



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle 2023

Marking Scheme

Graphics

Common Level

Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

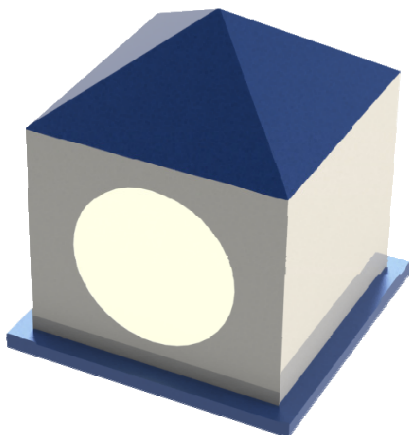
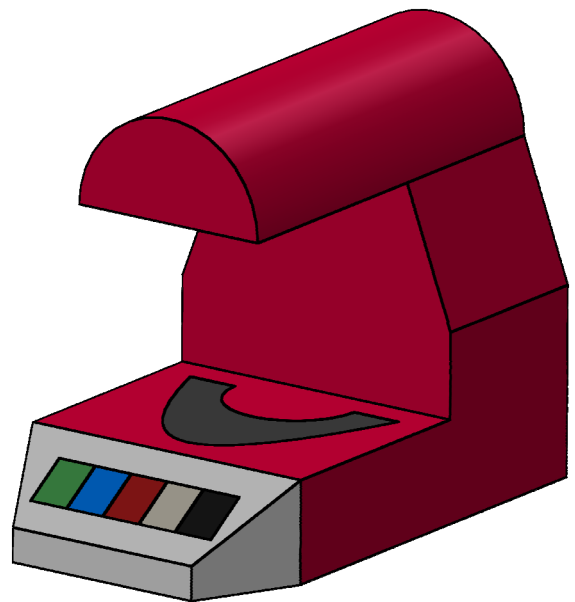
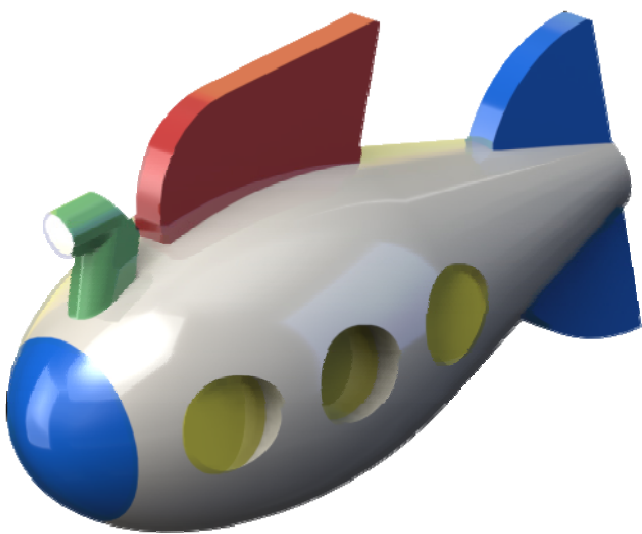
Future Marking Schemes

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.



Junior Cycle Examination 2023

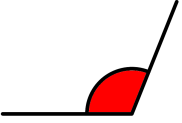
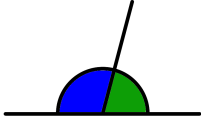
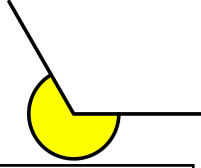
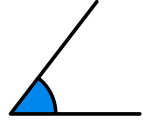
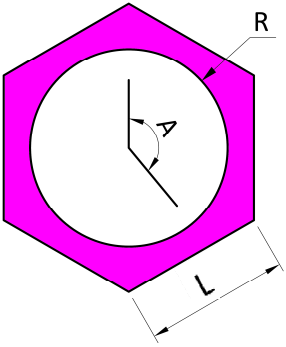
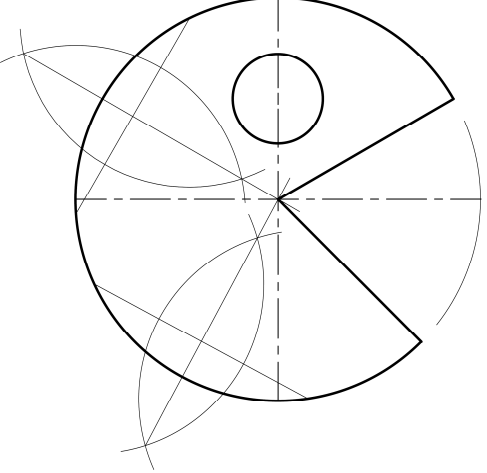
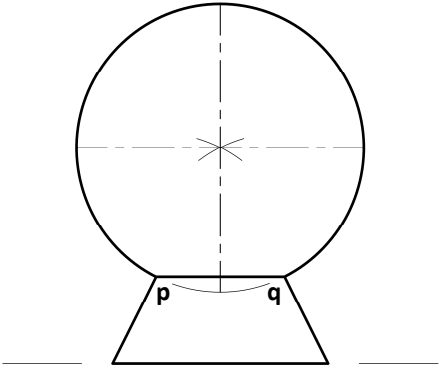
Graphics - Common Level



