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)

26 November 2019 (X-Paper)
09:00–13:00

REQUIREMENTS: A4 drawing sheets

This question paper consists of 4 pages and 2 diagram sheets.

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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, in proportion and fully labelled.
6. ALL abbreviations and symbols must comply with the latest National Building Regulations and ALL relevant SANS (SABS) codes.
7. Work neatly.

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QUESTION 1

1.1 Explain each of the following computer terms:

1.1.1 Application programming interface (API)

1.1.2 ASCII

1.1.3 Windows

1.1.4 Zoom

1.1.5 Entity

(5 × 1) (5)

1.2 Redraw the shapes shown in FIGURE 1. Include a title bar, STUDENT NUMBER, CENTRE NUMBER, scale, date and QUESTION NUMBER.

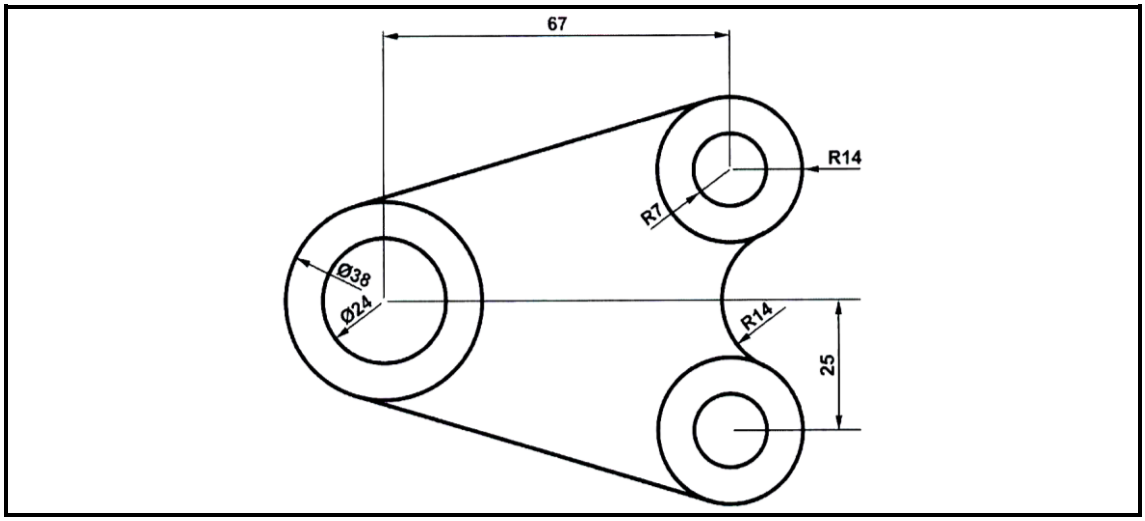


FIGURE 1 (4)

1.3 What is a *bill of materials*? (1)

[10]

QUESTION 2

FIGURE 2, DIAGRAM SHEET 1 (attached), shows a lever.

2.1 Draw, to scale 1:1, the component. (15)

2.2 Include ALL dimensions on the drawing. (4)

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

2.4 Plot the drawing on an A4 DRAWING SHEET. (3)

[25]

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QUESTION 3

FIGURE 3, DIAGRAM SHEET 1 (attached), shows the primary views of an object in first-angle orthographic projection.

3.1 Draw, to scale 1:2, the TWO given views of the component. (14)

3.2 Include ALL dimensions on the drawing. (6)

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

3.4 Plot the drawing on an A4 DRAWING SHEET. (4)

3.5 Insert the correct orthographic projection symbol. (2)

[30]

QUESTION 4

FIGURE 4, DIAGRAM SHEET 2 (attached), shows an isometric view of an object. ALL hidden lines are included.

