

4.21.1 drawing and design Paper 1 (449/1)

1. (a) - Size should be standard
 - White colour / good colour for contract / colour
 - Texture/good quality
 - Paper gauge/thickness
 - Ink must not run on it/ blooting factor
 - The edges should be perpendicular to each other

any 4 x $\frac{1}{2}$ = 2 marks

- (b) (i) A₀ - 1188 x 840
 (ii) A₃ - 420 x 297

2 x 1 = 2 marks

- (c) - maintain right angle between blade and stock
 - maintain straightness of blade edge
 - store such that the blade is in a vertical position
 - avoid dropping or storing in direct sunlight
 - Only use it for the intended purpose

any 2 x 1 = 2 marks

2. (a) - word processing - draw plus
 - corel draw - sketch up
 - Archi-CAD - punch card
 - Auto-CAD - Inviscape
 - Paint - Real draw
 - Mat lab - Auto desk
 - Adobe

any 6 x $\frac{1}{2}$ = 3 marks

(b) Definition

- Mock-up is a scale model of the finished work made in any suitable material.
 Purpose - Mock-up is made and tested to find out whether or not the design is satisfactory
 - Imperfection not seen when drawing may show up clearly in a mock-up

Definition - 1

Purpose - 1

(2 marks)

3. - Ferrous e.g steel
 - Nonferrous e.g copper, lead, aluminium, silver, gold
 - Alloys eg. brass, bronze solder

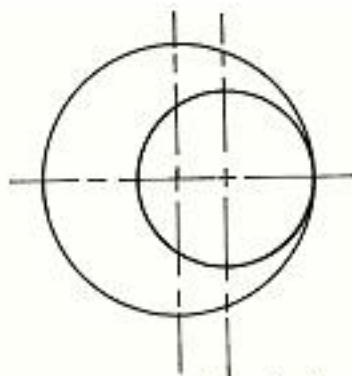
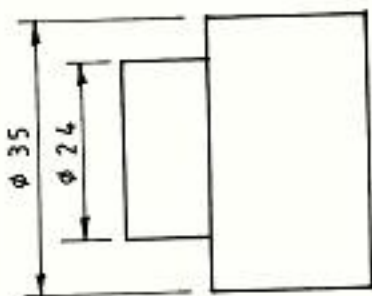
Naming 3 x $\frac{1}{2}$ =Examples 3 x $\frac{1}{2}$ = $\frac{1}{2}$

3 marks



4. (a) (i) A = $45 \times 2 = 90$
(ii) Angle = 25°

(i)	Measuring	-	1
	Tabulation	-	1
(ii)	Angle	-	1
(3 marks)			



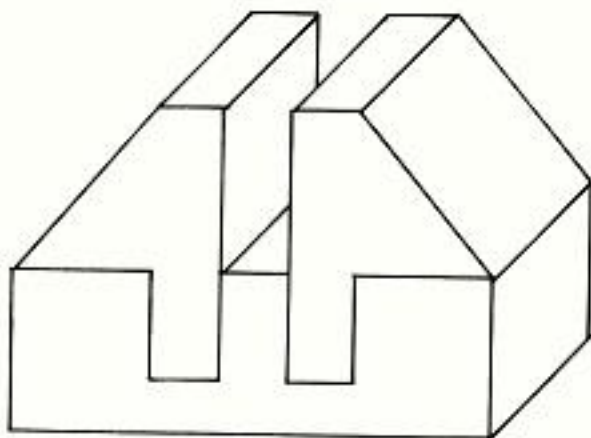
Ecentric circles	= 1
Solid piece	= 1
Dimensions	= 1
<hr/>	
= 3 mks	

5. (a) Fixed assets are properties e.g buildings, machines, and other equipment or facilities that have monetary value. 1 mark
- (b) Deficit is the amount by which expenditure is greater than income. 1 mark
- (c) Liabilities is financial obligation 1 mark



6.

