

2003 Graphic Communication

Higher

Finalised Marking Instructions

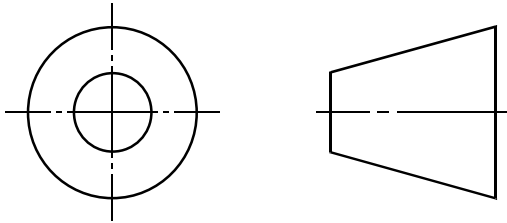
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Section A

Marks

Question 1

- (a) A clear and unambiguous sketch for 1 mark (accept CL if connecting both views and accept 1st angle). The second mark should be given if shown in 3rd angle. 2



- (b) Accept Name, Date, Scale, Title, Drawing number, Finish, Tolerances, Material, Company name, Client, Checked by. 6
Do not accept Parts list, Fillet radii, Projection symbol, dimensions.

Any 6 @ 1 mark each

Question 2

- (a) Thumbnail sketches 1
- (b) Scanned images (imported, scanned or photographed), Illustrative images (imported paint, draw, CAD, graphs, clipart, digital images), Promotional graphics (posters, leaflets, etc) 2

Any 2 @ 1 mark each

- (c) Answer must include some explanation of the integration of **TEXT** and **GRAPHICS**. Accept reasonable explanation. 1
- (d) Cost Print run (number required) Colour Size of document 4
Deadline Fonts available File type

Any 4 @ 1 mark each

Notes:

If the generic name is used i.e. Promotional, then no subsequent mark is given for an example of a promotional graphic.

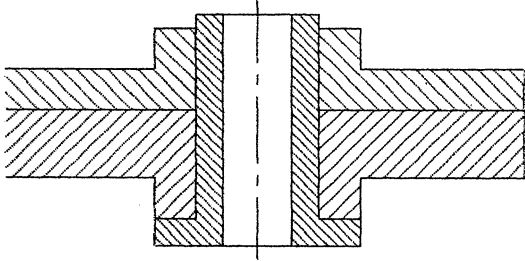
Question 3

- Line A Cutting plane , section line or indication of a cut/section 3
Line B Limit of interrupted views, limit of part section, break line or explanation relating to the object being too large to draw all of it.
Line C Alternative position of moveable parts or any reference to movement.

3 @ 1 mark

Question 4

- (a) 1 mark for all lines at 45° 3
1 mark for staggered hatching on any two adjacent parts (not if herring bone or mirrored)
1 mark if hatching in part A or part C is smaller than that of part B.



- (b)i To show detail that would not be clear if the section was on just one plane. 2

1 mark for a clear description of why the step is needed (indicating two planes or levels)
1 mark for the sketch showing an appropriate step in the cutting plane.

- ii To show both external and internal information on the same view 2
To show a section on a symmetrical object or
To avoid drawing another view. or

1 mark for the description.
1 mark for the sketch.

Question 5

Text Wrap	the edge of a piece of text follows the outline of a graphic or object.	3
Column rules	lines inserted in the gutters between columns of text.	
Bleed	a graphic that is deliberately extended beyond or to the edge of a page.	

Mark is given for description or a sketch.

1 mark for each.

Question 6

- (a)i Digital camera, scanner (any type but only accept one scanner), also accept webcam, digital video camera, CD ROM/floppy/zip drive. 2

1 mark for each answer.

- ii Digital camera 2 Direct input editing, true colour image, no hard copy required, new image acquisition.
Scanner Existing graphic can be input and edited, can result in poorer quality

1 reasonable argument to be accepted for each device.

1 mark for each.

- (b)i The description should include the concept of exporting or saving a drawing to a file or clipboard that is compatible with the DTP package. It is then imported or pasted into the DTP document. The marks are split into each stage: **3**
- | | | |
|---|-------------------------------|--------|
| 1 | Export or save. | 1 mark |
| 2 | File, clipboard or compatible | 1 mark |
| 3 | Import or paste. | 1 mark |

(c) E-mail **1**

- (d)i **Pan** to allow a drawing to be moved to view parts of the drawing that are outwith the visible screen. **3**
- ii **Snap** allows the curser to be locked to points on a predetermined grid or parts of an object.
- iii **Mirror** creates a reflection of a drawn object about an axis.

