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)

13 March 2020 (X-paper)
09:00–13:00

REQUIREMENTS: **A4 drawing sheets**
Computer with CAD software

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

559Q2S2013

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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. Make all drawings, sketches and diagrams with CAD software on A4 DRAWING SHEETS.
5. Freehand drawings, sketches and/or diagrams must be neat, reasonably large, in proportion and fully labelled.
6. Rule off across the page after each question.
7. Clearly cross out all work you do not want to be marked.
8. All abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS) codes.
9. Write neatly and legibly.

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QUESTION 1

1.1 Write each of the following computer terms in full:

1.1.1 API

1.1.2 AEC

1.1.3 ANSI

1.1.4 ASCII

(4 × 1) (4)

1.2 Draw, to scale 1:2, the shapes shown in FIGURE 1, DIAGRAM SHEET 1 (attached), using the given dimensions and size. Include a title bar with your student number, centre number, the scale, date and question number. (6)

[10]

QUESTION 2

FIGURE 2, DIAGRAM SHEET 1 (attached), shows a representation of a wall bracket.

2.1 Draw, to scale 1:6, the component. (15)

2.2 Include all dimensions on the drawing. (4)

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

2.4 Plot the drawing and candidate information on an A4 drawing sheet. (3)

[25]

QUESTION 3

FIGURE 3, DIAGRAM SHEET 1 (attached), shows a sectional view of a pulley system assembly drawing in orthographic projection.

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

3.2 Include all dimensions on the drawing. (6)

3.3 Include a title bar with your student number, centre number, the scale, date and question number. (4)

3.4 Plot the drawing on an A4 drawing sheet. (4)

3.5 Insert crosshatching on each component as shown. (2)

[30]

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QUESTION 4

FIGURE 4, DIAGRAM SHEET 2 (attached), shows an isometric view of a component. All hidden lines are included.

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

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

4.1.2 The right view (10)

4.1.3 The top view (10)

4.2 Include a title bar with your student number, centre number, the scale, date and question number. (1)

4.3 Plot the drawing on an A4 drawing sheet. (3)

4.4 Insert the correct orthographic projection symbol. (1)

[35]

