



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

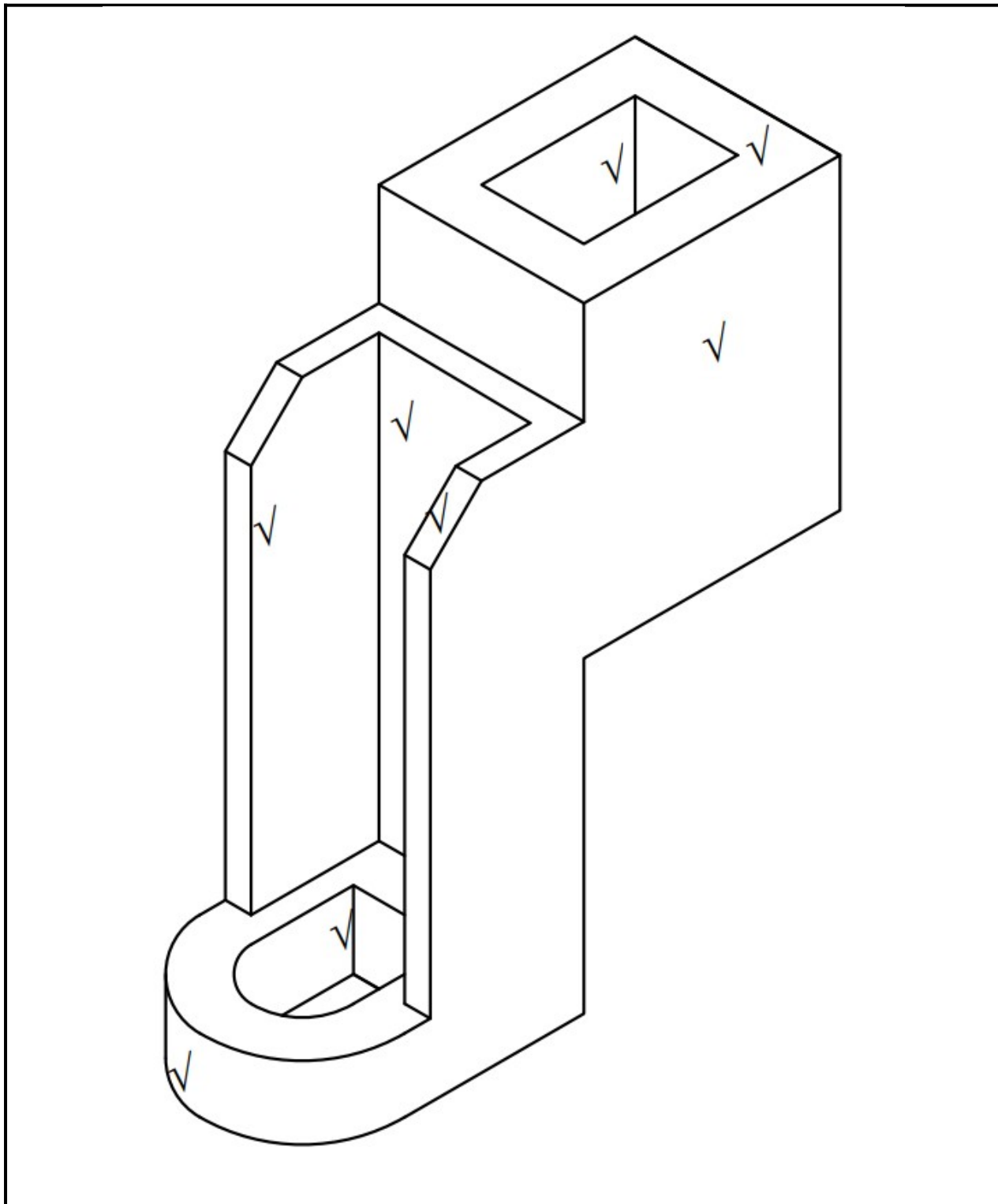
NATIONAL CERTIFICATE ENGINEERING DRAWING N3

11 August 2023

This marking guideline consists of 10 pages.

