



**NATIONAL SENIOR CERTIFICATE EXAMINATION  
2012**

**ENGINEERING GRAPHICS AND DESIGN  
PAPER III (CAD) MARKING GUIDELINES**

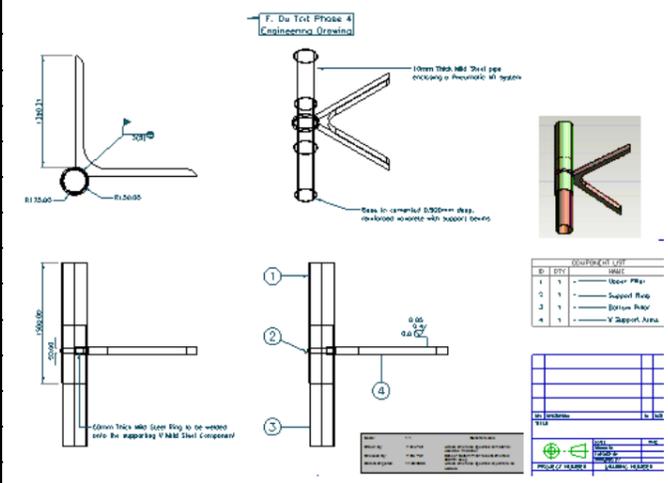
**MARKS: 100  
Time: 2 HRS**

**PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY:**

1. This paper consists of **3 questions**, printed on **4 sheets** including this cover page.
2. **All** the questions must be answered.
3. **Calculators** may be used.
4. The correct **CAD conventions** must be applied throughout this paper.
5. Work should be **saved** and **updated** continuously.
6. Every answered page must be handed in as a **printed sheet (A3/A4)**. This **question paper**, including the cover page, must be **stapled** to your **printed answers**.
7. All the questions must be **saved** and handed to your teacher in **electronic format** as well. (Save in a **DXF** or **PDF** format)
8. Unless specified otherwise, all questions are in **Third Angle Orthographic Projection**.
9. **Dimensions** omitted must be assumed in **proportion** to the rest of the drawing.
10. Every page should have a **frame/border**.
11. Every page should have the **question number** in the top, left hand corner. (Use Arial font)
12. Every page should have your **examination number** in the bottom, right hand corner. (Use Arial font)
13. Show all **constructions**.
14. All visible outlines (A-lines) must be at least **0.5 mm** thick.
15. Your teacher will, in order to **assess** your **competency levels** accurately ( Table A), be watching your keyboard and screen from time to time while you are drawing. This should not distract you.

**TABLE A: To be completed by the invigilator (13)**

The learner was able to	Yes	No
* Open and apply the correct software		
* Set up a drawing page with borders		
* Set up and use layers		
* Apply the snap mode		
* Apply and edit line type and weight		
* Apply and edit scale		
* Modify objects and lines		
* Add and modify dimensions		
* Add and modify text		
* Add and modify tables		
* Open and save files		
* Print correctly		
* Save answers electronically		