Accept reasonable answers 1 mark for each

Total marks 40

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Section B

Question 7 – Air Duct

Marks

Elevation

(a)	Points at start and finish of curve.	2 @ ½ each	1
(b)	5 intermediate points	1 for ½, 2 for 1, 3 for 1½, 5 for 2	2
	Fair curve	½, 1	1
(c)	Lines	2 @ 1 each (mark given for a continuous line)	2

Plan

(d)	Construction of ellipse	1 mark for major & minor axis.	2
	8 intermediate points	4 for ½, 8 for 1	
(e)	Fair ellipse	½, 1	1
(f)	Lines	2 @ ½ each	1

Development

(g)	Circumference: + or – 8 mm		1
(h)	9 critical points:	1 for ½, 3 for 1, 4 for 1½, 5 for 2, 6 for 2½, 7 for 3, 8 for 3½, 9 for 4	4
(i)	8 intermediate points:	2 for ½, 4 for 1, 6 for 1½, 8 for 2	2
(j)	Fair curves	5 @ ½ each	2½
(k)	Lines	3 @ ½ each	1½

Auxiliary Plan

(l)	Circle		1
(m)	Top and bottom hex.: 12 outlines	2 for ½, 3 for 1, 4 for 1½, 6 for 2, 7 for 2½, 9 for 3, 10 for 3½, 12 for 4	5
	2 broken lines @ ½ each		
(n)	10 joining lines	1 for ½, 3 for 1, 5 for 1½, 7 for 2, 8 for 2½, 10 for 3	3

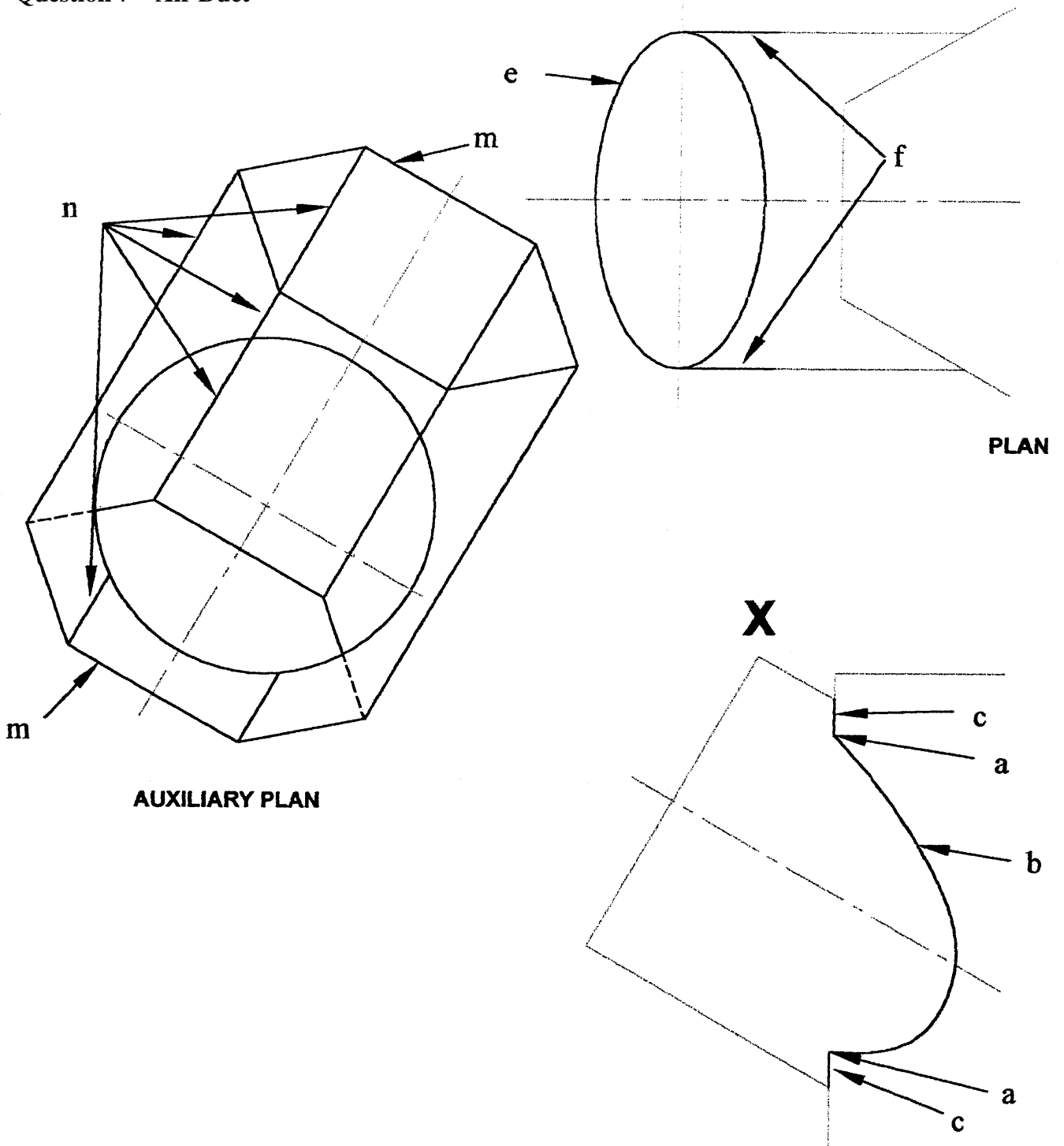
Total marks 30

Notes:

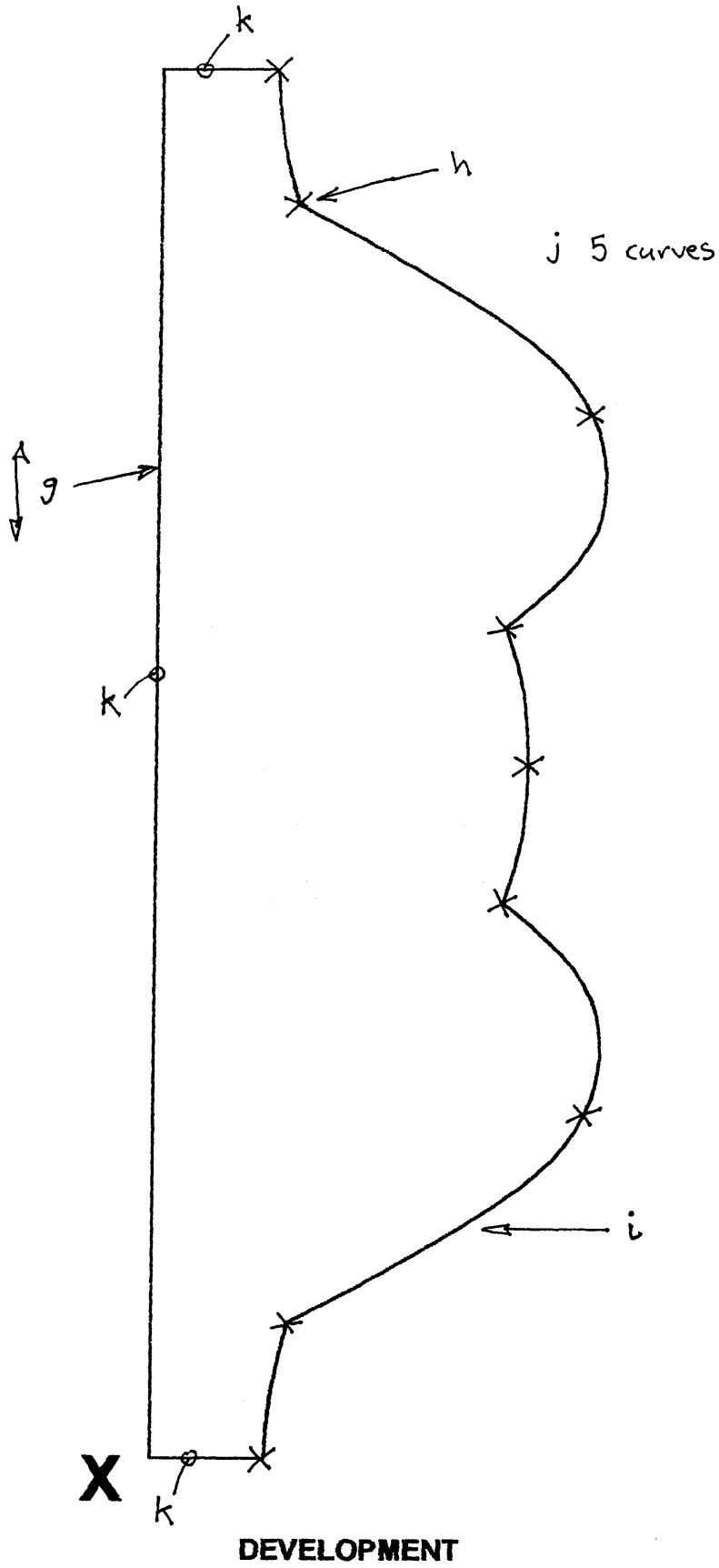
If a half development is drawn, give 1 mark for circumference then mark to scheme.

If assumed to be solid, 3 lines are lost at (m), then apply the follow on rule at (n).