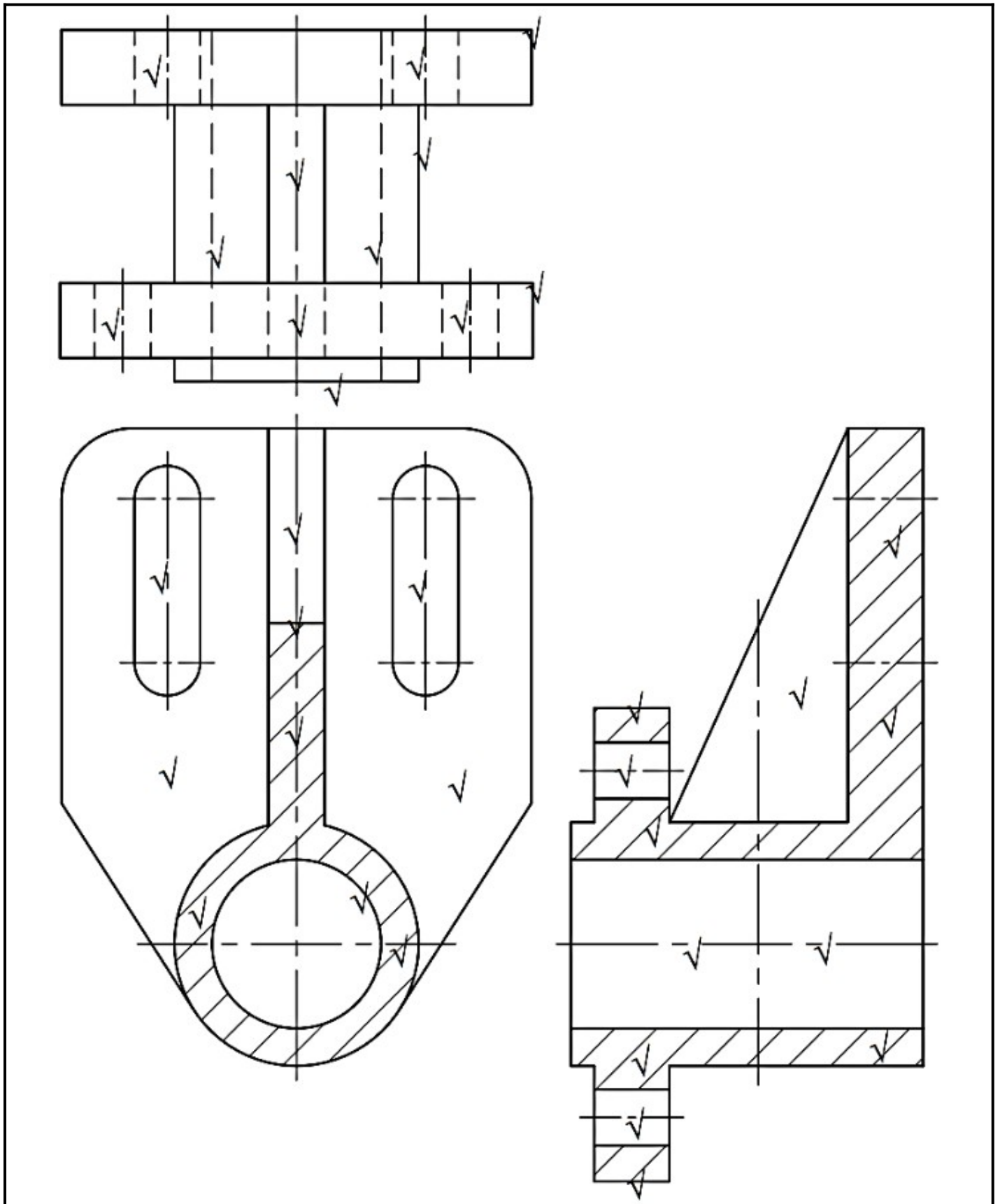
INSTRUCTIONS AND INFORMATION

1. Copying and scanning of drawings will affect the accuracy of the drawings on the marking guideline.
2. All markers must prepare their own marking guideline to use during the marking of candidates' drawings.

