higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING OFFICE PRACTICE

TECHNICAL ILLUSTRATION

(8090235)

15 November 2022 (Y-paper)
13:00–17:00

Requirements: TWO A3 drawing sheets.
ONE A4 sheet of tracing paper.
A sheet of grid-line paper.

Drawing instruments and nonprogrammable calculators may be used.

This question paper consists of 4 pages and 3 diagram sheets

042Q1E2215

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
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NATIONAL CERTIFICATE: MULTI-DISIPLINARY 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. Use only ONE side of the drawing and tracing paper.
5. A balanced layout is very important. Candidates will be penalised for poor planning.
6. The question numbers must be clearly indicated.
7. All drawing work, including the candidate's information, must be completed in pencil.
8. TWO sheets of A3 DRAWING PAPER for QUESTIONS 2 and 3, as well as ONE sheet of A4 tracing paper and a grid for QUESTION 4 are supplied.
9. Answer QUESTION 1 in the ANSWER BOOK. ALL the other questions must be answered on the DRAWING PAPER provided.
10. All the construction lines must be shown.
11. Marks will be awarded for neatness and accuracy.
12. Write neatly and legibly.

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SECTION A: WRITTEN WORK

QUESTION 1: TECHNICAL ILLUSTRATION

Complete the following sentences by writing only the missing words next to the question number (1.1–1.2) in the ANSWER BOOK.

1.1 In … , … perspective the convergence of lines travelling away from the … occurs at a single point on the ….

1.2 The … of vision is at right angles to one side of the …; this side is parallel to the picture ….

(2 × 3) **[6]**

TOTAL SECTION A: 6

SECTION B: DRAWING

QUESTION 2: TWO-POINT PERSPECTIVE

FIGURE 1, DIAGRAM SHEET 1 (attached) shows a model and its dimensions.

2.1 Draw the model with its sides vanishing to the left at an angle of 45° of the C.V. (16)

2.2 Distance of the eye in front of P.P. is 120 mm.
Height of the eye above the G.L. is 90 mm.
The model lies on the G.L. with its leading edge, A, 30 mm to the right. (5)

2.3 Include a title bar with your student number, the centre number, scale, date, and question number. (3)

ALL the measurements are given in millimetres.

[16]

QUESTION 3: OBLIQUE PERSPECTIVE

FIGURE 2, DIAGRAM SHEET 2 (attached) shows an object and its dimensions.

3.1 Draw the object with ascending planes. Construct as a two-point perspective with raised and lower vanishing points.

3.2 Distance of the eye in front of the P.P. is 130 mm.
Height of the eye above the G.L. is 100 mm.
Point A is situated 30 mm to the right of the C.V. (a1).

3.3 Include a title bar with your student number, centre number, scale, date, and question number.

ALL the measurements are given in millimetres.

[22]

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QUESTION 4: CONSTRUCTION OF OFF-PLANE ANGLES

FIGURE 3, DIAGRAM SHEET 3 (attached) shows a model and its dimensions.

4.1 Draw the model on the grid supplied.

4.2 Include a title bar with your student number, centre number, scale, date, and question number.

4.3 Scale: TWO grid units equal 10 millimetres.

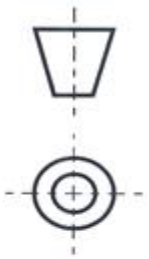
4.4 NOTE: When the construction is complete, outline the object in bolder line treatment 0,5 mm thick. Do NOT show the dimensions on the final illustration.