TOTAL: 100

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DIAGRAM SHEET 1

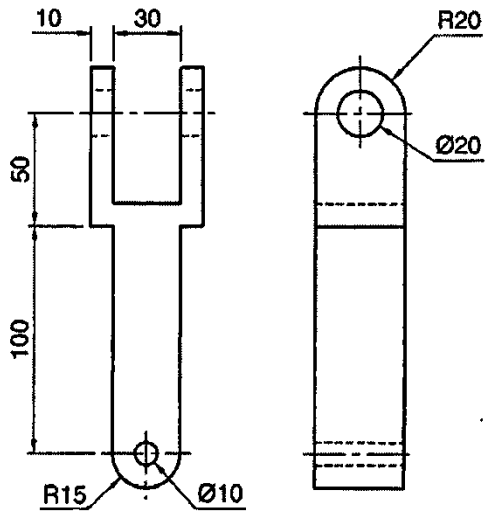


FIGURE 1

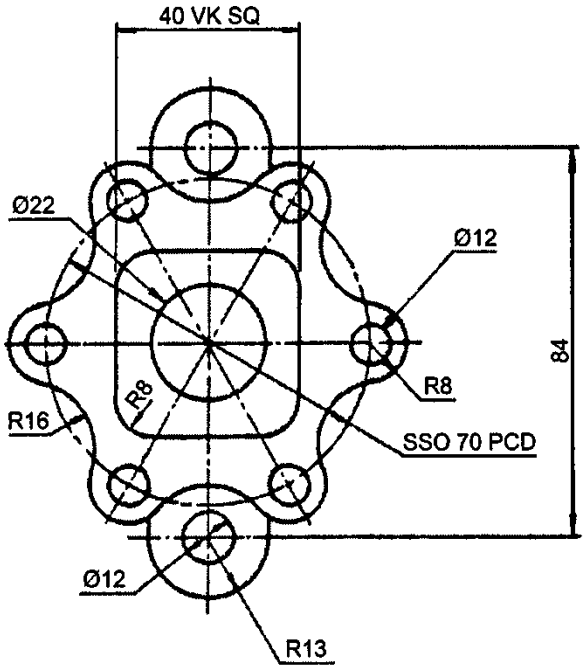


FIGURE 2

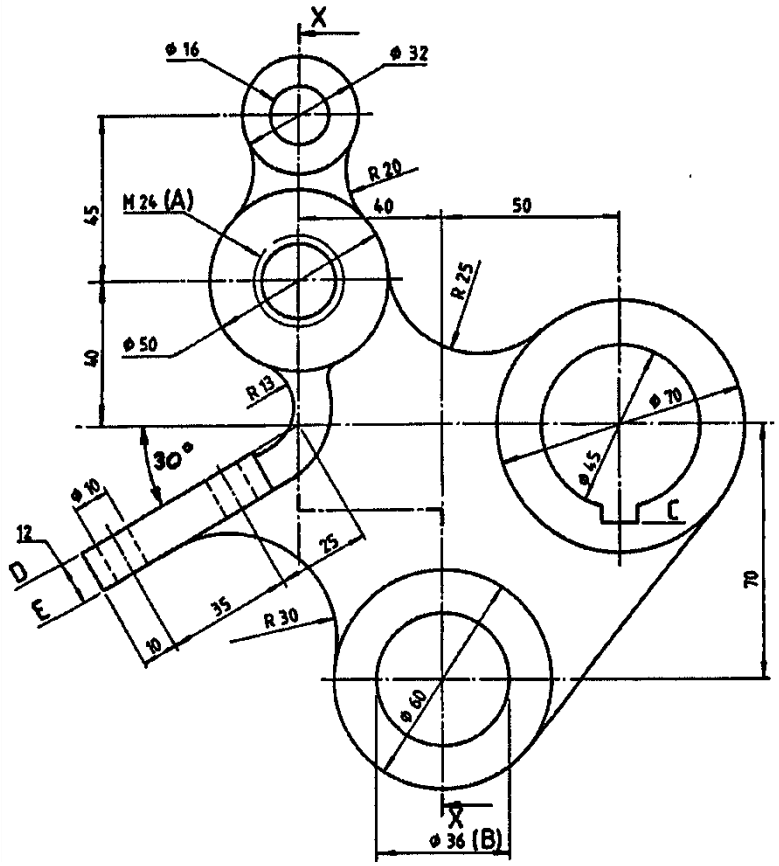


FIGURE 3

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DIAGRAM SHEET 2

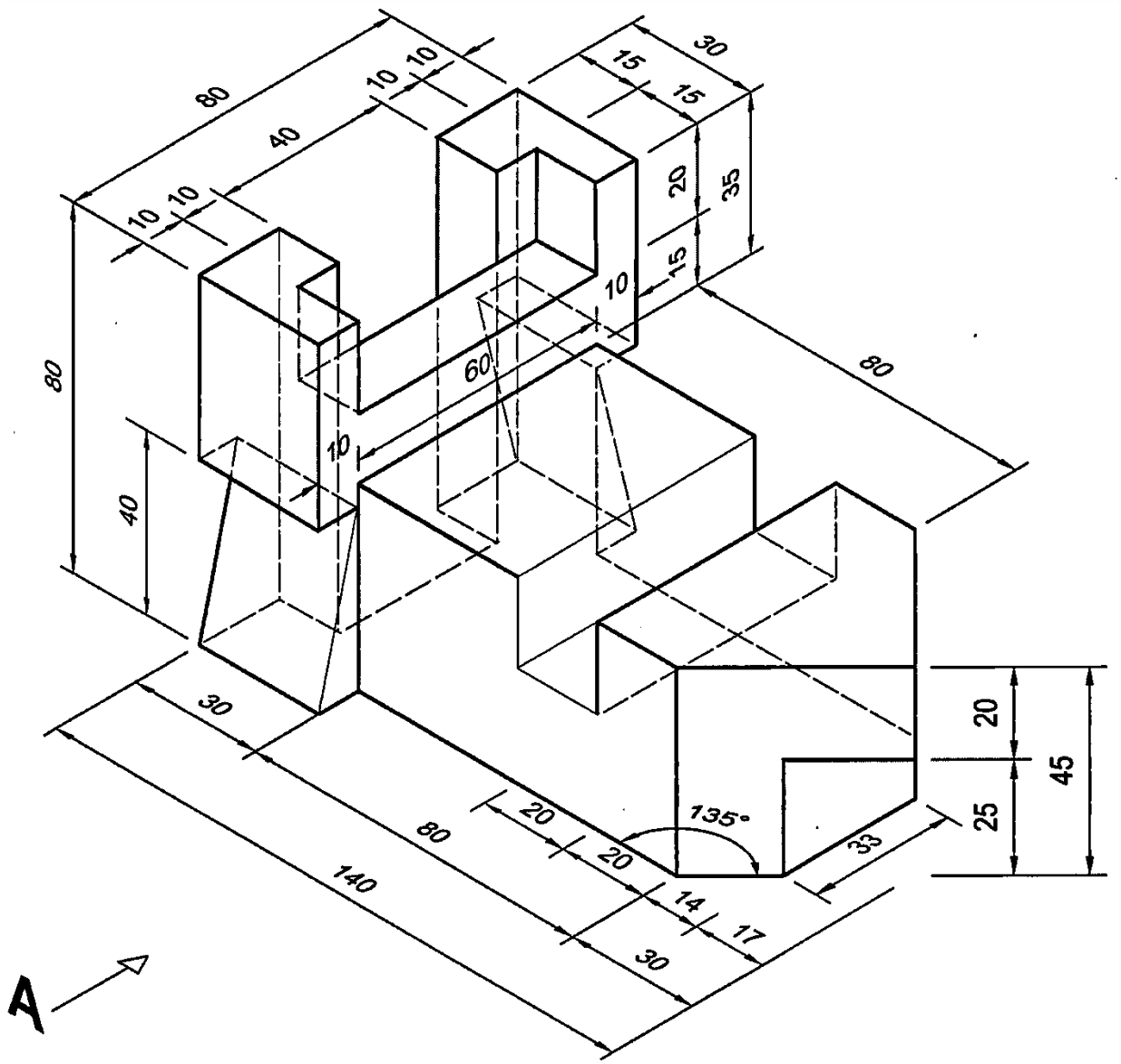


FIGURE 4

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