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)

23 November 2018 (X-Paper)
09:00–13:00

REQUIREMENTS: THREE 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. Produce drawings, sketches and diagrams with CAD software.
5. ALL questions must be answered on the A4 DRAWING SHEETS.
6. Clearly cross out ALL work you do NOT want to be marked.
7. ALL abbreviations and symbols must comply with the latest National Building Regulations and ALL relevant SANS (SABS) codes.
8. Candidates will be responsible, with suitable supervision, for printing/plotting their own drawings.
9. Work neatly.

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QUESTION 1

Answer the following questions using CAD software.

1.1 Explain each of the following computer-glossary terms:

1.1.1 Algorithm

1.1.2 Alphanumeric

1.1.3 CADD

1.1.4 ISO

1.1.5 Aspect ratio

(5 × 2) (10)

1.2 What is *Snap to grid* used for? (2)

[12]

QUESTION 2

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

2.1 Draw, to scale 1:2, the machine lever on an A4 DRAWING SHEET using CAD software. (15)

2.2 Show ALL dimensions on the drawing. (4)

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

[22]

QUESTION 3

FIGURE 2, DIAGRAM SHEET 1 (attached), shows the primary views of a pivot-bracket assembly in third-angle orthographic projection.

Draw, to scale 1:4, the following views of the component on an A4 DRAWING SHEET using CAD software:

3.1 The TWO given views (14)

3.2 Show ALL dimensions on the drawing. (6)

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

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3.4 Show the title and scale. (2)

3.5 Show the correct orthographic projection symbol. (4)
[30]

QUESTION 4

FIGURE 3, 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 (include ALL hidden lines and dimensions) on an A4 DRAWING SHEET using CAD software:

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

4.5 Show the correct orthographic projection symbol. (3)
[36]

TOTAL: 100

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DIAGRAM SHEET 1

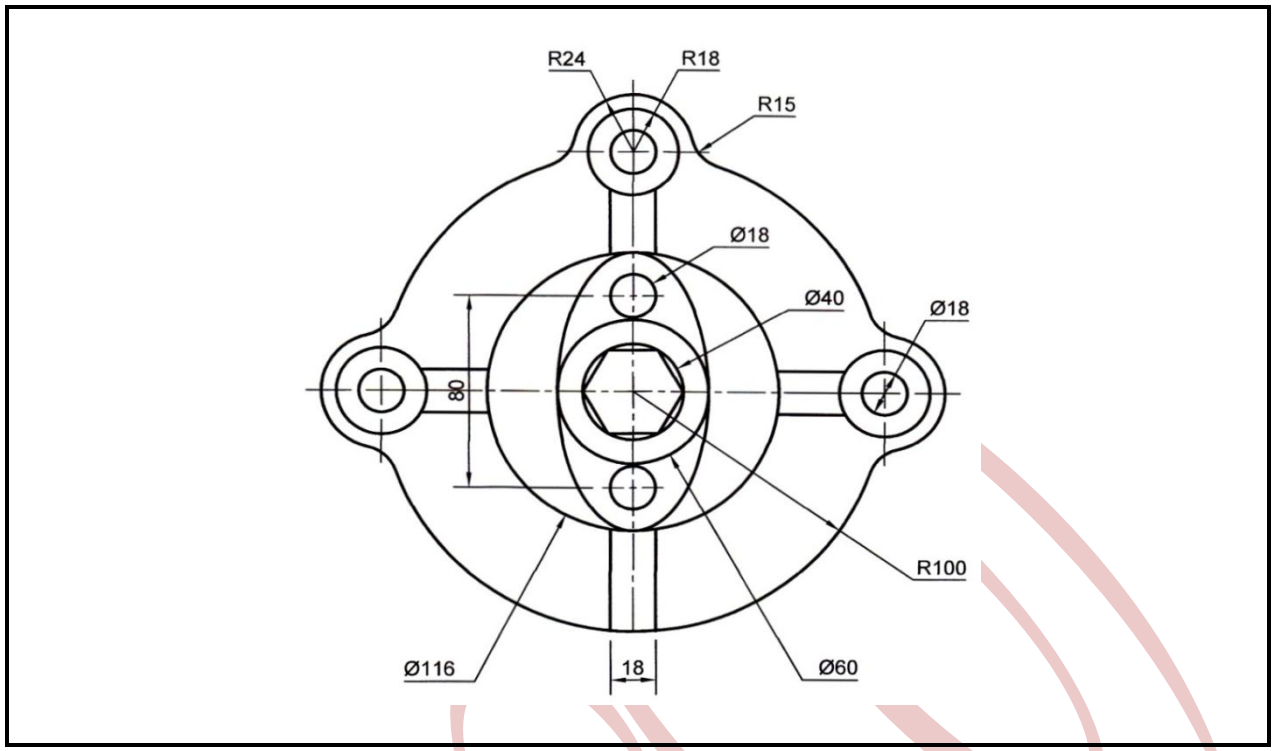