SOLUTION



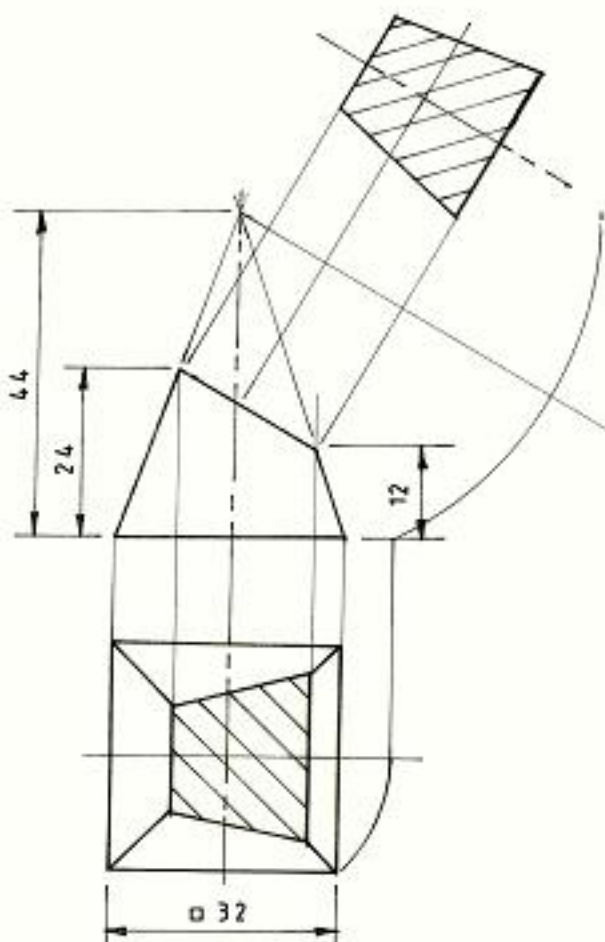
$$7 \text{ faces, } 7 \times \frac{1}{2} = 3\frac{1}{2}$$

$$\text{Assembly } 2 \times 1 = 2$$

$$\text{Oblique} = \frac{1}{2}$$

$$\underline{\underline{= 6 \text{ marks}}}$$

7.



