



## NATIONAL SENIOR CERTIFICATE EXAMINATION 2012

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

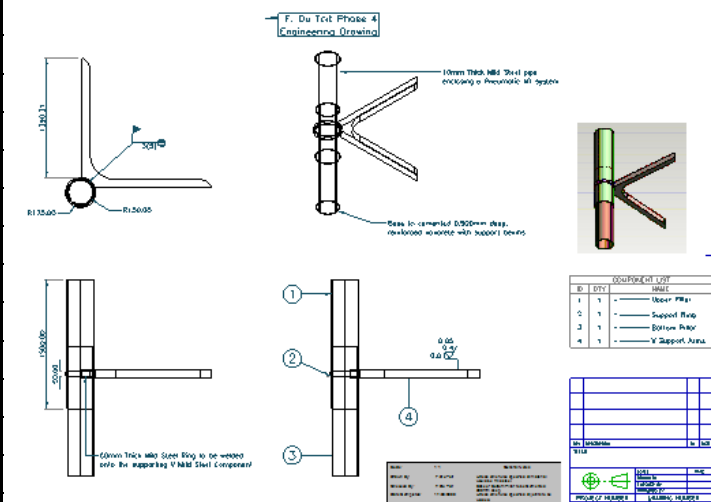
**MARKS: 100**  
**Time: 2 HRS**

#### 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		



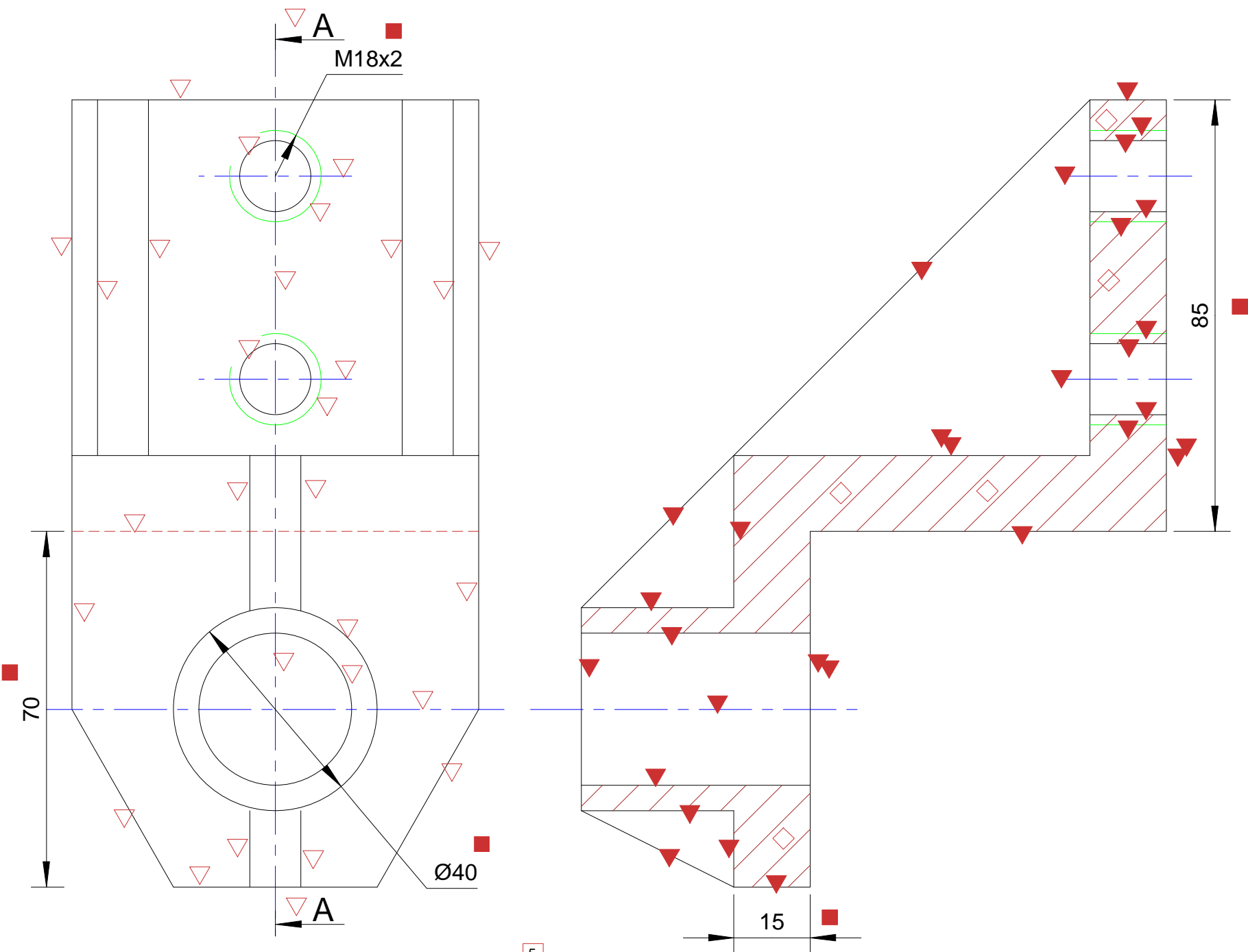
**TABLE B: To be completed by the marker (7)**

