higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

DRAWING OFFICE PROCEDURES AND TECHNIQUES

(Second paper)
NQF LEVEL 3

(12050713)

3 December 2024 (Y-paper)
13:00–17:00

REQUIREMENTS: **A4 drawing sheets**
CAD program

This question paper consists of 6 pages.

603Q2N2403

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
DRAWING OFFICE PROCEDURES AND TECHNIQUES
(Second paper)
NQF LEVEL 3
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. Create drawings, sketches, and diagrams with CAD software.
5. Freehand drawings, sketches, and/or diagrams must be neat, reasonably large, proportional, and fully labelled.
6. All work that you do NOT want to be marked must be clearly crossed out.
7. All abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS)-codes.
8. Write neatly.

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QUESTION 1

1.1 Choose an item from COLUMN B that matches an description in COLUMN A. Write only the letter (A–F) next to the question number (1.1.1–1.1.4) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.1.1	An object created using CAD software	A	trim
1.1.2	The ratio of width to height of a drawing	B	bill of materials
1.1.3	Draw at angle 30° to the horizontal axis	C	aspect ratio
1.1.4	List of materials to complete a specific job	D	entity
		E	CAD
		F	isometric

(4 × 1) (4)

1.2 To scale 1:1, redraw the shape shown in FIGURE 1. Include a title bar with your STUDENT NUMBER, the CENTRE NUMBER, scale, date, and QUESTION NUMBER.

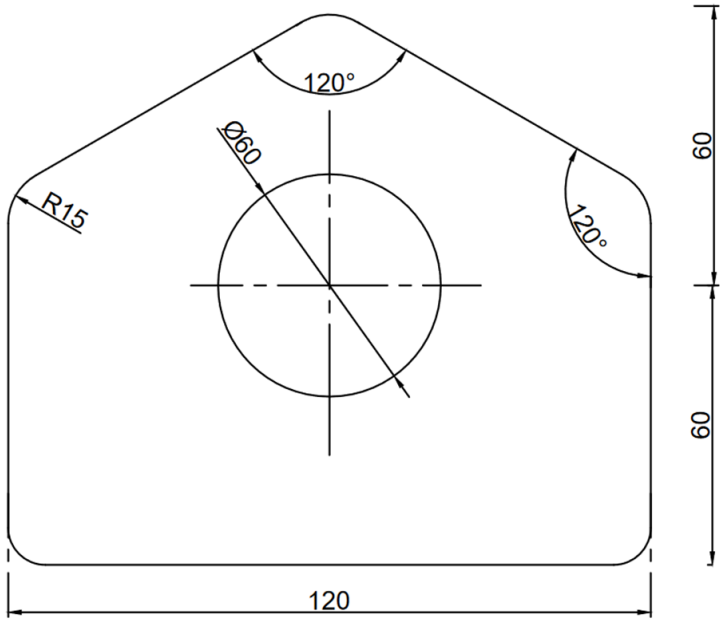


FIGURE 1

(6)
[10]

QUESTION 2

FIGURE 2 shows a representation of a wall bracket.