$$\text{Plan} = 1$$

$$\text{Hatching} = 1$$

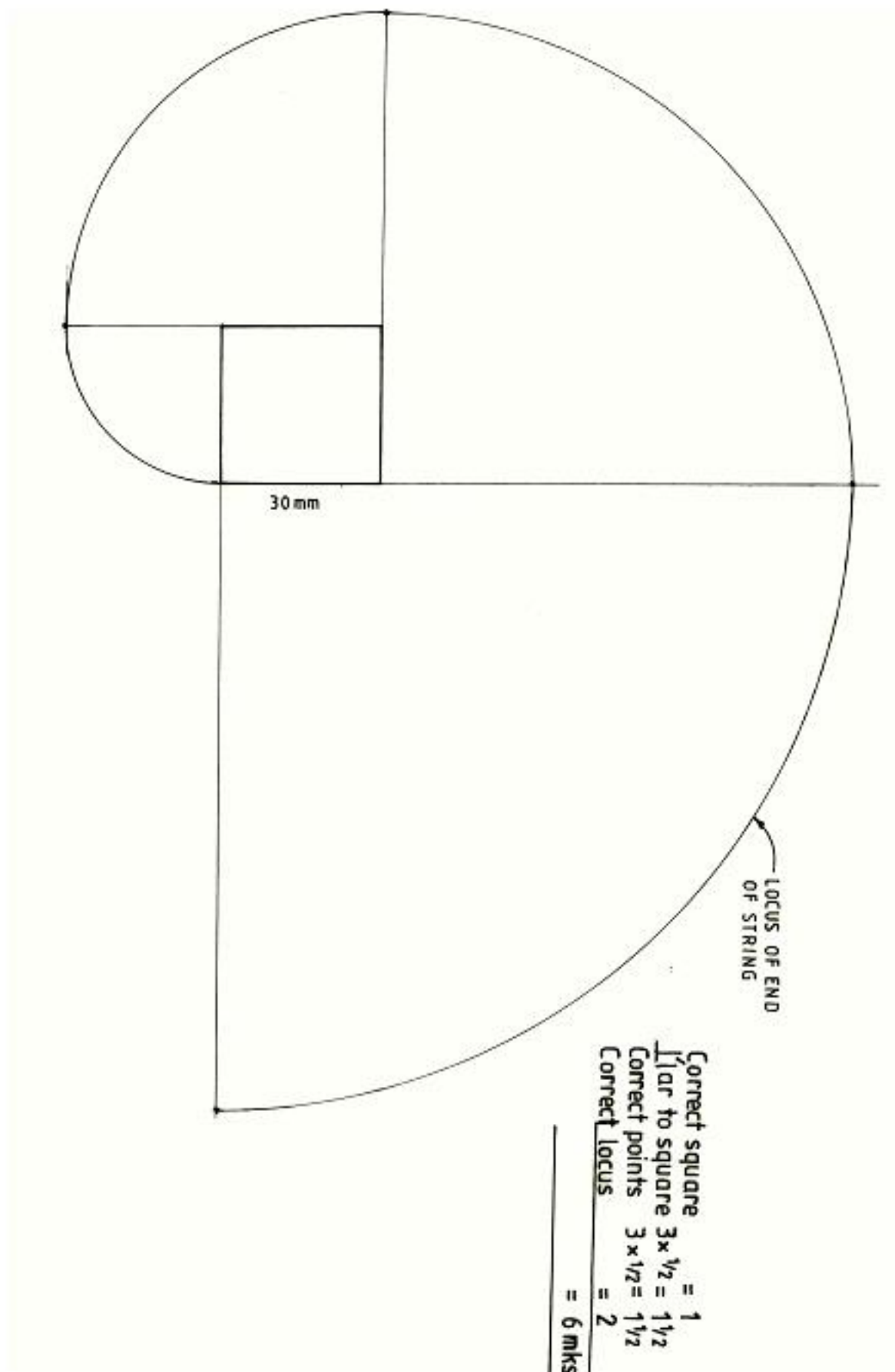
$$\text{Projection} = 1$$

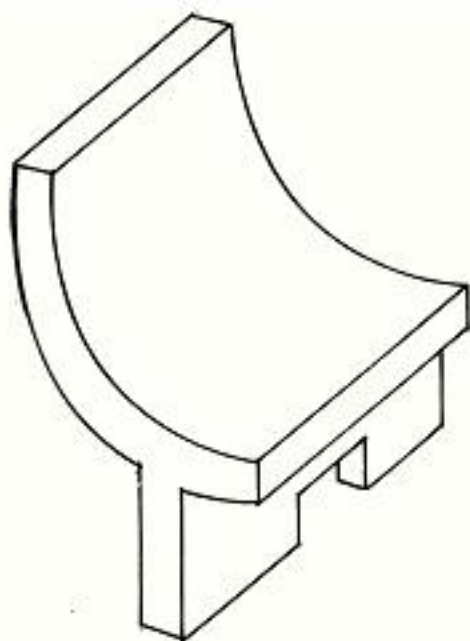
$$\text{Plotting points} = 1$$