Question 7 – Air Duct



Question 7 – Air Duct



Question 8 – Swivel Bracket**Marks**

- (a) Correct assembly. $\frac{1}{2}$ mark each
 $\frac{1}{2}$ mark penalty if drawn in 1st angle. **1**

Spindle

- (b) 16 lines (8 horizontal & 8 vertical) 4 for $\frac{1}{2}$, 8 for 1, 12 for $1\frac{1}{2}$, 16 for 2 **2**
- (c) Curves 2 for $\frac{1}{2}$, 4 for 1 **1**

Bracket

- (d) 12 Outside lines (6 horizontal, 6 vertical) 3 for $\frac{1}{2}$, 6 for 1, 9 for $1\frac{1}{2}$, 12 for 2 **2**
- (e) Inside lines (8 horizontal, 8 vertical) 2 for $\frac{1}{2}$, 4 for 1, 8 for $1\frac{1}{2}$, 10 for 2, 13 for $2\frac{1}{2}$, 16 for 3 **3**
- (f) Chamfers 2 for $\frac{1}{2}$ $\frac{1}{2}$
- (g) Lines 2 @ $\frac{1}{2}$ each **1**
- (h) Thread convention (both pairs): 2 @ $\frac{1}{2}$ each **1**
- (i) Hatching 4 areas Lines at 45° to BS for $\frac{1}{2}$ **1 ½**
 Four areas hatched for $\frac{1}{2}$
 Correct convention for spindle threads for $\frac{1}{2}$

Base

- (j) Horizontal and vertical outside lines – 8 lines 2 for $\frac{1}{2}$, 5 for 1, 8 for $1\frac{1}{2}$ **1 ½**
- (k) C/B holes – 10 lines 2 for $\frac{1}{2}$, 5 for 1, 7 for $1\frac{1}{2}$, 10 for 2 **2**
- (l) Chamfers 2 for $\frac{1}{2}$ $\frac{1}{2}$
- (m) Hatching 3 areas Lines at 45° to BS for $\frac{1}{2}$ **1 ½**
 Three areas hatched for $\frac{1}{2}$
 Correct convention for base/spindle threads for $\frac{1}{2}$
- (n) Centre lines 3 @ $\frac{1}{2}$ each **1 ½**

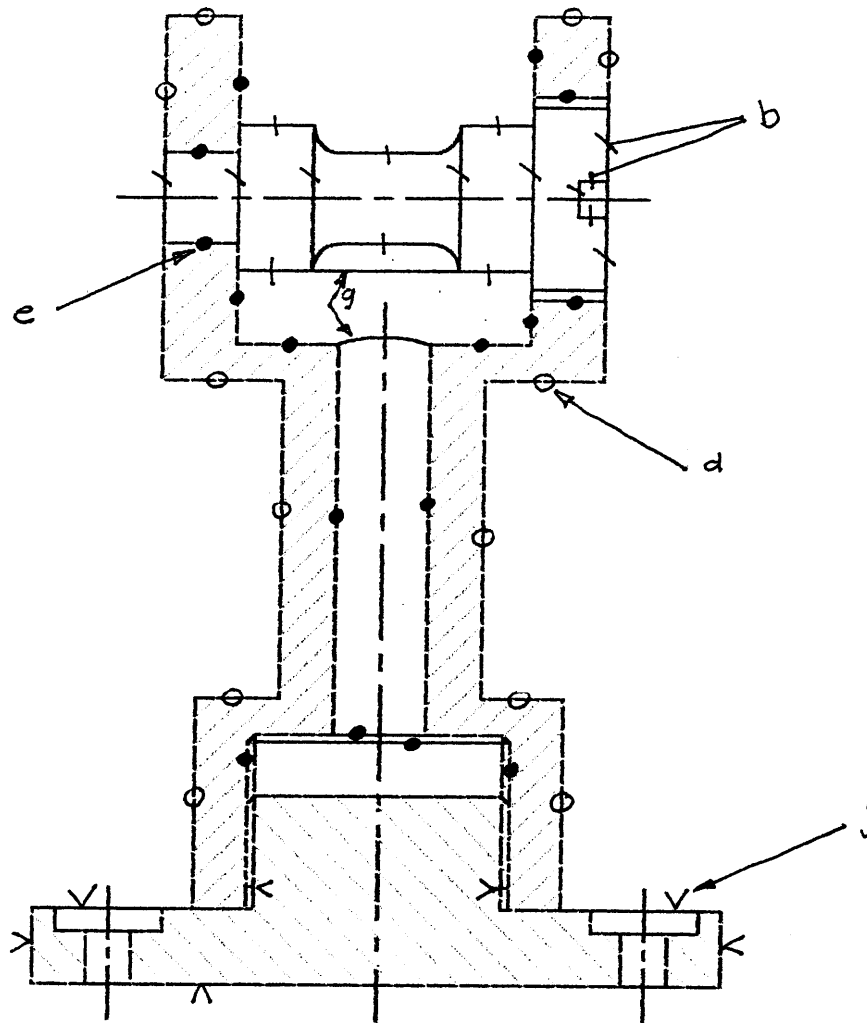
Total marks 20

Notes:

If base is not sectioned then marks are lost for (k) C/B holes and (m) hatching.