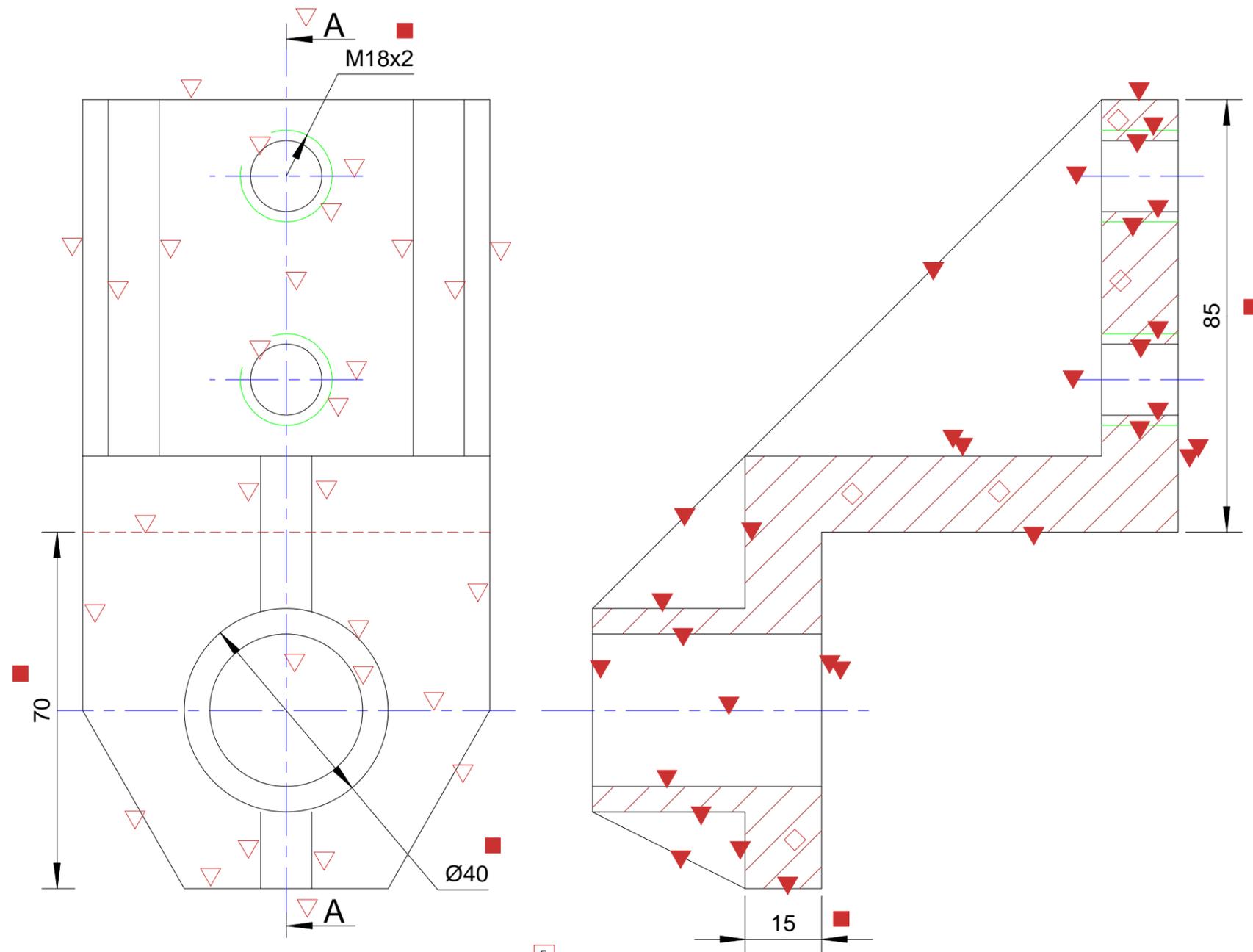


**TABLE B: To be completed by the marker (7)**

Level	7	6	5	4	3	2	1
		80 – 100%	70 – 79%	60 – 69%	50 – 59%	40 – 49%	30 – 39%
Description of competency	A very high level of skill is evident in the drawings.  Drawings are perfect according to size and shape.  Drawings show almost no deviations in size, shape, accuracy or drawing conventions.	A high level of skill is evident in the drawings.  Drawings are almost perfect according to size and shape.  Drawings show very slight deviations in size, shape, accuracy or drawing conventions.	An adequate level of skill is evident in the drawings.  Drawings satisfy size and shape requirements.  Drawings show very slight deviations in size, shape, accuracy or drawing conventions.	A satisfactory level of skill is evident in the drawings.  Drawings satisfy size and shape requirements.  Drawings show slight deviations in size, shape, accuracy or drawing conventions.	A limited skill level is evident in the drawings.  Drawings satisfy limited size and shape requirements.  Drawings show some deviations in size, shape, accuracy or drawing conventions.	A low level of skill is evident in the drawings.  Drawings barely fulfill size and shape requirements.  Drawings are not accurate according to size, shape, accuracy or drawing conventions.	A very low skill level is evident in the drawings.  Drawings are incomplete and show little attention to size, shape, accuracy or drawing conventions.

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Assessment	Possible Mark	Obtained Mark	Checked by
TABLE A and B	20/2	10	
Q1 MECHANICAL		40	
Q2 ISOMETRIC		30	
Q3 LOCUS		20	
<b>Total</b>		<b>100</b>	