QUESTION 1: FREEHAND DRAWING**MARK ALLOCATION**

Correctness: ½ mark for each of the areas indicated in the marking guideline	4
Line work	3
Accuracy and proportion	3

[10]

QUESTION 2: SECTIONAL DRAWING

MARK ALLOCATION FOR CORRECTNESS**FSFV**

1½ marks for correct sectioning	1½ marks
½ mark for the Ø36 hole	½ mark
½ mark for the line indicating the cutting plane	½ mark
½ mark for the web not sectioned	½ mark
½ mark for each slot	1 mark
1 mark for the back plate not sectioned	1 mark

TOTAL **5 marks****FSRV**

3 marks for correct sectioning	3 marks
½ mark for not drawing the slot	½ mark
½ mark for each Ø12 not sectioned	1 mark
1 mark for the Ø36 hole not sectioned	1 mark
½ mark for the web not sectioned	½ mark

TOTAL **6 marks****TV**

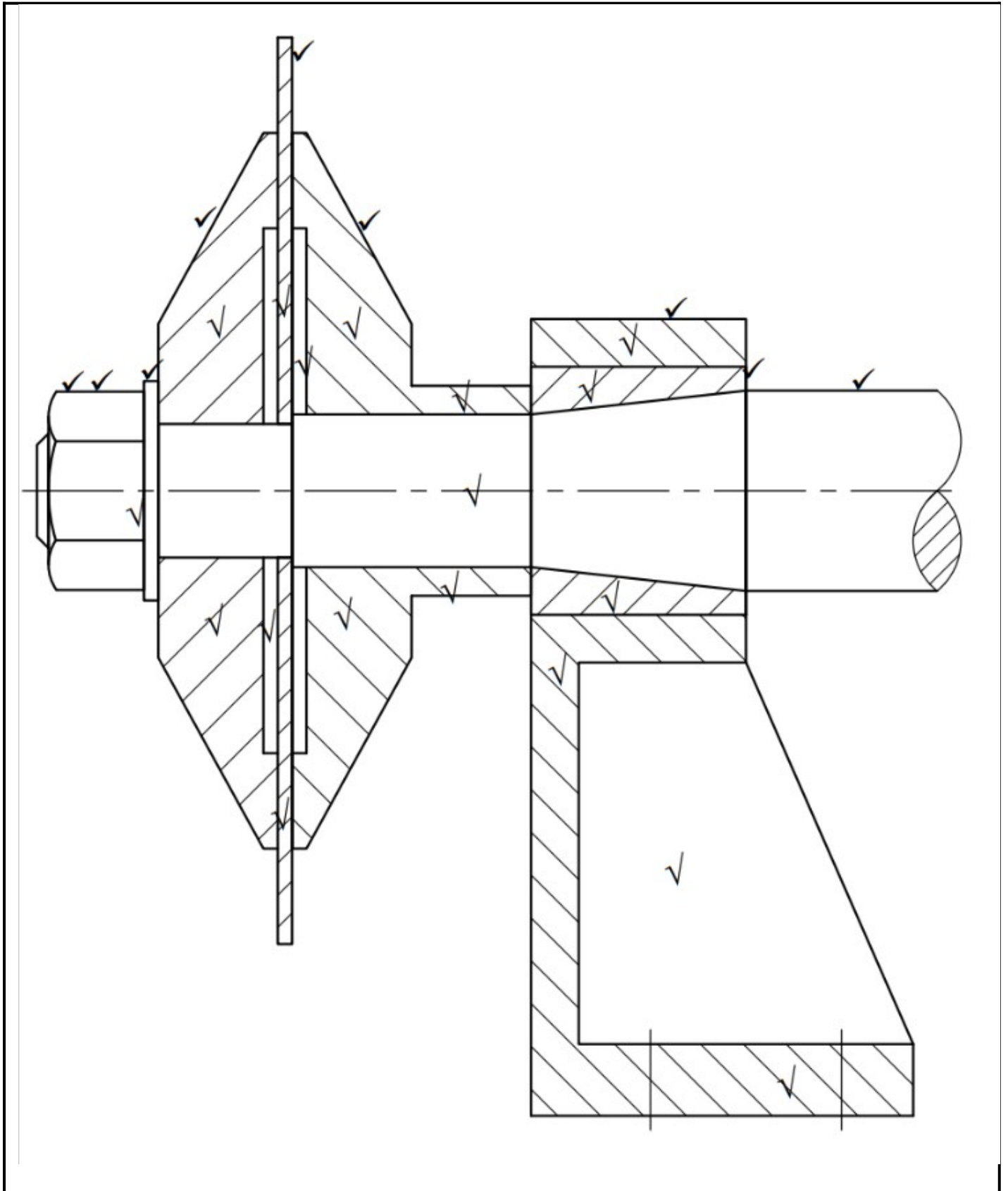
½ mark for the top view of the back plate	½ mark
½ mark for the top view of the 80 × 80 flange	½ mark
½ mark for the Ø52 cylinder	½ mark
½ mark for the hidden detail of each slot	1 mark
½ mark for the hidden detail of each of the 3 × Ø12 holes	1½ mark
1 mark for the hidden detail of the Ø36 hole	1 mark
½ mark for the web	½ mark
½ mark for the 5 mm protruding portion	½ mark