$$\text{True shape} = 1$$

$$\underline{\underline{= 5 \text{ marks}}}$$

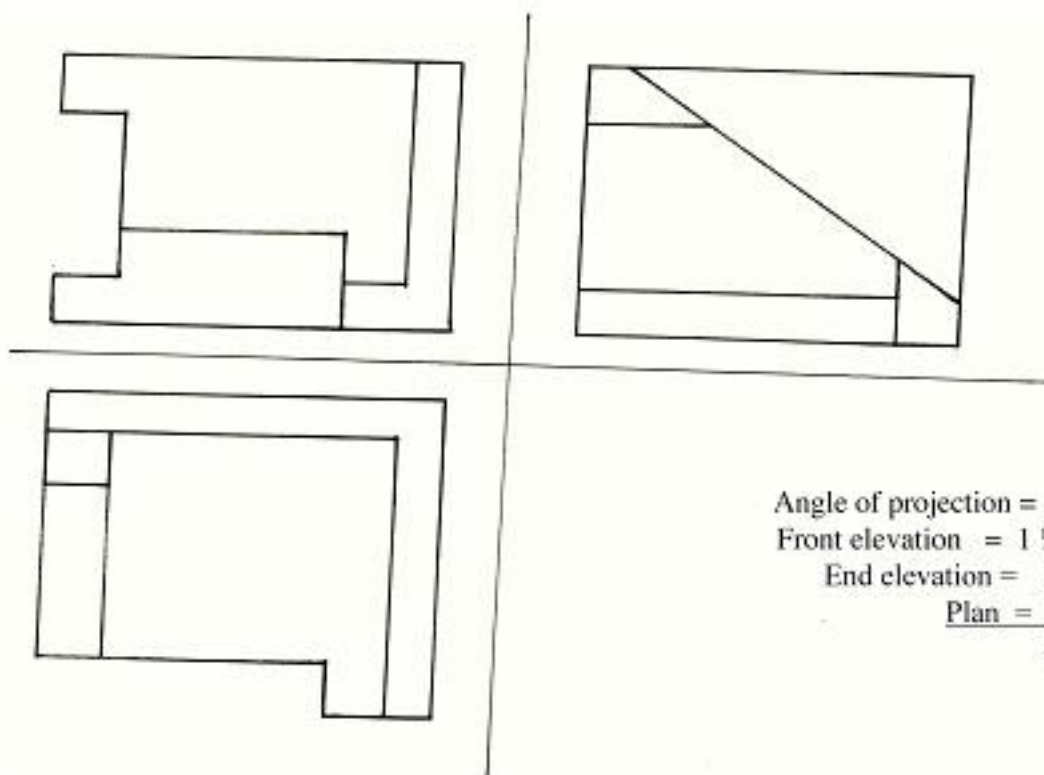






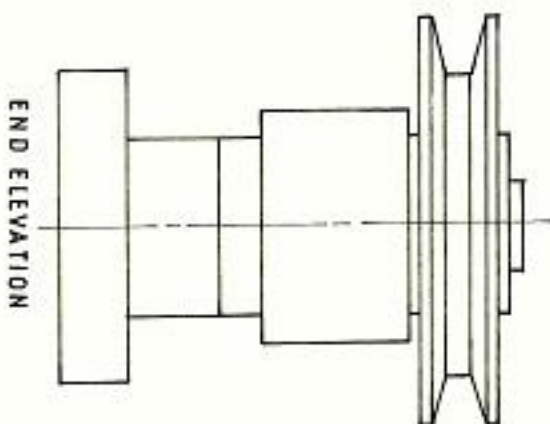