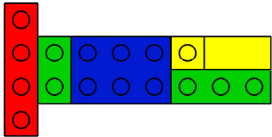
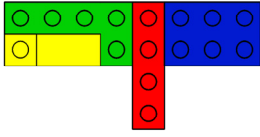
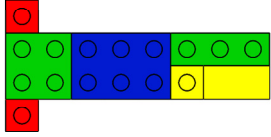
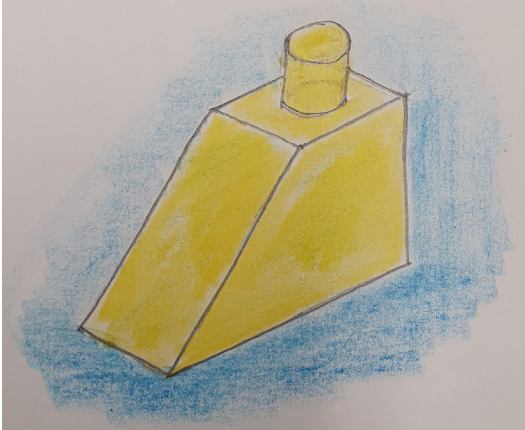
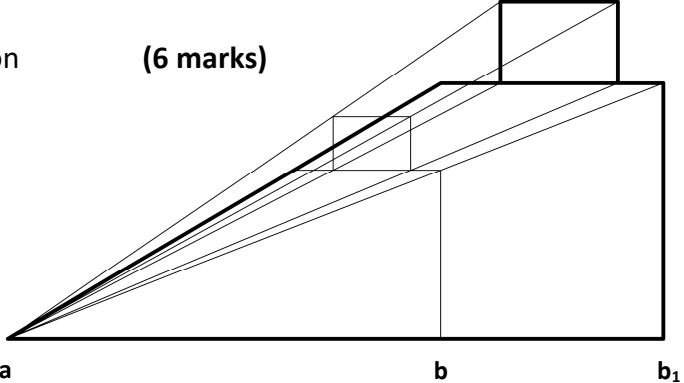
Marking Scheme