TOTAL **6 marks**

MARK ALLOCATION	
Correctness:	
FSFV	5
FSRV	6
TV	6
Line work	3
Accuracy	3
Layout and neatness	2

[25]

QUESTION 3: ASSEMBLY DRAWING



MARK ALLOCATION FOR CORRECTNESS

1 mark for each item correctly assembled 8 marks

Item 1

1½ mark for correct sectioning 1½ mark
 ½ mark for the web not sectioned ½ mark

Item 2

2 marks for correct sectioning 2 mark
 ½ mark for the 3 mm recess ½ mark

Item 3

1 mark for correct sectioning 1 mark
 ½ mark for the 3 mm recess ½ mark

Item 4

1 mark for correct sectioning 1 mark

Item 5

1 mark for correct sectioning 1 mark

Item 6

½ mark for not sectioning the shaft ½ mark

Item 7

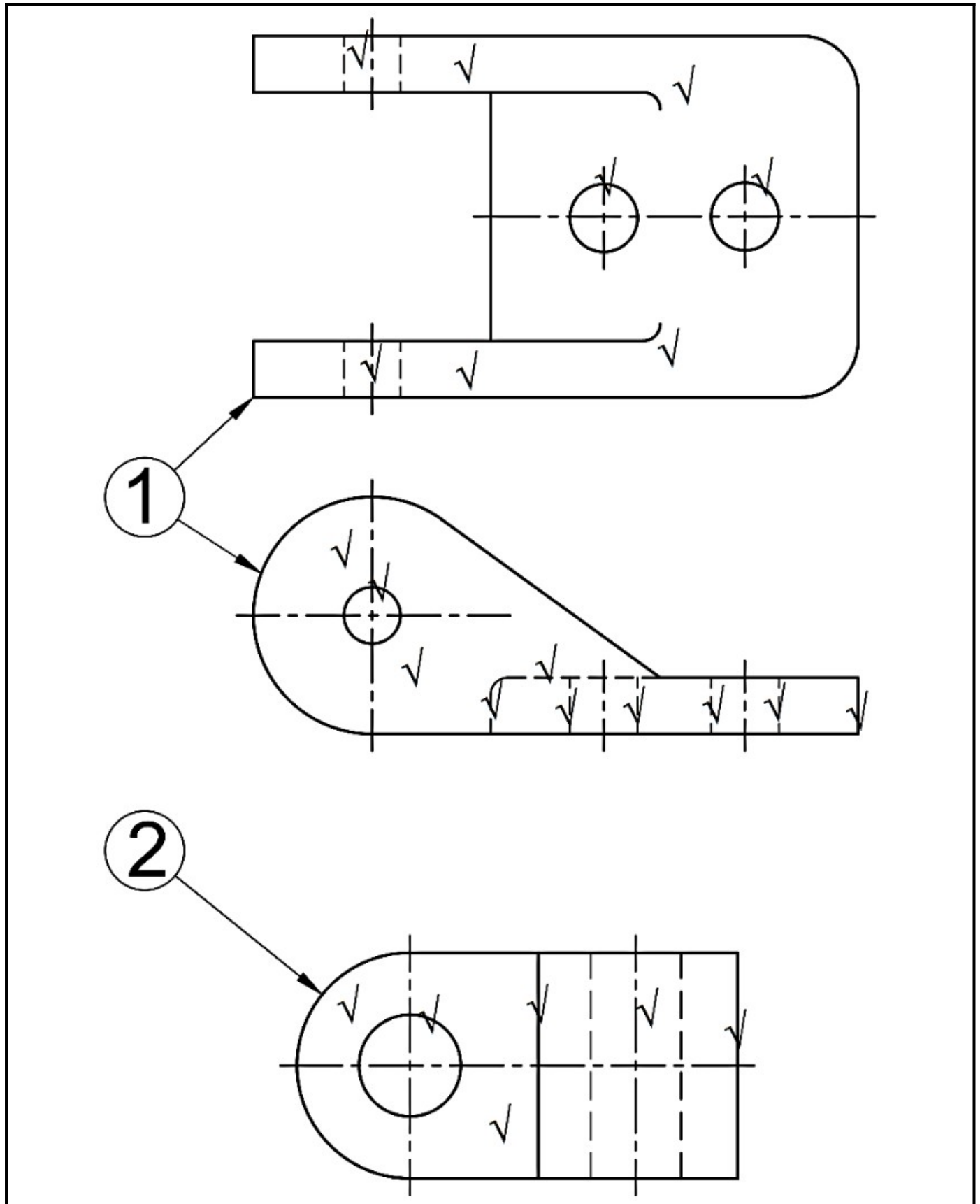
1 mark for correctly drawing the nut 1 mark
 ½ mark for not sectioning the nut and washer ½ mark

TOTAL **18 marks**

MARK ALLOCATION	
Correctness	18
Line work	5
Accuracy	5
Layout and neatness	2

[30]

QUESTION 4: DETAILED DRAWING



MARK ALLOCATION FOR CORRECTNESS**FV (ITEM 1)**

- 1 mark for the upright
- $\frac{1}{2}$ mark for the $\varnothing 10$ hole
- $\frac{1}{2}$ mark for the outline of the base
- $\frac{1}{2}$ mark for each of the 6 hidden detail lines

- 1 mark
- $\frac{1}{2}$ mark
- $\frac{1}{2}$ mark
- 3 mark

TOTAL

5 marks

TV (ITEM 1)

- 1 mark for the base
- $\frac{1}{2}$ mark for each $\varnothing 12$ hole
- $\frac{1}{2}$ mark for the top view of each vertical upright/web
- $\frac{1}{2}$ mark for the hidden detail of each $\varnothing 10$ hole

- 1 mark
- 1 mark
- 1 mark
- 1 mark

TOTAL

4 marks

TV (ITEM 2)

- 1 mark for the top view of the flat portion
- $\frac{1}{2}$ mark for the $\varnothing 18$ hole
- 1 mark for the top view of the cylindrical portion
- $\frac{1}{2}$ mark for the hidden detail of the $\varnothing 16$ hole

