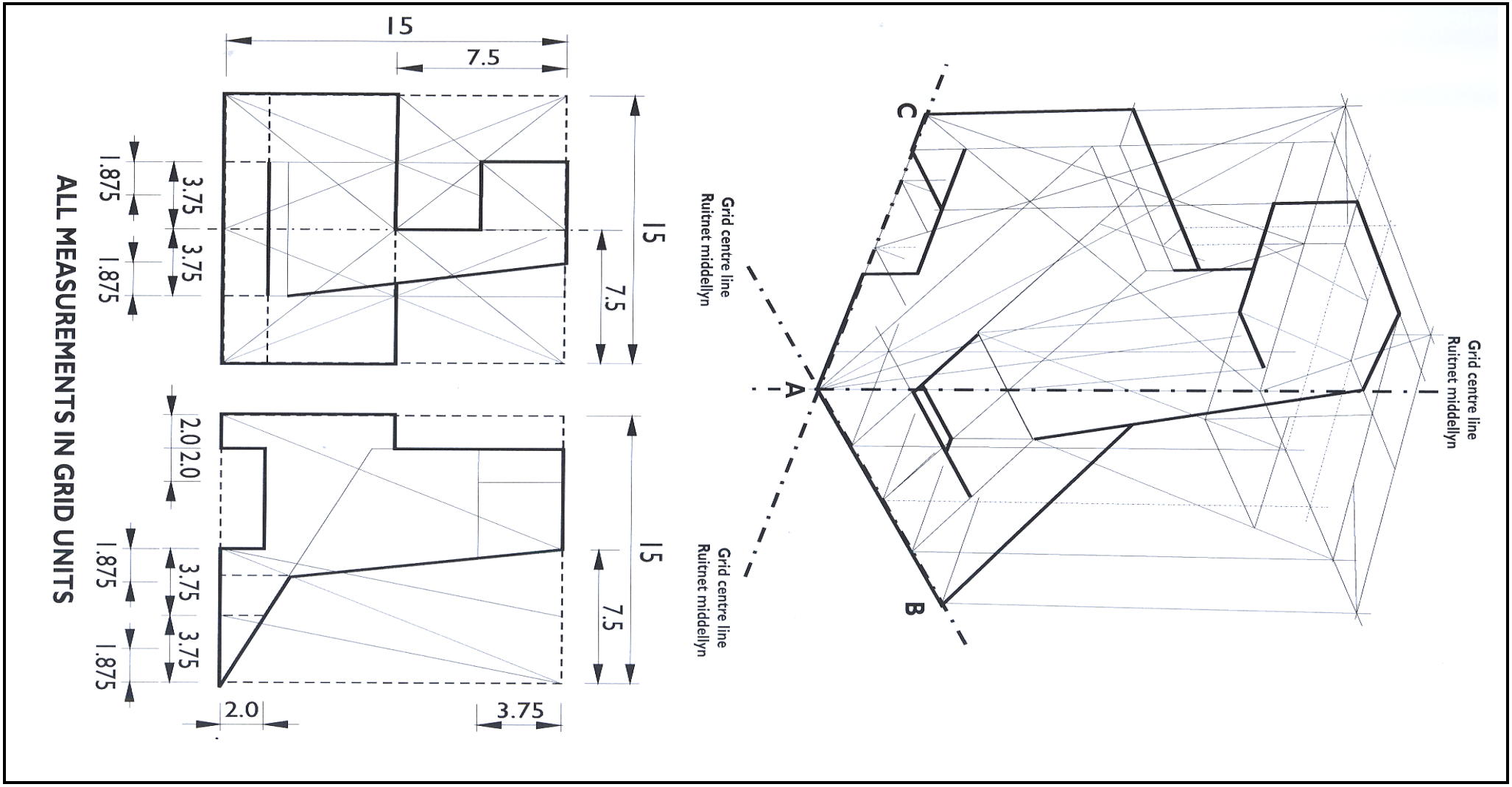
DIAGRAM SHEET 2



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ANSWER SHEET **EXAMINATION NUMBER:** | | | | | | | | | | | | | |

QUESTION 1

1.1 _____ (2)

1.2 _____ (2)

1.3 _____ (2)

QUESTION 2

QUESTIONS 1, 2, 3 – 2 MARKS EACH = 6 MARKS

CORRECTNESS	10	ITEM ONE	5
		ITEM TWO	5

			10
LINEWORK	3		
ACCURACY	2		
BALANCED LAYOUT	1		
	----		
	16 MARKS		

QUESTION 3

CORRECTNESS	14	ITEM ONE	14

			14
LINEWORK	4		
ACCURACY	2		
BALANCED LAYOUT	2		
	----		
	22 MARKS		

QUESTION 4

CORRECTNESS	31,5	ITEM ONE – WEDGE BLOCK	31,5

			31,5
LINEWORK	11		
ACCURACY	8,5		
BALANCED LAYOUT	5		
	----		
	56 MARKS		

TOTAL: 100

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