Answer *all* questions

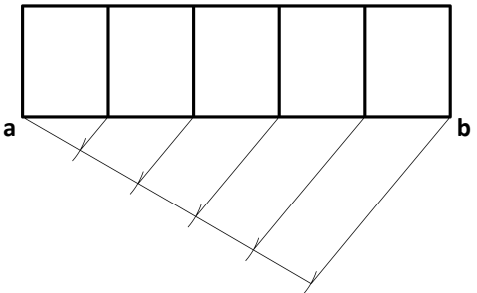
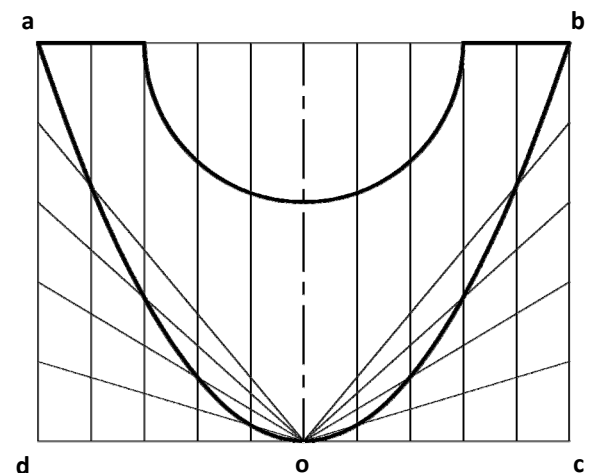
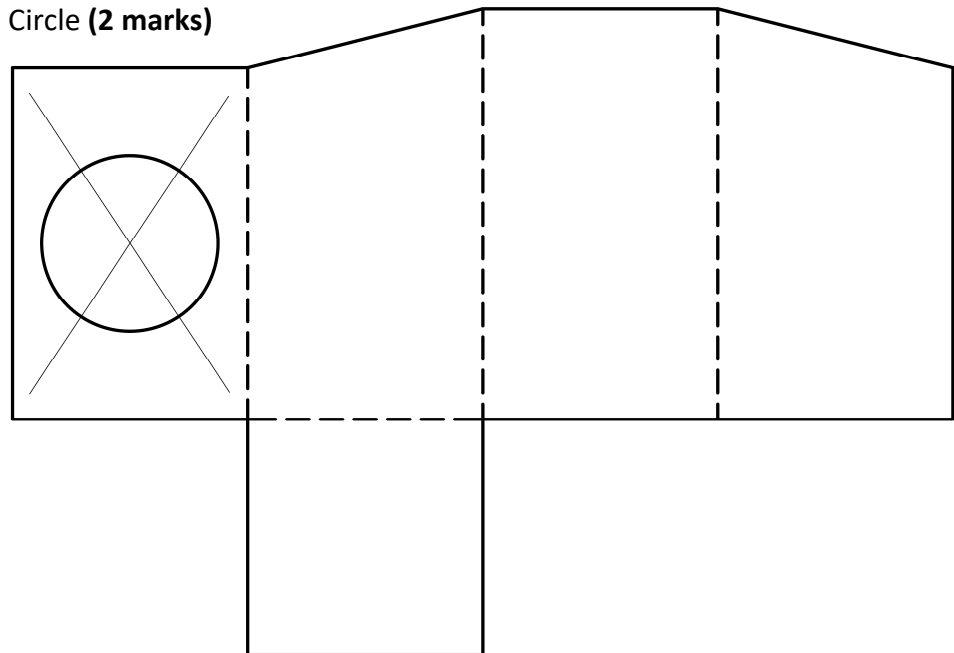
Page 2 – Question 1

<p>Q1 (a)</p>	<p>12</p>	<p>(4 x 3 marks)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Obtuse</p> </div> <div style="text-align: center;">  <p>Supplementary</p> </div> <div style="text-align: center;">  <p>Reflex</p> </div> <div style="text-align: center;">  <p>Acute</p> </div> </div>
	<p>12</p>	
<p>Q1 (b)</p>	<p>3</p> <p>9</p>	<p>(i) Hexagon (3 marks)</p> <p>(ii) $A = 140^\circ$ (3 x 3 marks)</p> <p>$L = 39\text{mm}$</p> <p>$R = 26\text{mm}$</p> <div style="text-align: right;">  </div>
	<p>12</p>	
<p>Q1 (c)</p>	<p>4</p> <p>4</p> <p>3</p>	<p>Correct centre-point (4 marks)</p> <p>2 lines (2 x 2 marks)</p> <p>Circle (3 marks)</p> <div style="text-align: right;">  </div>
	<p>11</p>	
<p>Q1 (d)</p>	<p>4</p> <p>2</p>	<p>Construction (2 x 2 marks)</p> <p>Circle (2 marks)</p> <div style="text-align: right;">  </div>
	<p>6</p>	
<p>Page 2</p>	<p>41</p>	