Level	7	6	5	4	3	2	1
	80 – 100%	70 – 79%	60 – 69%	50 – 59%	40 – 49%	30 – 39%	0 – 29%
Description of competency	<p>A very high level of skill is evident in the drawings.</p> <p>Drawings are perfect according to size and shape.</p> <p>Drawings show almost no deviations in size, shape, accuracy or drawing conventions.</p>	<p>A high level of skill is evident in the drawings.</p> <p>Drawings are almost perfect according to size and shape.</p> <p>Drawings show very slight deviations in size, shape, accuracy or drawing conventions.</p>	<p>An adequate level of skill is evident in the drawings.</p> <p>Drawings satisfy size and shape requirements.</p> <p>Drawings show very slight deviations in size, shape, accuracy or drawing conventions.</p>	<p>A satisfactory level of skill is evident in the drawings.</p> <p>Drawings satisfy size and shape requirements.</p> <p>Drawings show slight deviations in size, shape, accuracy or drawing conventions.</p>	<p>A limited skill level is evident in the drawings.</p> <p>Drawings satisfy limited size and shape requirements.</p> <p>Drawings show some deviations in size, shape, accuracy or drawing conventions.</p>	<p>A low level of skill is evident in the drawings.</p> <p>Drawings barely fulfill size and shape requirements.</p> <p>Drawings are not accurate according to size, shape, accuracy or drawing conventions.</p>	<p>A very low skill level is evident in the drawings.</p> <p>Drawings are incomplete and show little attention to size, shape, accuracy or drawing conventions.</p>

#### FOR OFFICIAL USE ONLY

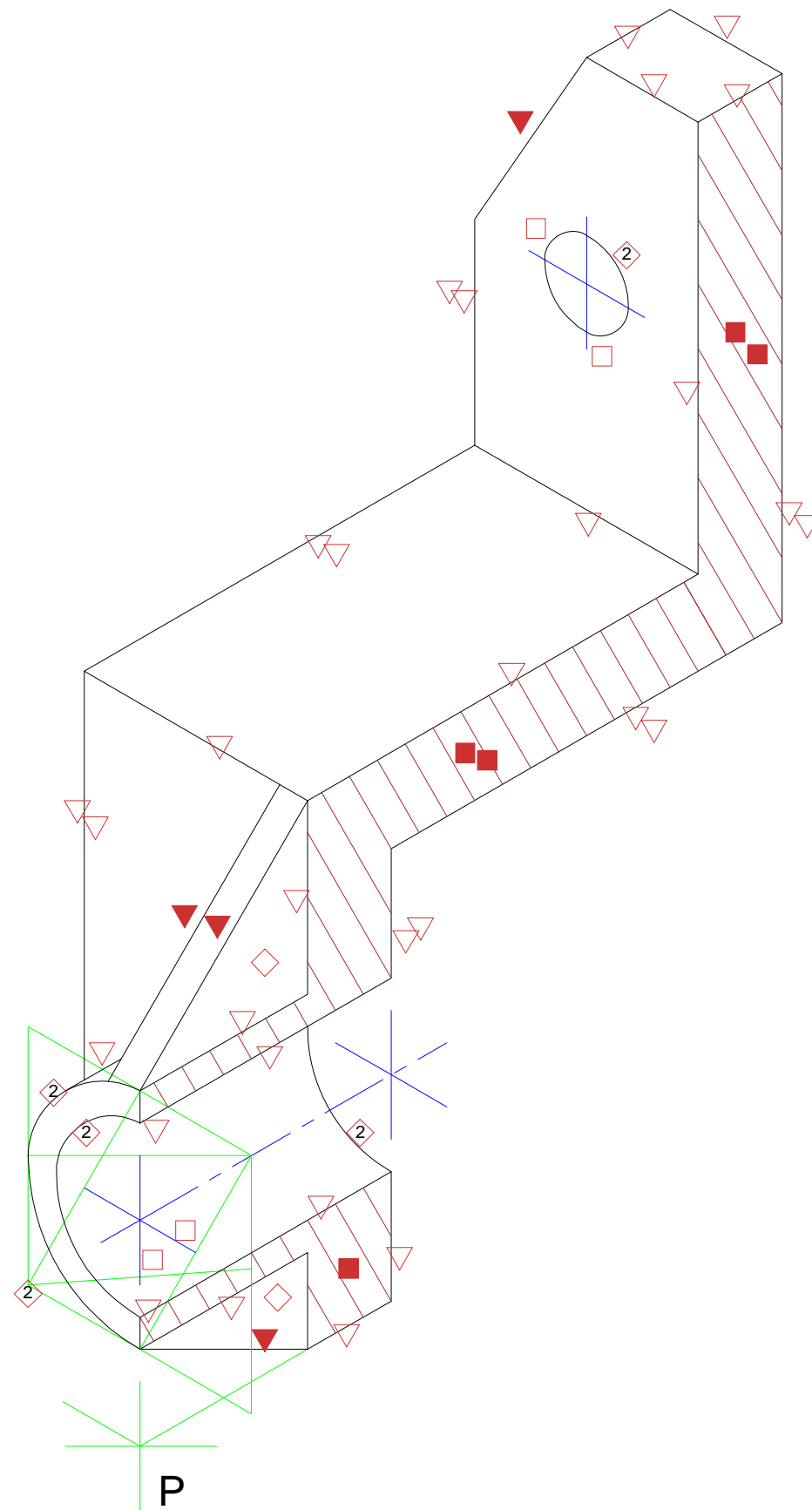
Assessment	Possible Mark	Obtained Mark	Checked by
TABLE A and B	20/2	10	
Q1 MECHANICAL		40	
Q2 ISOMETRIC		30	
Q3 LOCUS		20	
<b>Total</b>		<b>100</b>	

QUESTION 1 MARKING GUIDELINES



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

## 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

3  
5

	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>