Mark to scheme if the spindle is sectioned with no penalty.

Question 8 – Swivel Bracket



SECTIONAL ELEVATION ON X-X

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Question 9a – Floor Plan extension

Marks

(a)	Correct length, breadth and location:	½ mark each	1 ½
(b)	Wall outline: 9 lines (5 horizontal, 4 vertical):	2 for ½, 4 for 1, 6 for 1½, 8 for 2, 9 for 2½	2 ½
(c)	Worktop:	line for 1 (location out from the wall ½, size end to end ½)	1
(d)	Window, door, sink-top, lamp, switch locations:	2 for ½, 4 for 1, 6 for 1½	1 ½
(e)	Window, door, sink-top, lamp, switch drawn to BS:	2 for ½, 4 for 1, 6 for 1½	1 ½
(f)	Hatching to BS (3 areas):	2 for ½, 3 for 1	1
(g)	Dimensions to BS:	deduct ½ mark for 1 error, deduct 1 for 2 errors	1

Total marks 10

Notes:

For (b), the vertical lines forming the door opening are **included** in the wall outline.

The horizontal lines forming the window opening are **not included** in the wall outline but form part of the BS window symbol.

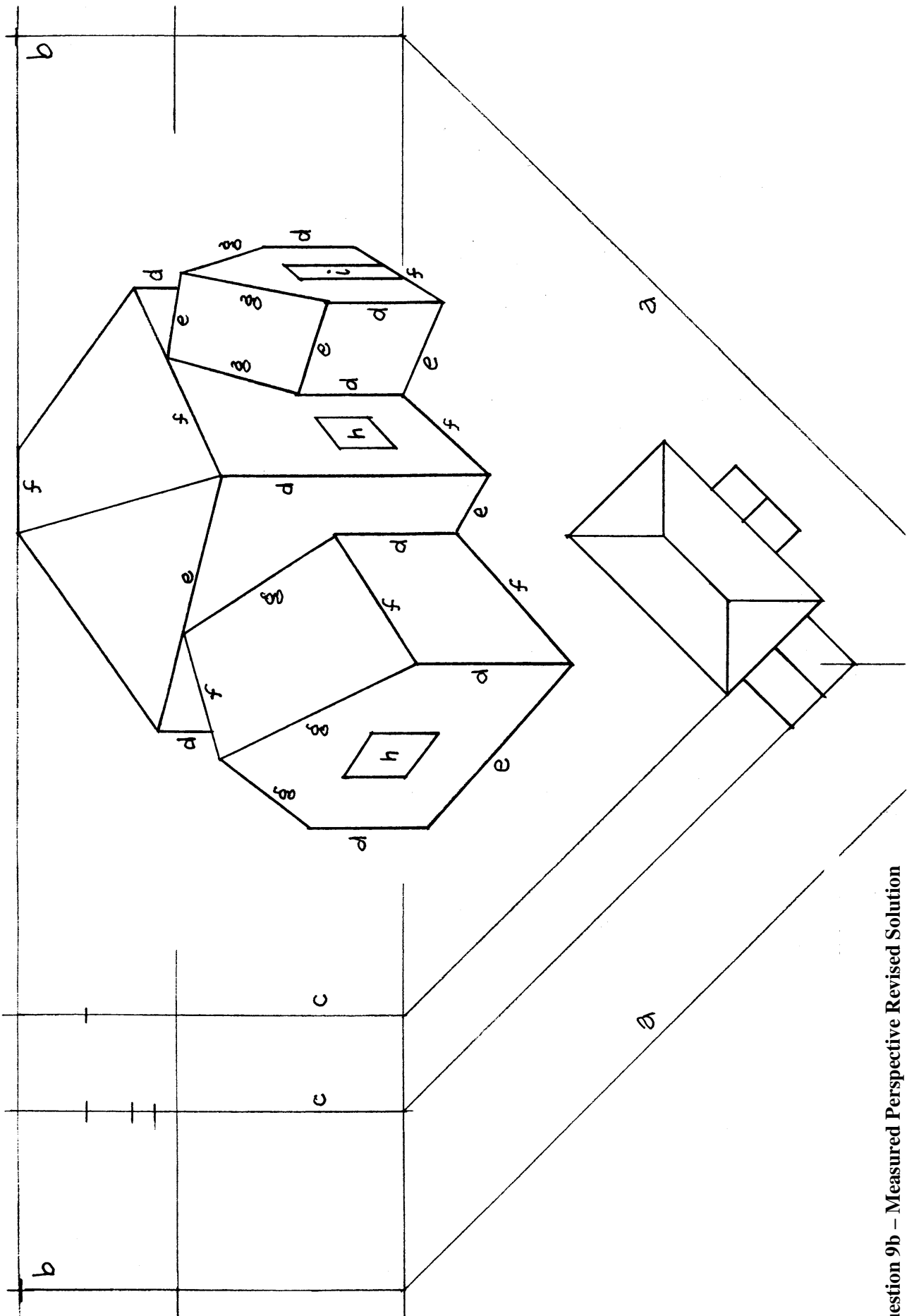
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Question 9b – Measured Perspective