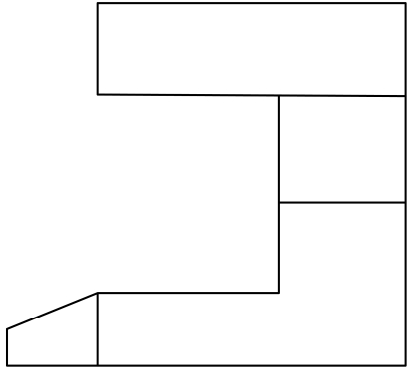
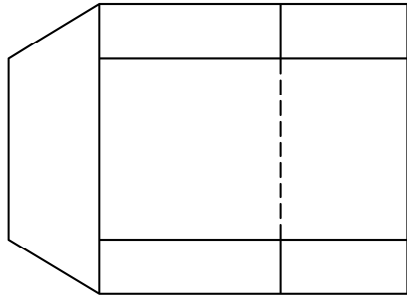
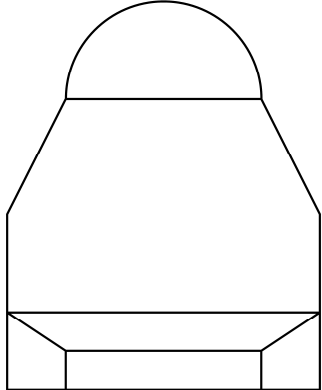
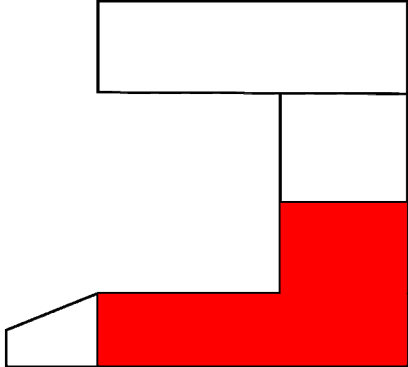
Page 3 – Question 2

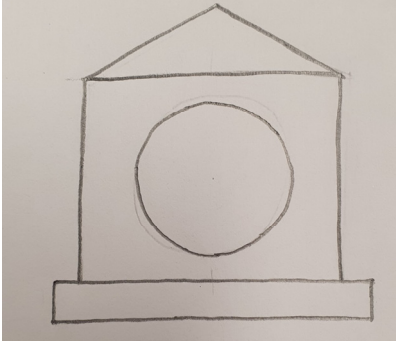
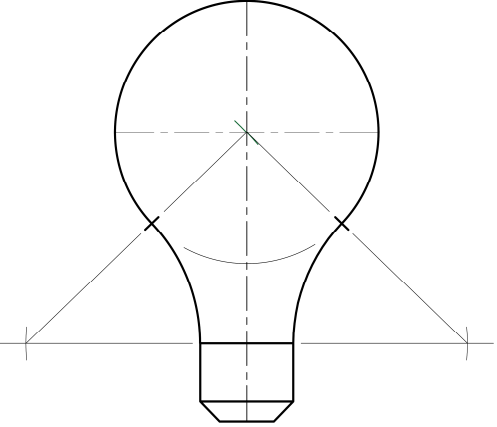
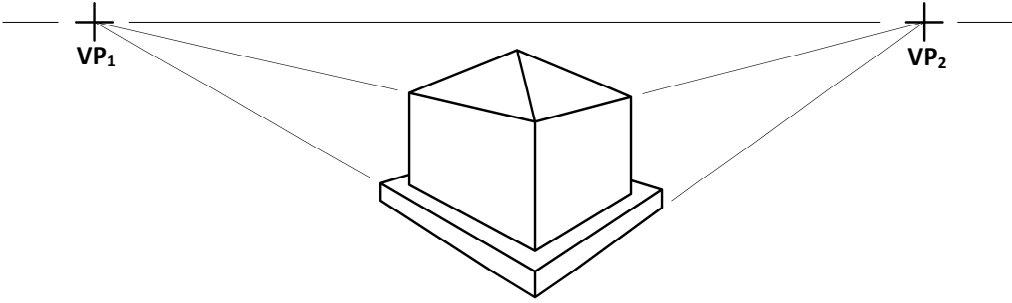
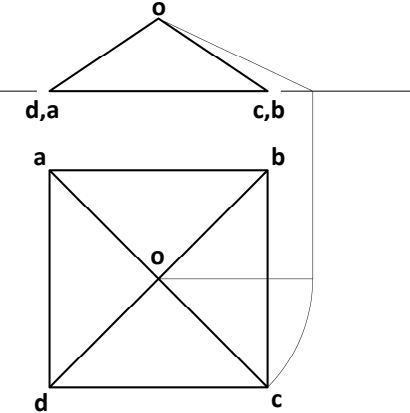
<p>Q2 (a)</p>	<p>3</p>	<p>Correct arrangement (3 marks)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><input type="checkbox"/></p> </div> <div style="text-align: center;">  <p><input type="checkbox"/></p> </div> <div style="text-align: center;">  <p><input checked="" type="checkbox"/></p> </div> </div>
<p>Q2 (b)</p>	<p>3</p>	<p>Correct number of blocks = 10 Blocks (3 marks)</p>
<p>Q2 (c)</p>	<p>6</p> <p>2</p>	<p>Sketch (6 marks)</p> <p>Appropriate rendering (2 marks)</p> <div style="text-align: center;">  </div>
<p>Q2 (d)</p>	<p>2</p> <p>2</p> <p>6</p>	<p>Correct vertical at b_1 (2 marks)</p> <p>Radiating lines (2 marks)</p> <p>Completion (6 marks)</p> <div style="text-align: center;">  </div>
<p>Page 3</p>	<p>24</p>	