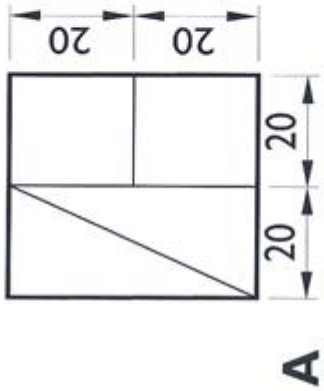
[56]

TOTAL SECTION B: 94
GRAND TOTAL: 100

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DIAGRAM SHEET 1





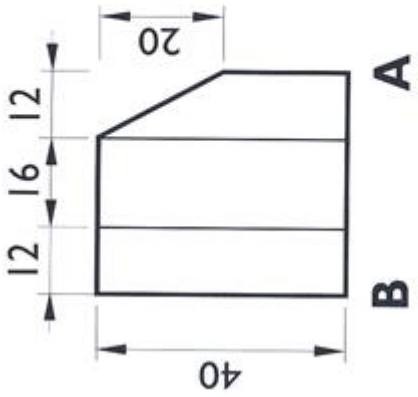


FIGURE 1

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DIAGRAM SHEET 2

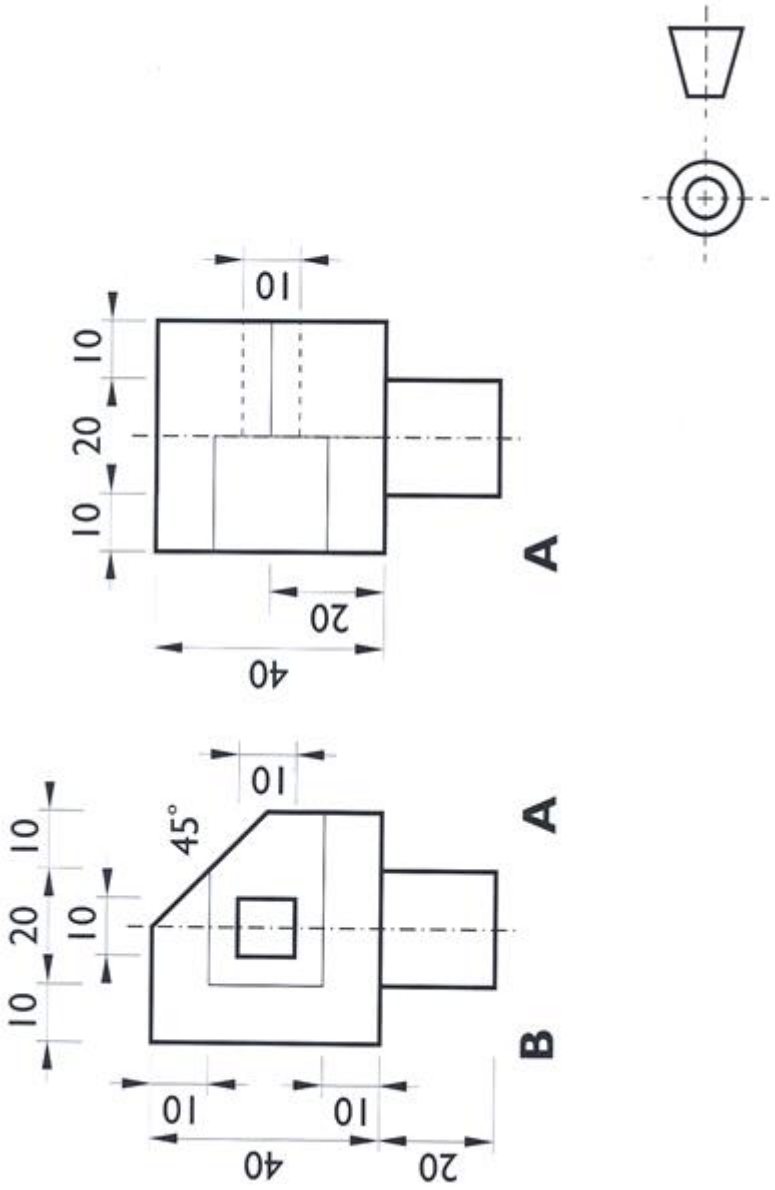


FIGURE 2

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DIAGRAM SHEET 3

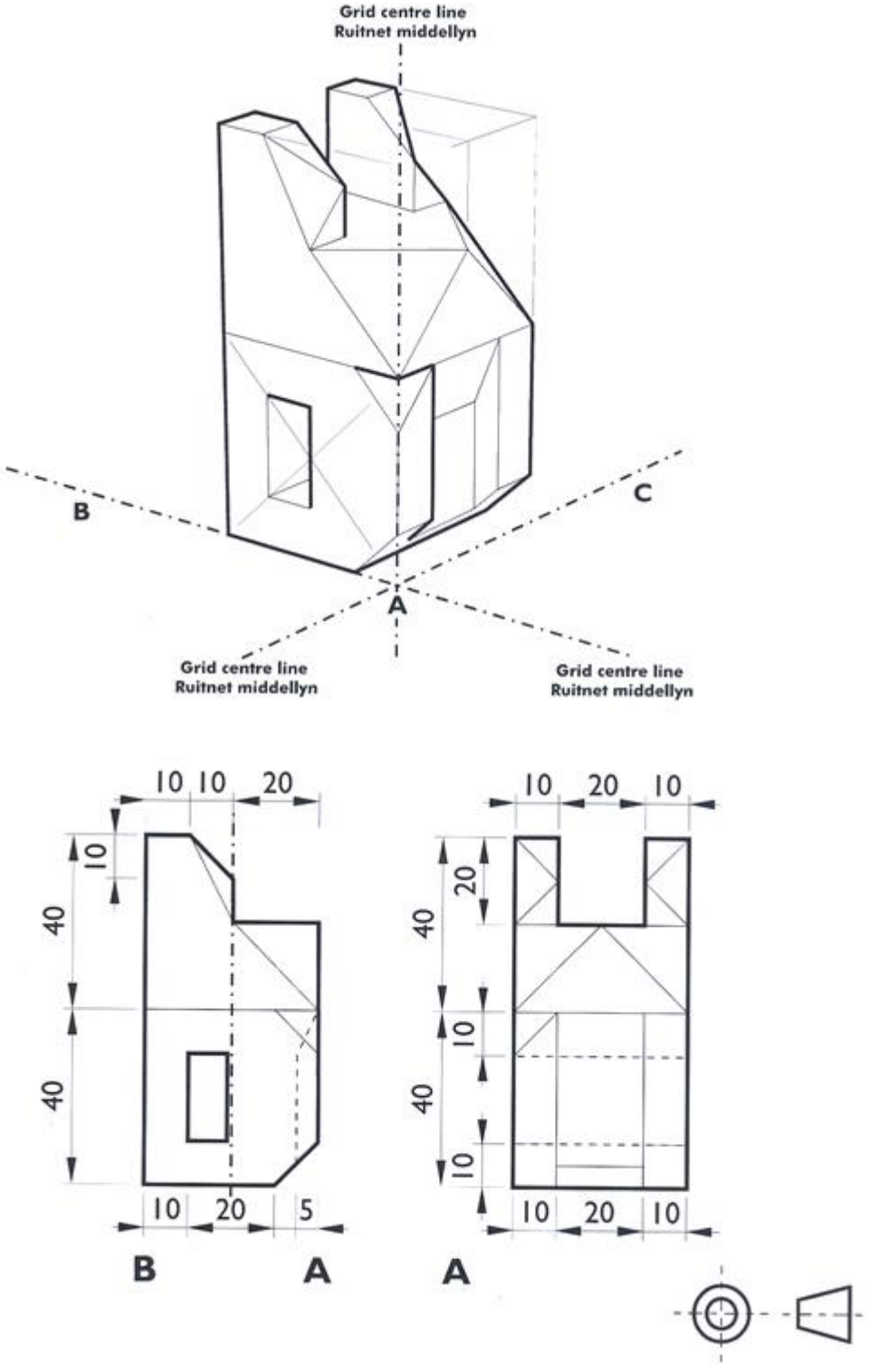


FIGURE 3

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