Marks

(a)	V1 and V2	½ mark each	1
(b)	VP left and VP right	½ mark each	1
(c)	Height line (any appropriate one)		1
(d)	Lines – vertical walls internal and external:	9 @ ½ mark each	4 ½
(e)	Lines – vanishing to left:	6 @ ½ mark each	3
(f)	Lines – vanishing to right:	7 @ ½ mark each	3 ½
(g)	Slopes on roofs:	2 for ½, 3 for 1, 5 for 1½, 6 for 2, 8 for 2½, 9 for 3	3
(h)	Windows: 4 vertical lines -location, 4 vanishing - height,	2 for ½, 4 for 1 2 for ½, 4 for 1	2
(i)	Door: 2 vertical lines - location, 1 vanishing -height,	2 for ½ 1 for ½	1

Total marks 20



Question 9b – Measured Perspective Revised Solution

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Question 10 – Tangency (Pruning saw handle)

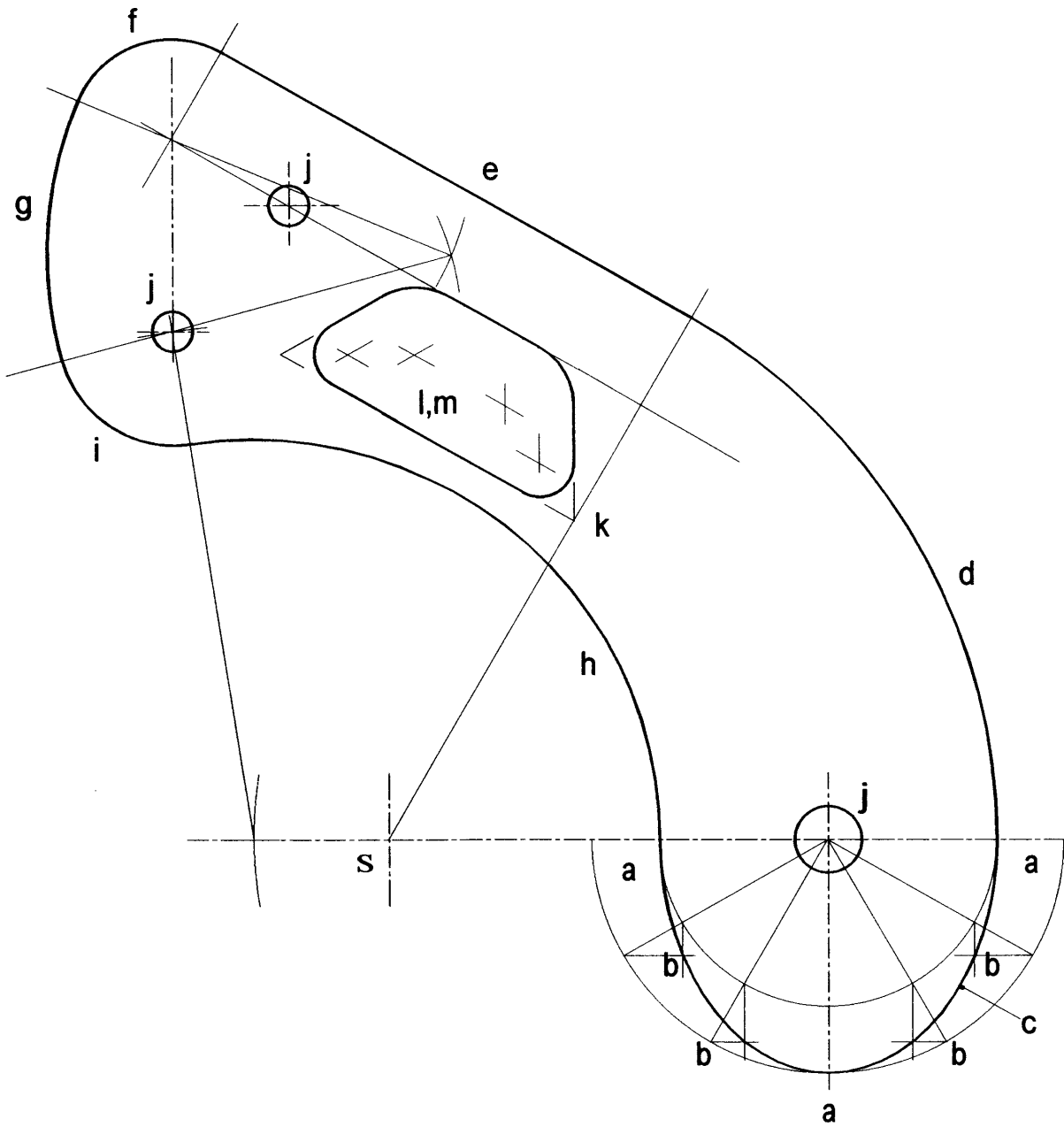
		Marks
(a)	Semi ellipse – major & minor axis locations:	2 for ½, 3 for 1
(b)	Semi ellipse – intermediate construction points:	2 for ½, 4 for 1
(c)	Semi ellipse - Fair curve:	0, ½, 1
(d)	R90:	centre (arc on line) for ½, arc radius for ½, smooth junction for ½
(e)	Straight line:	length 80 mm for ½, location for ½
(f)	R15:	centre (2 lines) for ½, arc radius for ½, smooth junction for ½.
(g)	R60:	centre (2 lines) for ½, arc radius for ½, smooth junction for ½.
(h)	R60:	centre (arc on lines) for ½, arc radius for ½, smooth junction for ½.
(i)	R17:	centre (arc on lines) for ½, arc radius for ½, smooth junction for ½.
(j)	3 circles	3 @ ½ each
(k)	Label location correct	½ for distance away from 80mm straight, ½ for corner
(l)	Label outline: 4 centres (intersecting lines) 4 arcs	4 @ ½ each 4 @ ½ each
(m)	4 straight linking lines:	4 @ ½ mark each