Draw, to scale 1:2, the following views of the component in first-angle orthographic projection (including ALL hidden lines and dimensions):

4.1 The front view as seen in the direction of arrow A (10)

4.2 The left view (10)

4.3 The top view (10)

4.4 Include a title bar, STUDENT NUMBER, CENTRE NUMBER, scale, date and QUESTION NUMBER. (1)

4.5 Plot the drawing on an A4 DRAWING SHEET. (3)

4.6 Insert the correct orthographic projection symbol. (1)

[35]

TOTAL: 100

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DIAGRAM SHEET 1

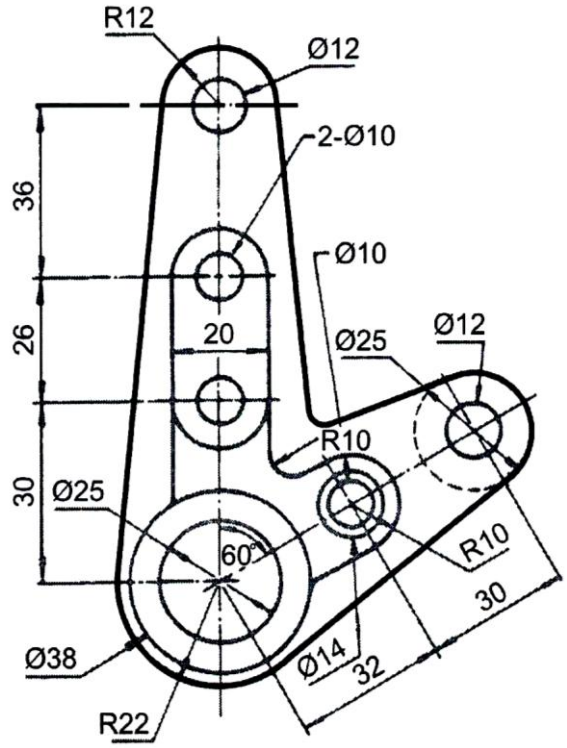


FIGURE 2

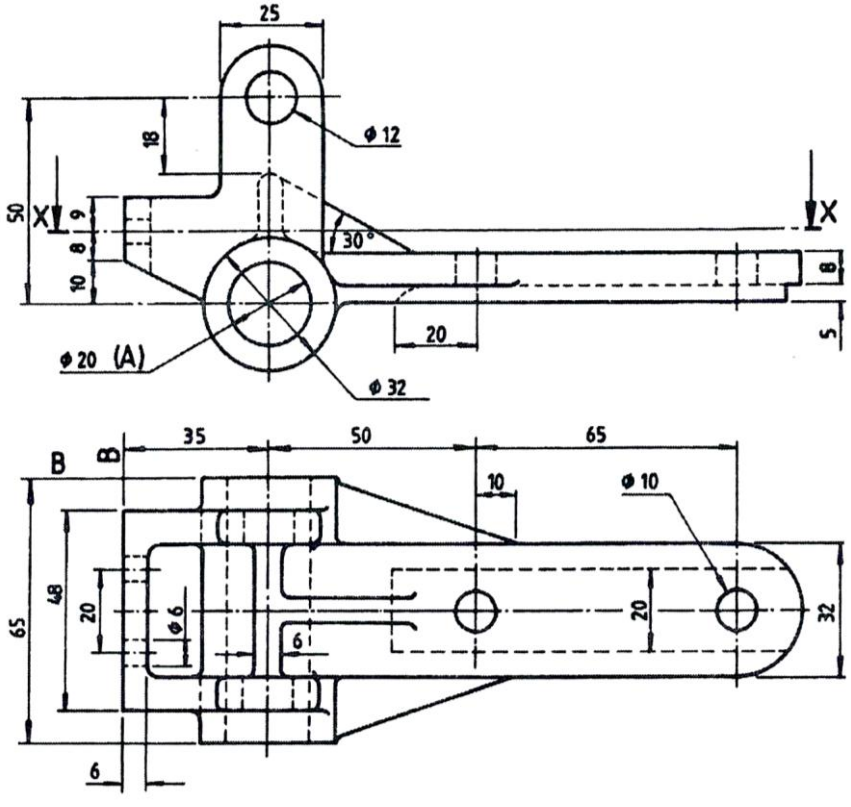


FIGURE 3

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DIAGRAM SHEET 2

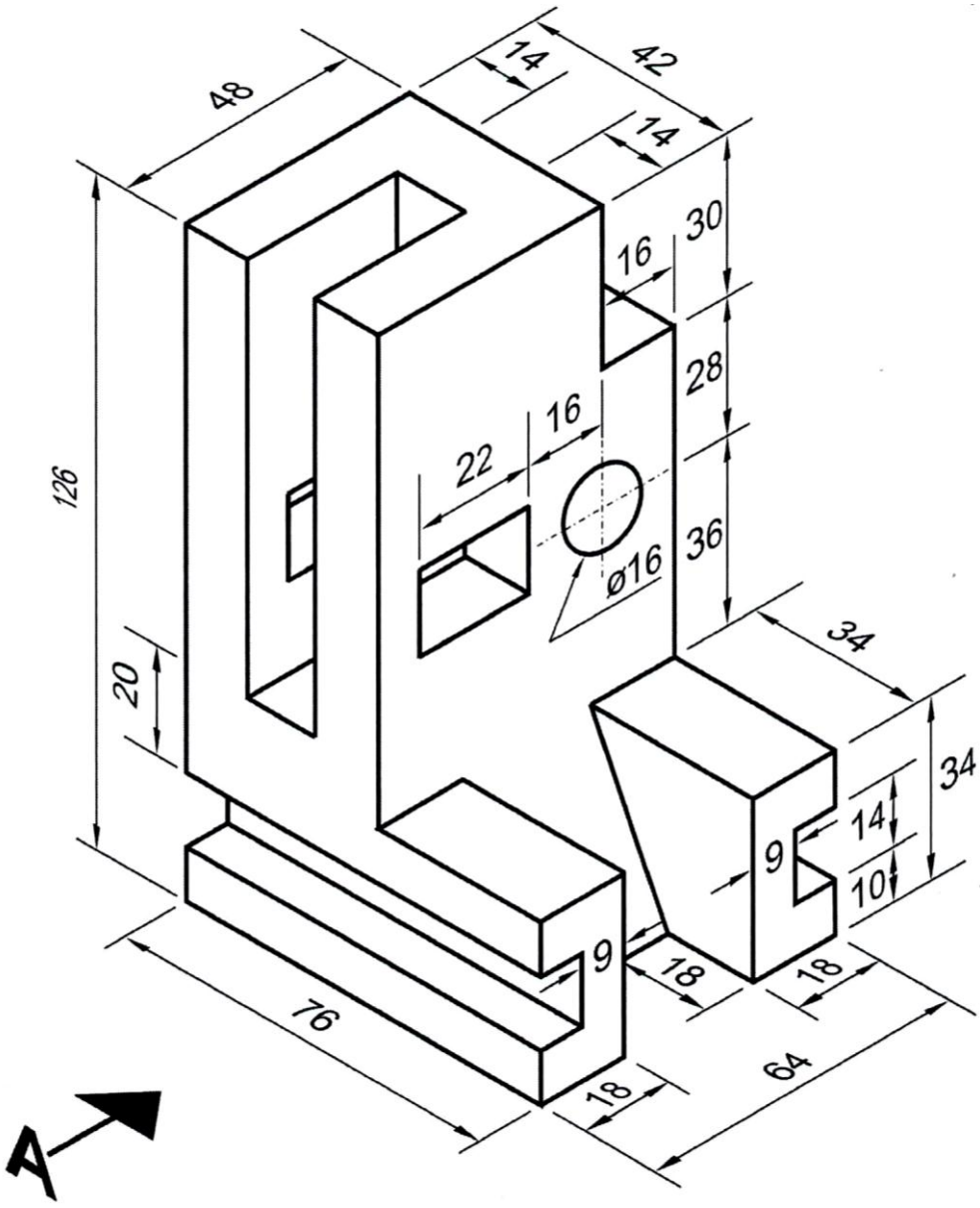


FIGURE 4

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