2.1 To scale 1:2, draw the component on an A4 DRAWING SHEET using CAD software. (17)

2.2 Include all dimensions on the drawing. (3)

2.3 Include a title bar with your STUDENT NUMBER, the CENTRE NUMBER, scale, date and QUESTION NUMBER. (3)

2.4 Plot the drawing and candidate information on an A4 DRAWING SHEET. (2)

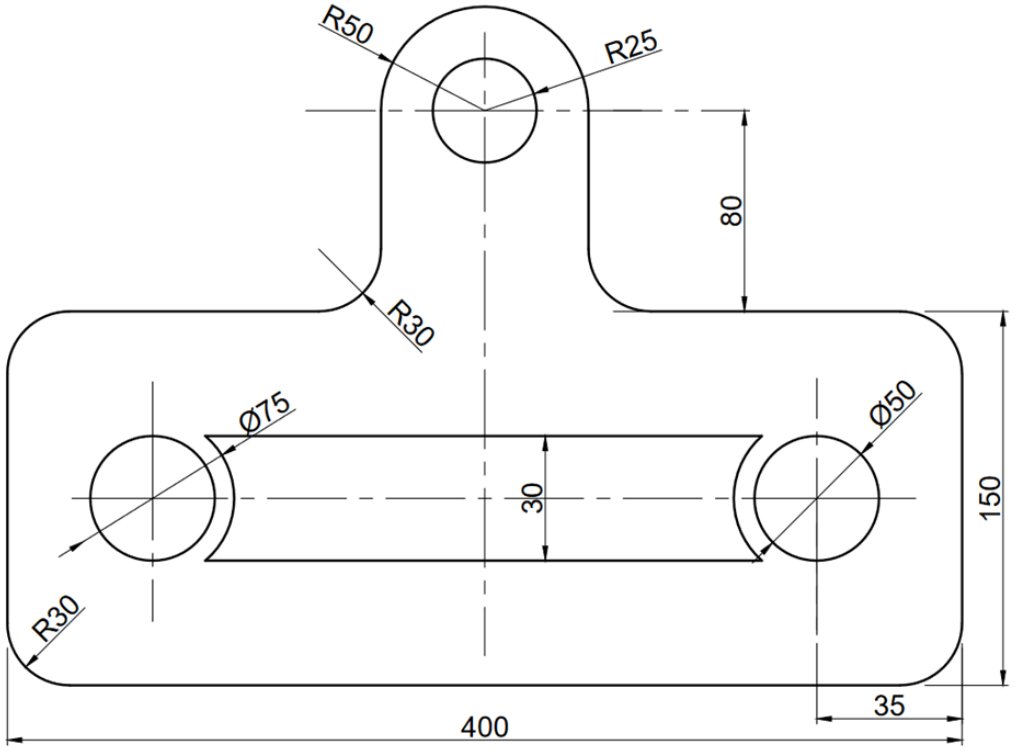


FIGURE 2

[25]

QUESTION 3

FIGURE 3 shows a sectional view of a pulley system assembly drawing in orthographic projection.