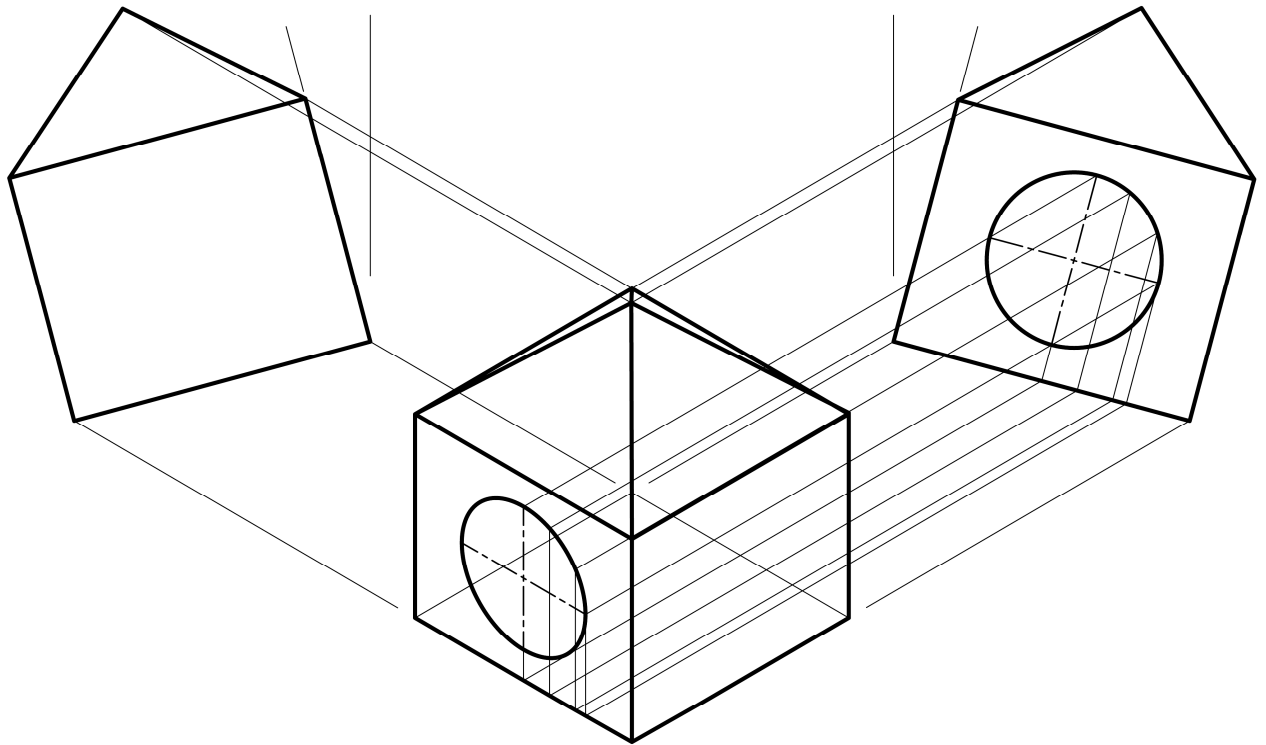
Page 4 – Question 3

<p>Q3 (a)</p>	<p>3 4 2</p> <hr/> <p>9</p>	<p>Division of line (3 marks)</p> <p>Completion (4 marks)</p> <p>Colour or shading (2 marks)</p> 
<p>Q3 (b)</p>	<p>6 3 1</p> <hr/> <p>10</p>	<p>Parabola construction (1,1,2,2)</p> <p>Draw curve (3 marks)</p> <p>2 lines (1 mark)</p> 
<p>Q3 (c)</p>	<p>3 7 3 2</p> <hr/> <p>15</p>	<p>Stepping out/down correct distance (3 x 1 mark)</p> <p>Completion – 7 lines (7 x 1 mark)</p> <p>Fold lines (3 x 1 mark)</p> <p>Circle (2 marks)</p> 
<p>Page 4</p>	<p>34</p>	