FIGURE 1

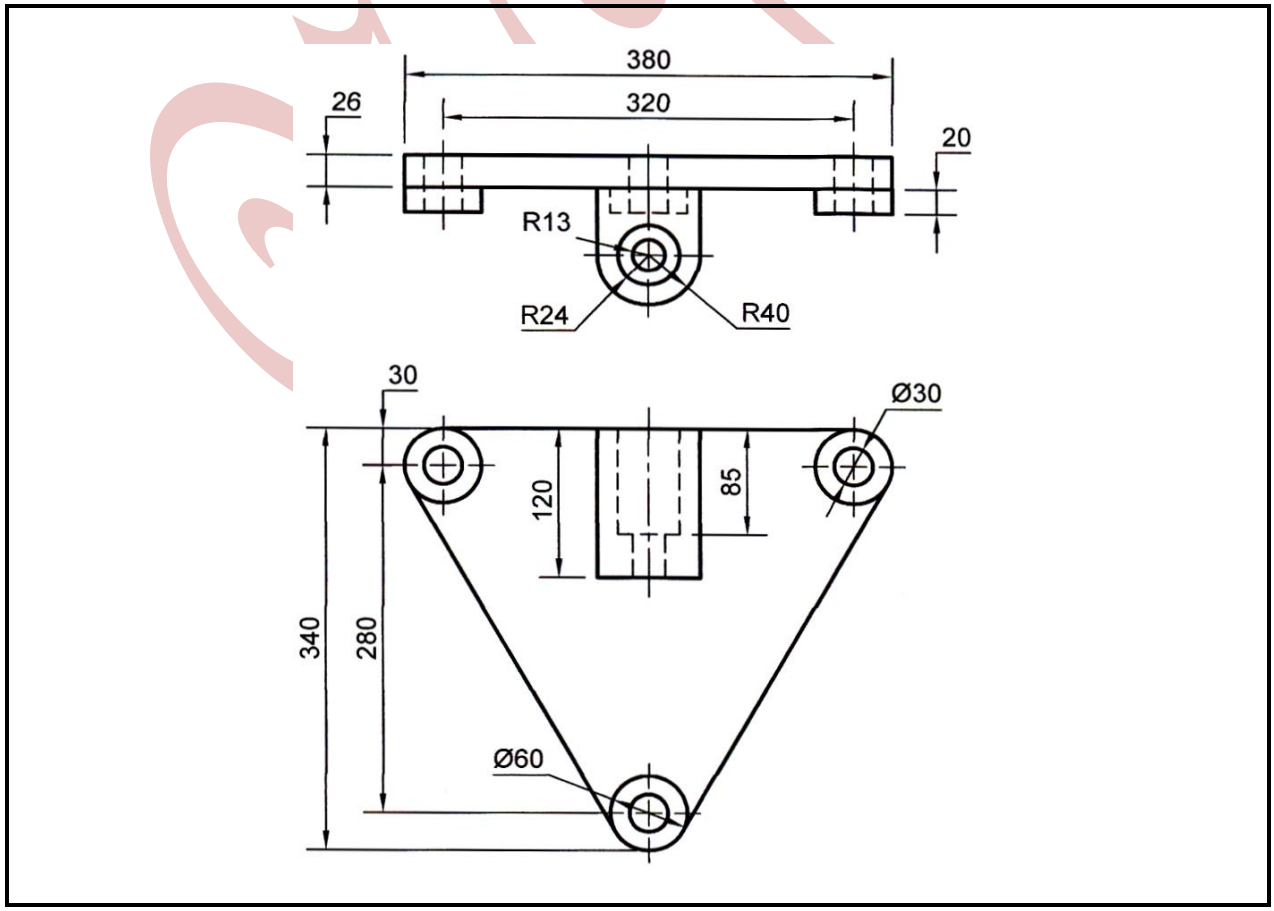


FIGURE 2

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DIAGRAM SHEET 2

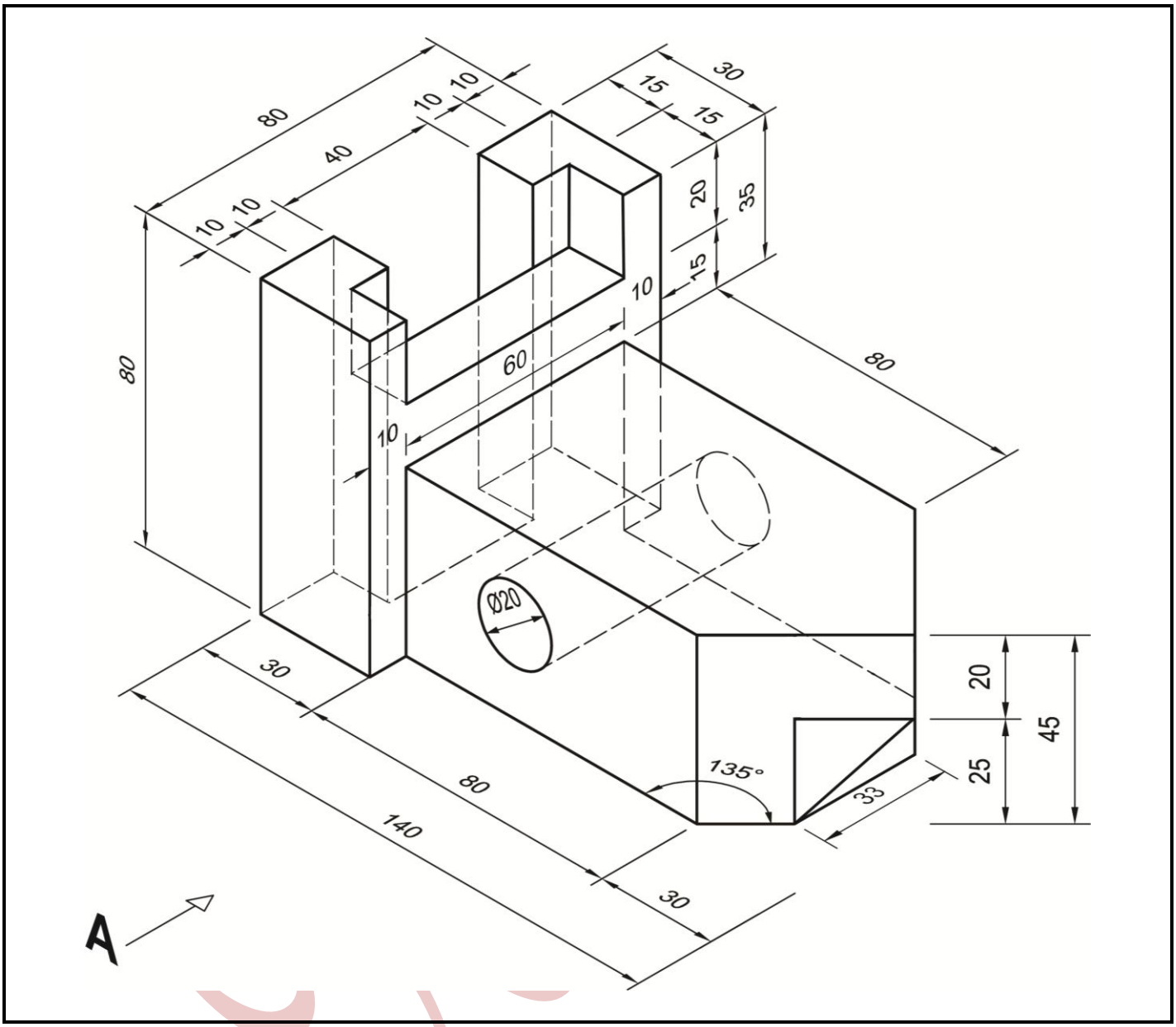


FIGURE 3

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