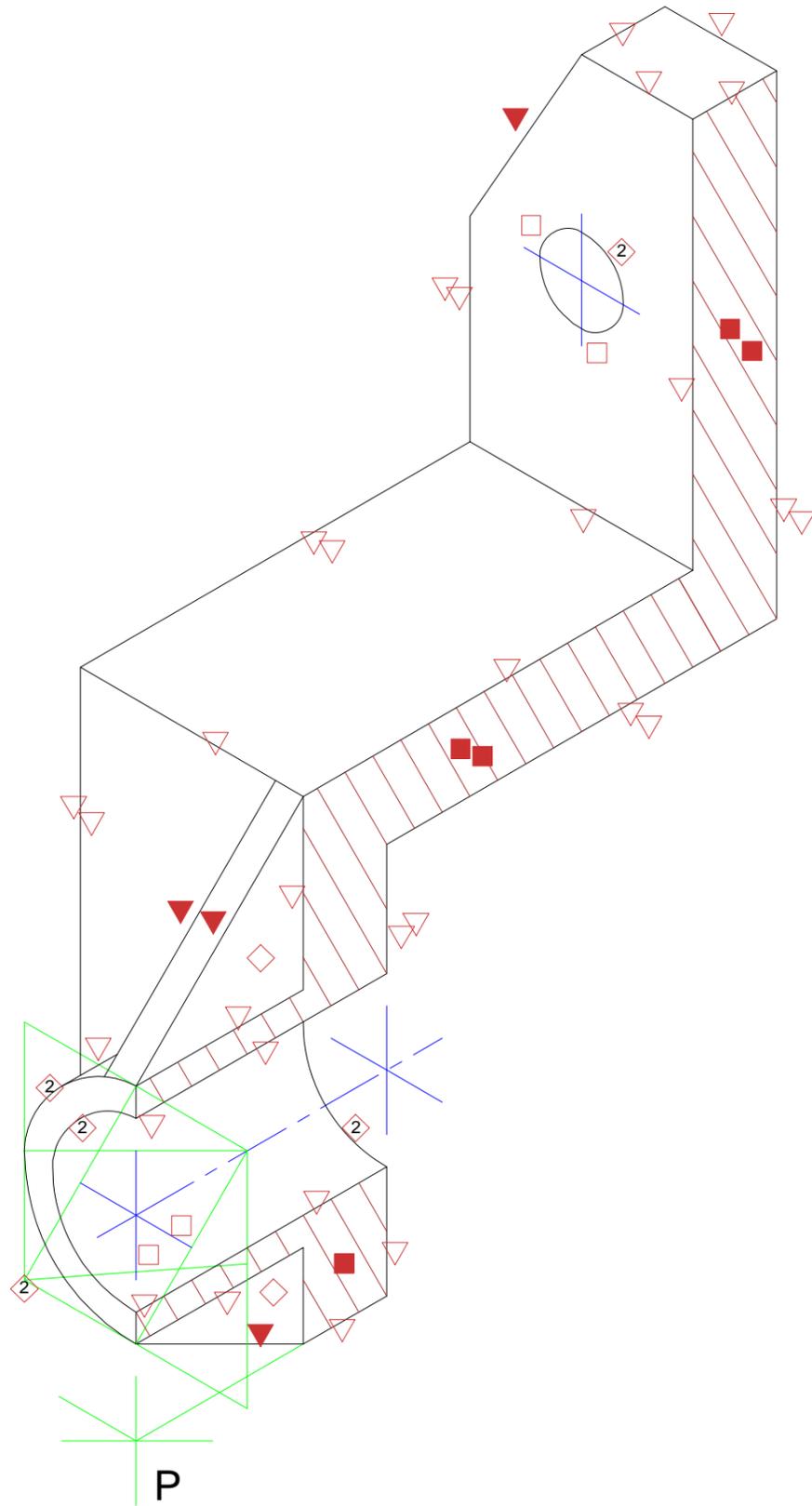
**QUESTION 1 MARKING GUIDELINES**



**BRACKET** SCALE 1:1

Left view	Marks
Redraw LV	30
<b>Front view</b>	
Project FV	30
Title/Scale	5
Dimensions	5
Hatching	5
Correct layout and printing	5
<b>Sub Total</b>	<b>80/2</b>
<b>Total</b>	<b>40</b>

**QUESTION 2 MARKING GUIDELINES**



	Marks
Iso lines	30
Non Iso lines	4
Ellipses	10
Centrelines	4
Hatching	5
Non hatching	2
Correct layout and printing	5
<b>Sub Total</b>	<b>60/2</b>
<b>Total</b>	<b>30</b>

**QUESTION 3 MARKING GUIDELINES**

	Marks
Redraw	18
Construction	12
Locus	5
Correct layout and printing	5
<b>Sub Total</b>	<b>40/2</b>
<b>Total</b>	<b>20</b>