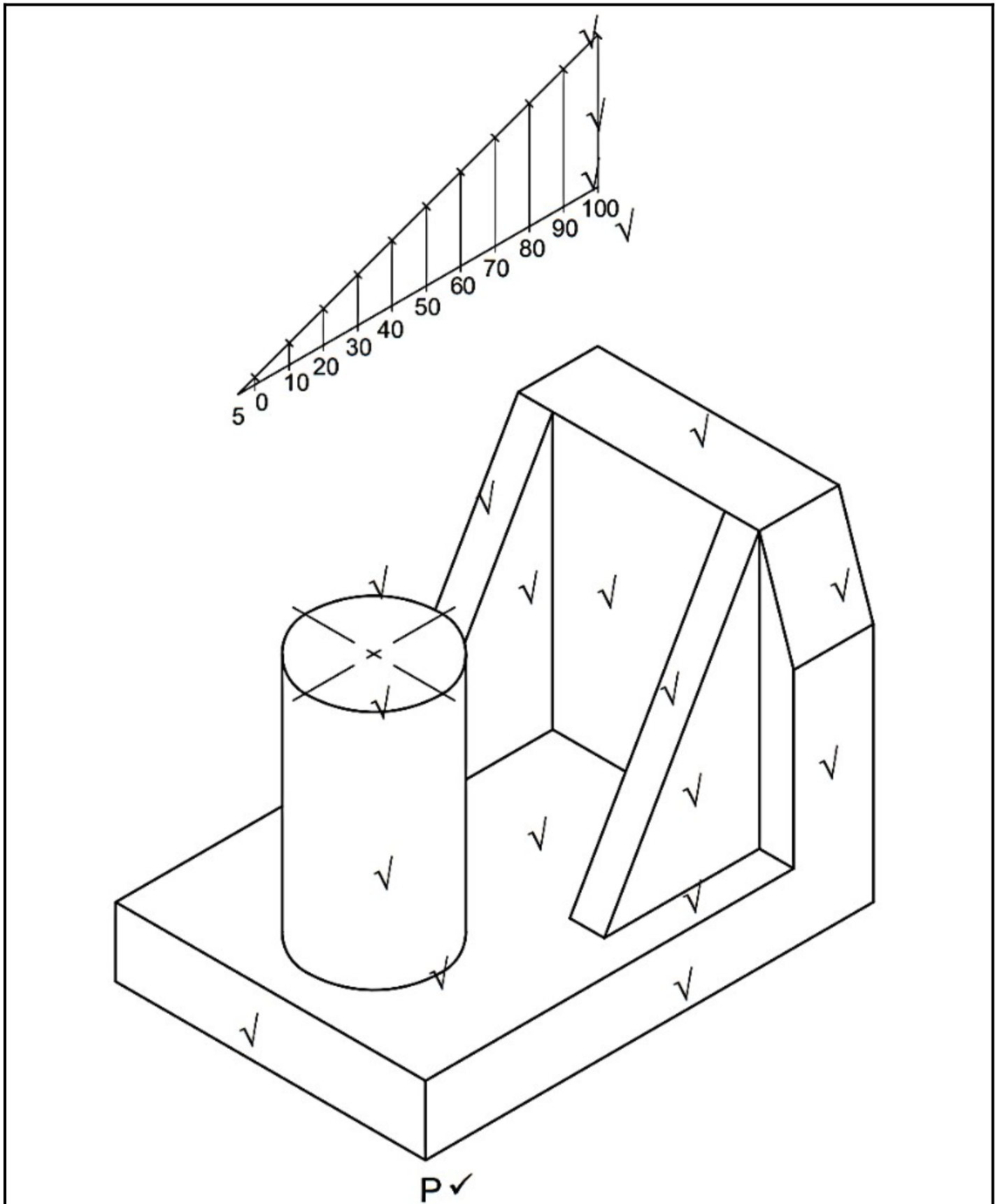
- 1 mark
- $\frac{1}{2}$ mark
- 1 mark
- $\frac{1}{2}$ mark

TOTAL

3 marks

MARK ALLOCATION	
Correctness:	
FV (Item 1)	5
TV (Item 1)	4
TV (Item 2)	3
Line work	3
Accuracy	3
Layout and neatness	2

[20]

QUESTION 5: ISOMETRIC PROJECTION

MARK ALLOCATION FOR CORRECTNESS $\frac{1}{2}$ mark for each of the areas indicated on the marking guideline**8 marks**

MARK ALLOCATION	
Correctness	8
Point P	1
Line work	2
Accuracy	2
Scale	2

[15]**TOTAL: 100**