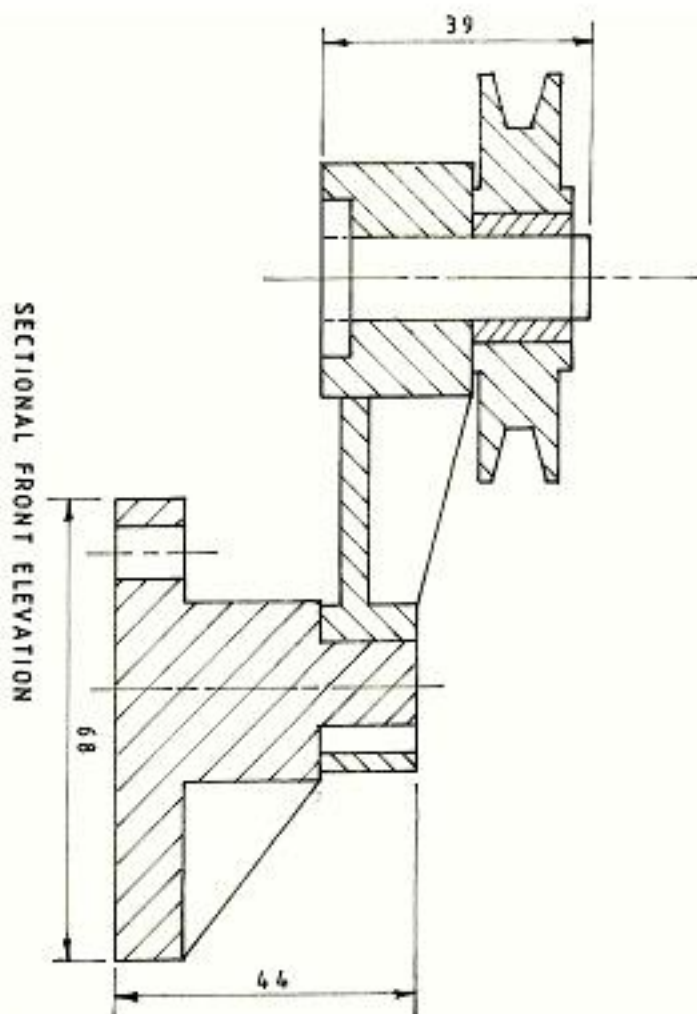
$$\begin{array}{rcl}
 6 \text{ faces, } 6 \times \frac{1}{2} & = & 3 \\
 \text{Oblique} & = & 1 \\
 \hline
 & = & 4 \text{ marks}
 \end{array}$$