Page 5 – Question 3

Q3 (d) (i) Elevation (11 marks)		
	5	5 vertical lines (5 x 1 mark)
	5	5 horizontal lines (5 x 1 mark)
	1	1 sloping line (1 mark)
	11	
		
Q3 (d) (ii) Plan (11 marks)		
	6	Outline – 6 lines (6 x 1 mark)
	4	Internal lines – 4 lines (4 x 1 mark)
	1	Hidden detail (1 mark)
	11	
		
Q3 (d) (iii) End View (14 marks)		
	4	4 vertical lines (4 x 1 mark)
	4	4 horizontal lines (4 x 1 mark)
	4	4 sloping lines (4 x 1 mark)
	2	Semi-circle (2 marks)
	14	
		
Q3 (d) (iv) True Shape (3 marks)		
	3	Identification of true shape in elevation
	3	
		
	3	Presentation (3 marks)
Page 5	42	

<p>Q4 (a)</p>	<p>6</p>	<p>Sketch (6 marks)</p> 
<p>Q4 (b)</p>	<p>3 4 4 2</p>	<p>3 lines (3 x 1 mark) R45 arcs (2 x 2 marks) Locate centre of R34 arc (2 marks) Draw R34 arc (2 marks) Points of contact (2 marks)</p> 
<p>Q4 (c)</p>	<p>10</p>	<p>Completion – 10 lines (10 x 1 mark)</p> 
<p>Q4 (d)</p>	<p>5 3</p>	<p>Correct indexing (5 marks) True length of line (3 marks)</p> 
<p>Page 6</p>	<p>37</p>	

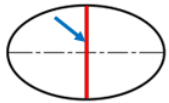

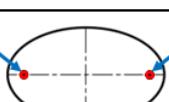
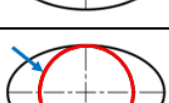
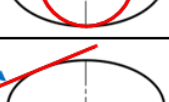


Q4 (e)	4	2 vertical lines (2 x 2 marks)
	4	4 horizontal lines (4 x 1 mark)
	2	Locate apex (2 marks)
	4	4 sloping lines (4 x 1 mark)
	14	
	2	Additional points on curve in elevation (2 marks)
	2	Projection of points to axonometric (2 marks)
	2	Locate points for curve in axonometric (2 marks)
	2	Draw curve (2 marks)
	8	
	3	Presentation (3 marks)
Page 7	25	

Q5 (a)

12

(4 x 3 marks)

A		TANGENT	E
B		FOCAL POINTS	C
C		MAJOR AXIS	B
D		MINOR CIRCLE	D
E		MINOR AXIS	A

12

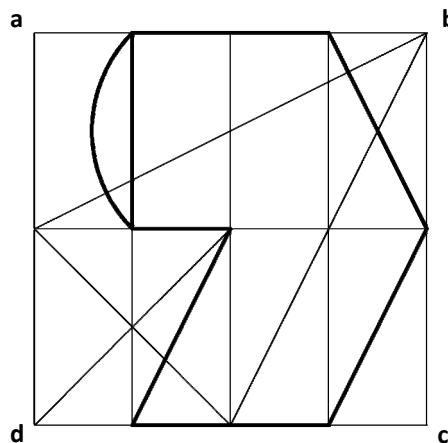
Q5 (b)

8

Outline (2 marks, 6 x 1 mark)

3

Arc (3 marks)