3.1 To scale 1:2, draw the given sectional view on an A4 DRAWING SHEET using CAD software. (20)

3.2 Include all dimensions on the drawing. (5)

3.3 Include a title bar with your STUDENT NUMBER, the CENTRE NUMBER, scale, date and QUESTION NUMBER. (4)

3.4 Plot the drawing and candidate information on an A4 DRAWING SHEET. (1)

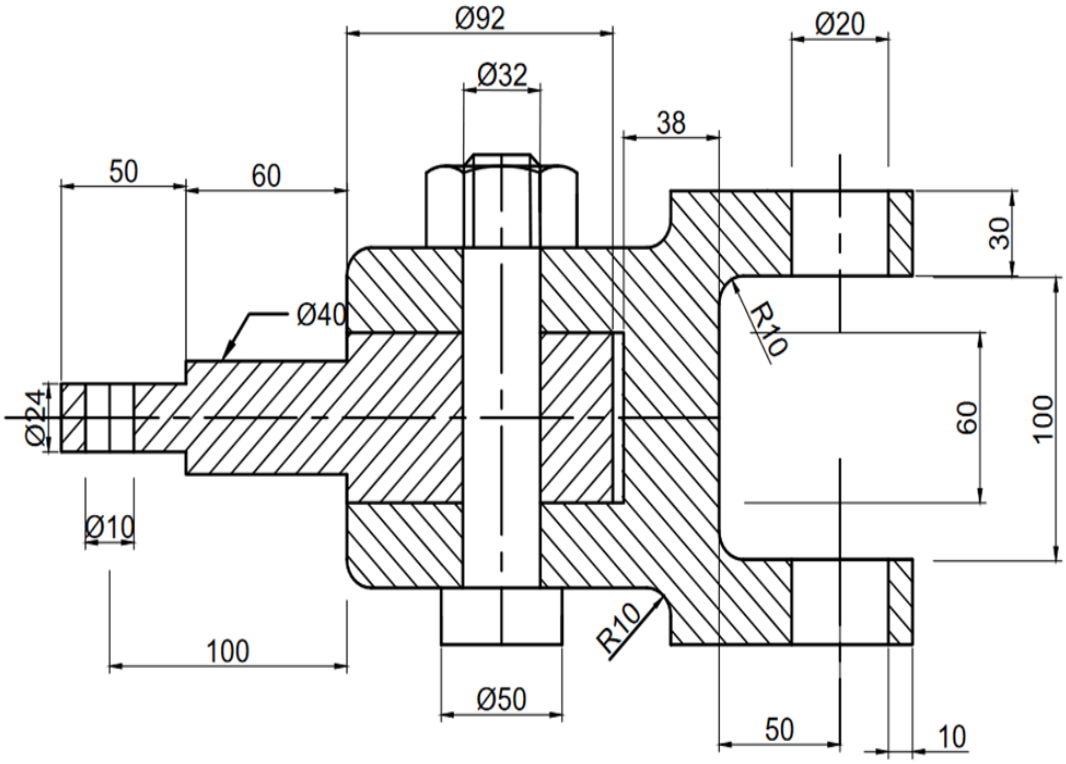


FIGURE 3

[30]

QUESTION 4

FIGURE 4 shows an isometric view of a component.

To scale 1:2, draw, in first-angle orthographic projection, the following views of the component on an A4 DRAWING SHEET using CAD software. No hidden details are required.

4.1 The front view as seen in the direction of arrow F. (7)

4.2 The left view as seen in the direction of arrow L. (6)

4.3 The top view as seen in the direction of arrow T. (9)

4.4 Include any SIX dimensions on the views. (6)

4.5 Include a title bar with your STUDENT NUMBER, the CENTRE NUMBER, scale, date and QUESTION NUMBER. (3)

4.6 Plot the drawing and candidate information on an A4 DRAWING SHEET. (2)

4.7 Insert the correct orthographic projection symbol. (2)

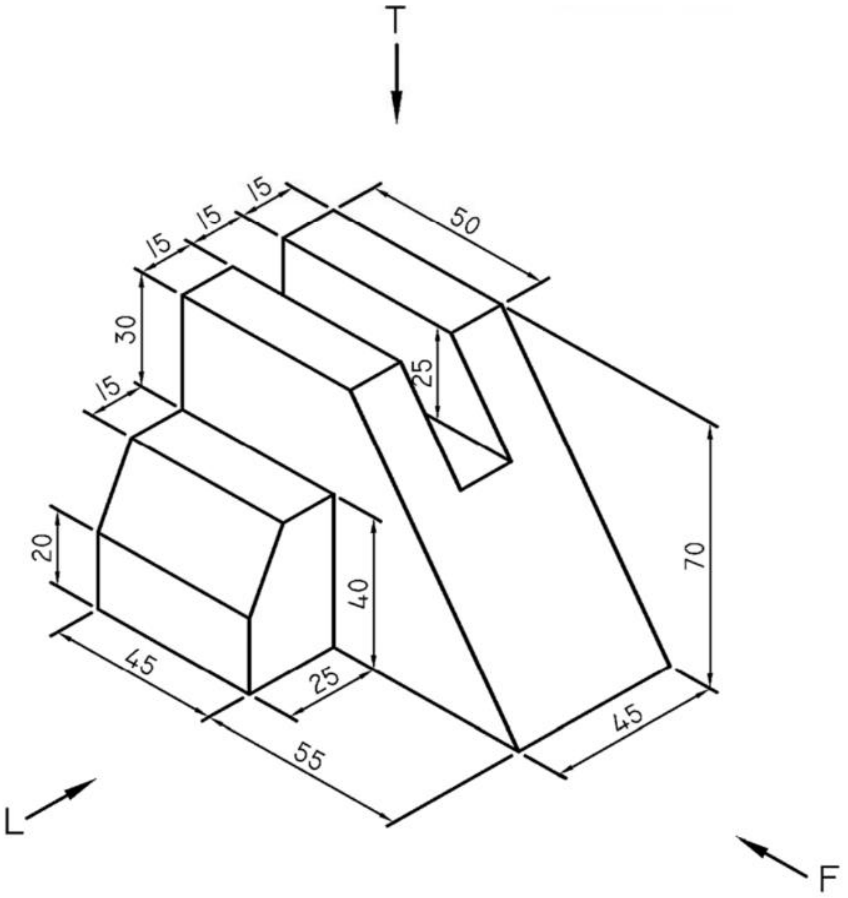


FIGURE 4

[35]

TOTAL: 100

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