10.



$$\begin{array}{rcl}
 \text{Angle of projection} & = & \frac{1}{2} \text{ mark} \\
 \text{Front elevation} & = & 1 \frac{1}{2} \text{ marks} \\
 \text{End elevation} & = & 2 \text{ marks} \\
 \text{Plan} & = & 2 \text{ marks} \\
 \hline
 & = & 6 \text{ marks}
 \end{array}$$



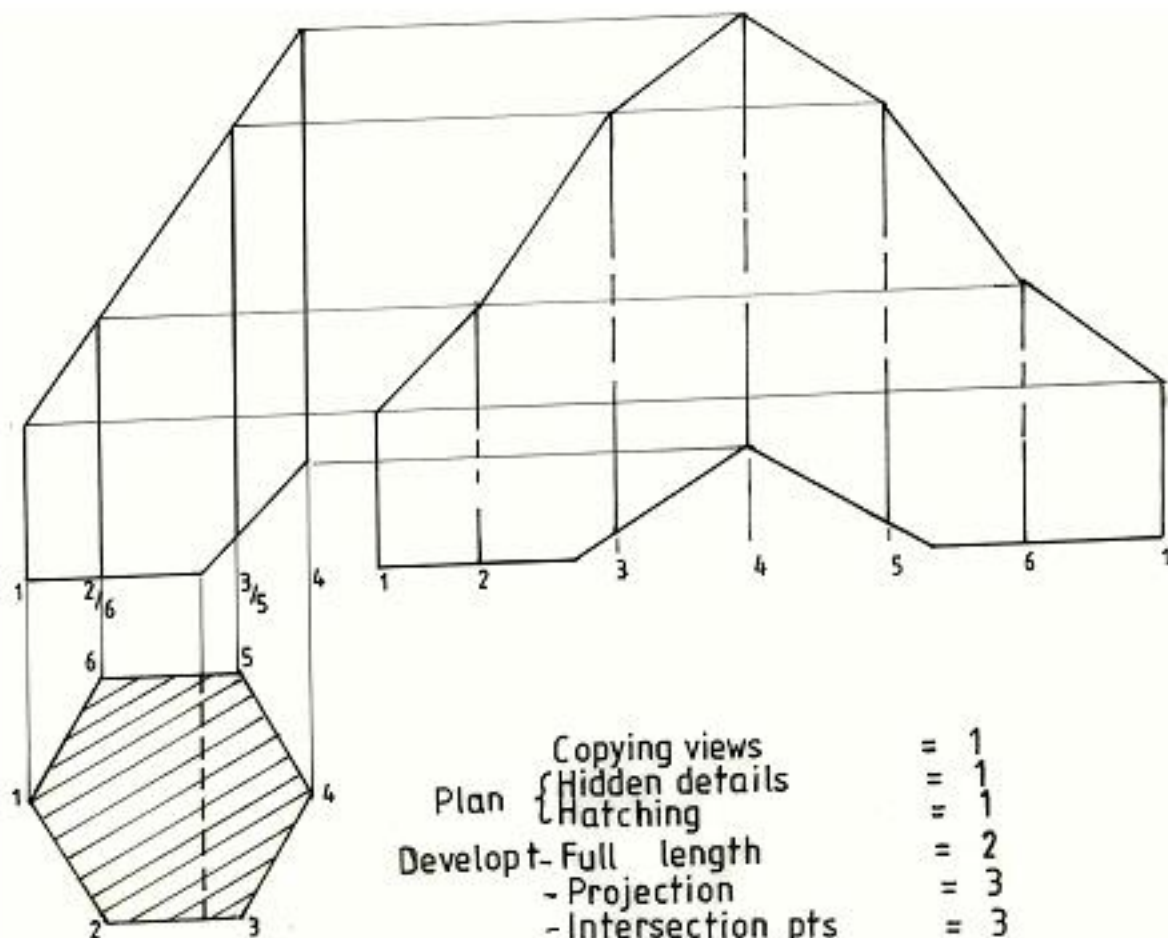
**FRONT ELEV.**

6 parts positioned 6×1 $6 = 6$
 4 faces sectioned $4 \times \frac{1}{2}$ $= 2$
 5 faces unsectioned $5 \times \frac{1}{2}$ $= 2\frac{1}{2}$
 3 dimensions shown $3 \times \frac{1}{2}$ $= 1\frac{1}{2}$
END ELEV.

13 faces shown $13 \times \frac{1}{2}$ $= 6\frac{1}{2}$
 Linework and neatness $= 1\frac{1}{2}$