Total marks 20

Notes:

Smooth junction:

- ◆ should blend in with the next arc or straight line in the direction of the construction progress;
- ◆ should not show obvious “tails”.



Question 10 – Tangency (Pruning saw handle) Solution

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Question 11 – Isometric and Assembly (Window restraint)

Marks

Isometric

- | | | | |
|-----|---|--|-----|
| (a) | 30° to right and left: 8 lines
If the orientation is incorrect, deduct 1 mark. | 2 for ½, 4 for 1, 6 for 1½, 8 for 2 | 2 |
| (b) | 3 vertical lines | 2 for ½, 3 for 1 | 1 |
| (c) | First curve: 9 construction points | 2 for ½, 4 for 1, 6 for 1½, 8 for 2,
9 for 2½ | 2 ½ |
| (d) | Fair curve | 0, ½, 1 | 1 |
| (e) | 3 upper curves (follow through construction): | 3 @ ½ mark for each curve drawn,
3 @ ½ mark for each fair curve | 3 |
| (f) | 2 lower curves (follow through construction): | 2 @ ½ mark for each curve drawn,
2 @ ½ mark for each fair curve | 2 |
| (g) | 3 circles: | 2 for ½, 3 for 1 | 1 |

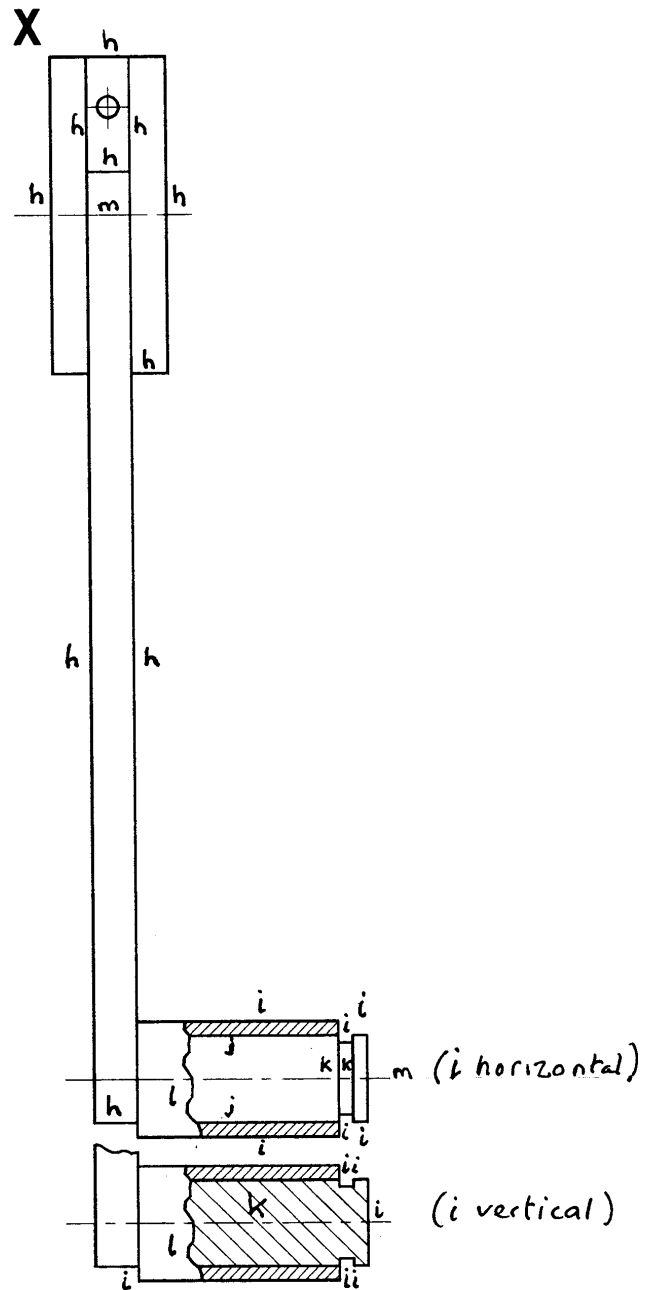
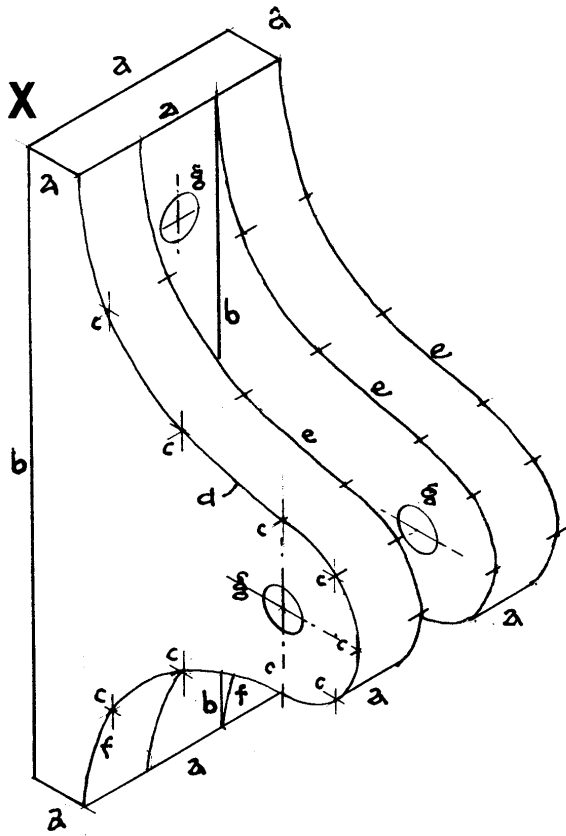
Assembly

- | | | | |
|-----|---|--|-----|
| (h) | Back-plate and arm: 10 lines, 4 horizontal, 6 vertical (3 for ½, 5 for 1, 8 for 1½, 10 for 2) | | 2 |
| (i) | Bush/roller outline: 12 lines, 6 horizontal, 6 vertical (3 for ½, 5 for 1, 8 for 1½, 10 for 2, 12 for 2½) | | 2 ½ |
| (j) | Bush: | 2 horizontal lines for ½ mark
2 hatching for ½ mark | 1 |
| (k) | Pin: either 2 vertical lines (elevation treatment) or hatching (section) for ½ mark | | ½ |
| (l) | Part section freehand line, any suitable location for ½ mark | | ½ |
| (m) | 2 centre lines | @ ½ mark each | 1 |

Total marks 20

Notes:

- (i) Ignore the 4 horizontal lines incorrectly given on the elevation of the bracket, if drawn on the assembly.



Question 11 – Window Catch Revised Solution

[END OF MARKING INSTRUCTIONS]