11

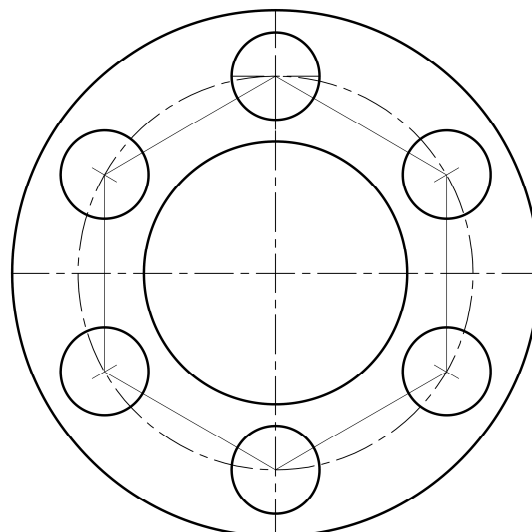
Q5 (c)

5

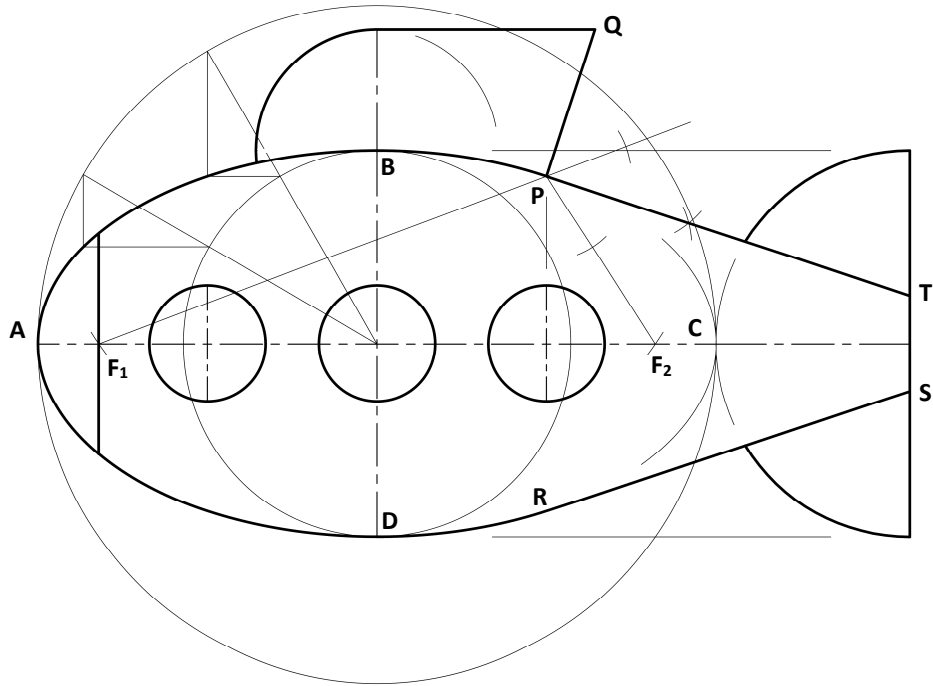
Construction to locate centres (5 marks)

5

Circles (5 x 1 mark)



10



Q5 (d) (i)		Ellipse (14)
	4	Draw major circle, Draw minor circle (2, 2)
	6	Locating additional points on the curve (2, 2, 2)
	4	Draw Curve
	14	
Q5 (d) (ii)		Tangents (19)
	4	Correct location of F_1 and F_2 (2 x 2 marks)
	1	Vertical at F_1 (1 mark)
	5	Tangent construction (5 marks)
	4	Tangents (2 x 2 marks)
	5	Normal PQ (2 marks), R25 arc (2 marks), line (1 mark)
	19	
		Completion (8)
	3	R40 semi-circle (2 marks), line (1 mark)
	5	R12 circles (1 x 1 mark, 2 x 2 marks)
	8	
	3	Presentation (3 marks)
Page 9	44	
Total 280		

Student Project marking scheme

Sheet 1					
2D & 3D Freehand sketches and annotations			Awareness of geometry		Presentation
20			12		8
Fair	Good	Excellent	Fair	Good	Excellent
0 – 7	8 – 14	15 – 20	0 – 4	5 – 8	9 – 12

Notes					

Sheet 2

Appropriately detailed 2D orthographic drawing			Main dimensions & appropriate 2D conventions			Presentation
20			12			8
Fair	Good	Excellent	Fair	Good	Excellent	
0 – 7	8 – 14	15 – 20	0 – 4	5 – 8	9 – 12	

Notes

Blank area for notes.