= 20 marks

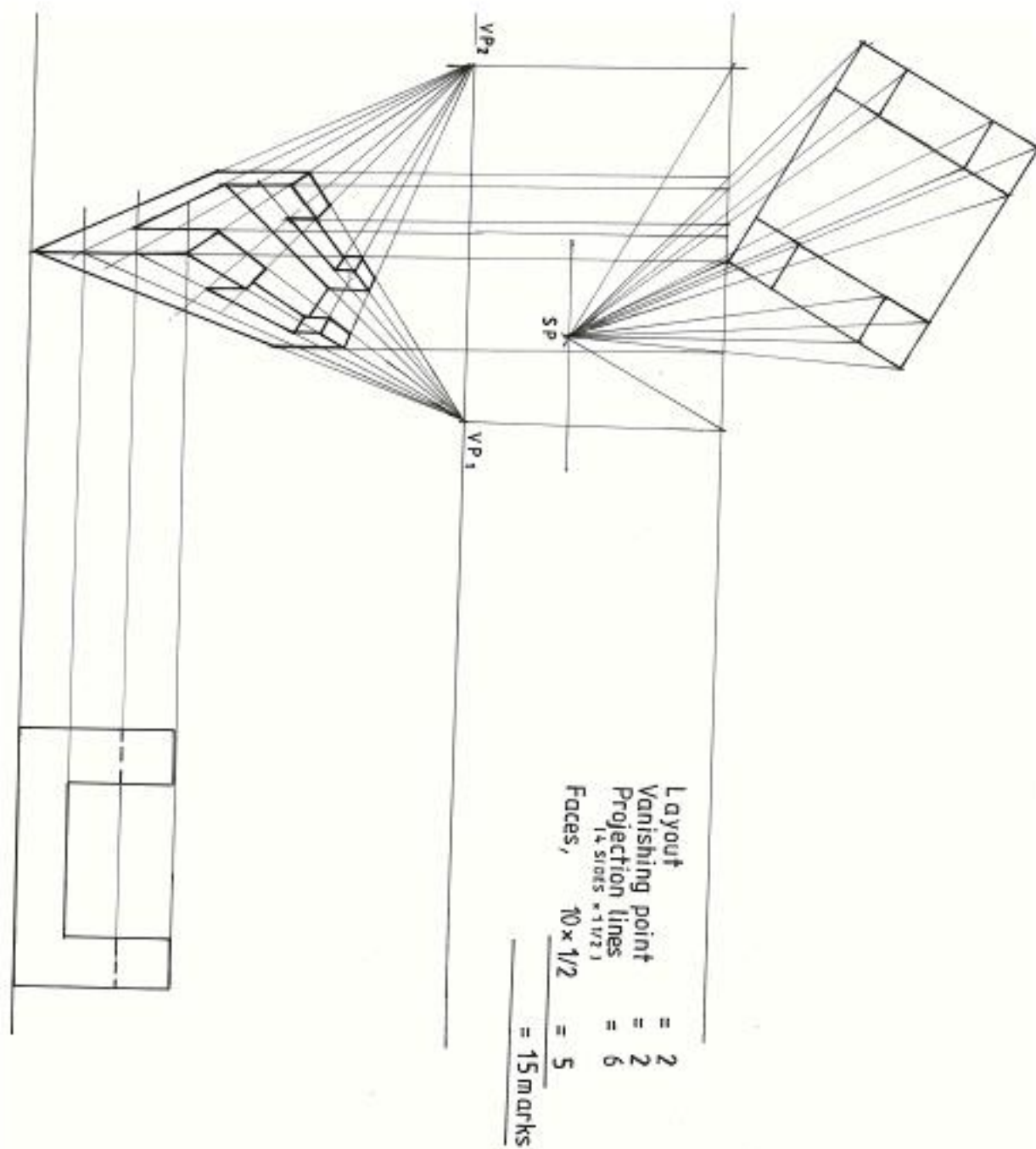


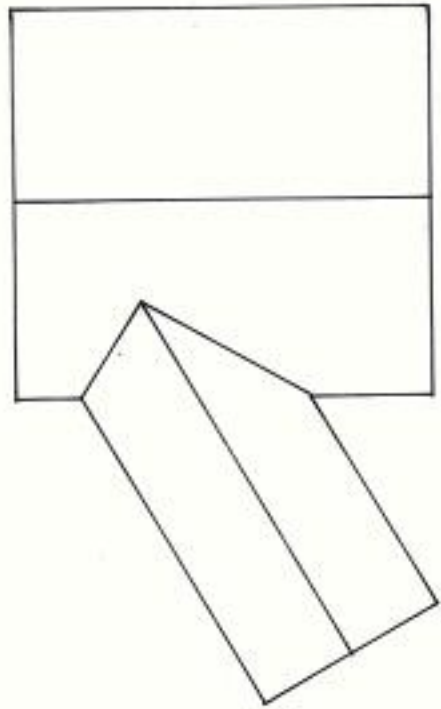


Copying views	= 1
Plan { Hidden details	= 1
{ Hatching	= 1
Develop- Full length	= 2
- Projection	= 3
- Intersection pts	= 3
- (lower truncation)	
- Intersection pts	= 1
- Folding lines	= 1
- Complete development	= 2
	<hr/>
	= 15 marks



13.





FRONT ELEV.

Intersection point lines = 2
Faces of slanting tube = 2
Correct Front elev = 1

= 5 mks

PLAN

Faces of slanting tube = 4
Correct Plan view = 1

= 5 mks

DEV. OF TUBE

Faces $4 \times \frac{1}{2}$ = 2
Correct hole = 2
Correct develop't = 1

= 5 marks

