



**QUESTION 2: SOLID GEOMETRY**

**Given:**

- The front view of a right equilateral triangular pyramid and a right regular hexagonal prism
- The top view of the pyramid and the axis of the prism
- An auxiliary view of the prism
- Cutting plane A-A

**Specifications:**

- The prism leans against the pyramid.
- Both solids are cut by cutting plane A-A.

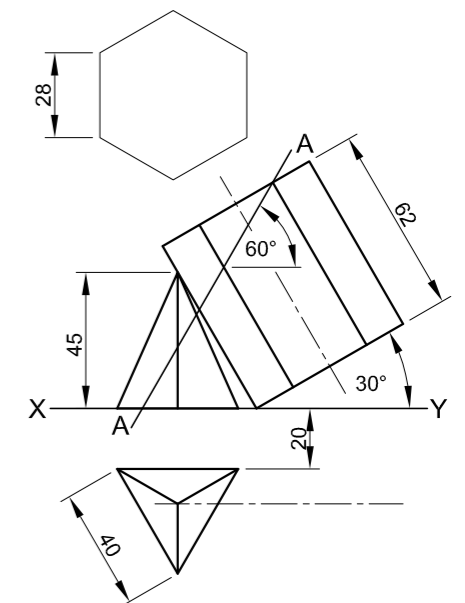
**Instructions:**

Draw, to scale 1 : 1, the following views of the TWO solids:

- 2.1 The given front view
- 2.2 A sectional top view
- 2.3 A sectional left view
- 2.4 The true shape of the cut surfaces

- Planning is essential.
- Show ALL construction.
- Show ALL hidden detail.

[40]



ASSESSMENT CRITERIA				
1	CONSTRUCTION	1		
2	FRONT VIEW	5 1/2		
3	SECTIONAL TOP VIEW	14 1/2		
4	SECTIONAL LEFT VIEW	12 1/2		
5	TRUE SHAPE	6 1/2		
PENALTIES (-)				
<b>TOTAL</b>		<b>40</b>		
EXAMINATION NUMBER				
EXAMINATION NUMBER				
EXAMINATION NUMBER				3





**QUESTION 2: SOLID GEOMETRY**

**Given:**

- The incomplete front view and the top view of a hollow open-ended right square prism that has been shaped to fit around a hollow open-ended right regular hexagonal prism. The axes of both hollow prisms lie in a common vertical plane.
- An auxiliary view of the square prism

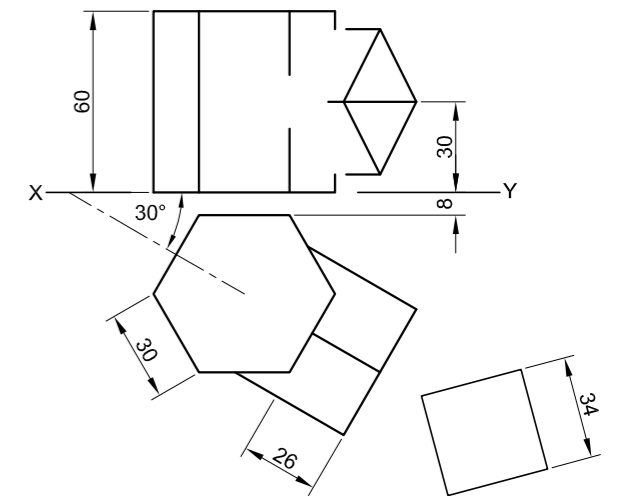
**Instructions:**

Draw, to scale 1 : 1, the following:

- 2.1 The given top view
- 2.2 The complete front view, clearly showing the curve of interpenetration
- 2.3 The complete right view, clearly showing the curve of interpenetration

- Planning is essential.
- Show ALL hidden detail.
- Show ALL construction.

[37]



ASSESSMENT CRITERIA			
1	TOP VIEW	7	
2	FRONT VIEW	14 1/2	
3	RIGHT VIEW	15 1/2	
PENALTIES (-)			
<b>TOTAL</b>		<b>37</b>	
EXAMINATION NUMBER			
EXAMINATION NUMBER			
EXAMINATION NUMBER			3





**QUESTION 2: SOLID GEOMETRY**

**Given:**

- The front view and the top view of a right regular hexagonal prism with a right regular hexagonal pyramidal hole
- Cutting plane A-A

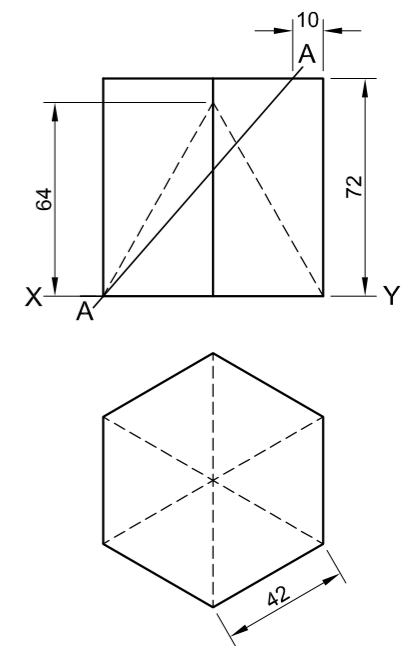
**Instructions:**

Draw, to scale 1 : 1, the following views of the solid:

- 2.1 The given front view
- 2.2 A sectional top view
- 2.3 A sectional left view
- 2.4 The true shape of the cut surface

- Show ALL hidden detail.
- Show ALL construction.

[35]



ASSESSMENT CRITERIA				
1	FRONT VIEW	4		
2	SECTIONAL TOP VIEW	9½		
3	SECTIONAL LEFT VIEW	10½		
4	TRUE SHAPE	6		
5	HATCHING	5		
PENALTIES (-)				
<b>TOTAL</b>		<b>35</b>		
EXAMINATION NUMBER				
EXAMINATION NUMBER				
EXAMINATION NUMBER				3





**QUESTION 2: SOLID GEOMETRY**

**Given:**

- The front view and the top view of a right regular hexagonal pyramid and a right equilateral triangular prism. The axes of both solids lie in a common vertical plane.
- An auxiliary view of the triangular prism

**Specifications:**

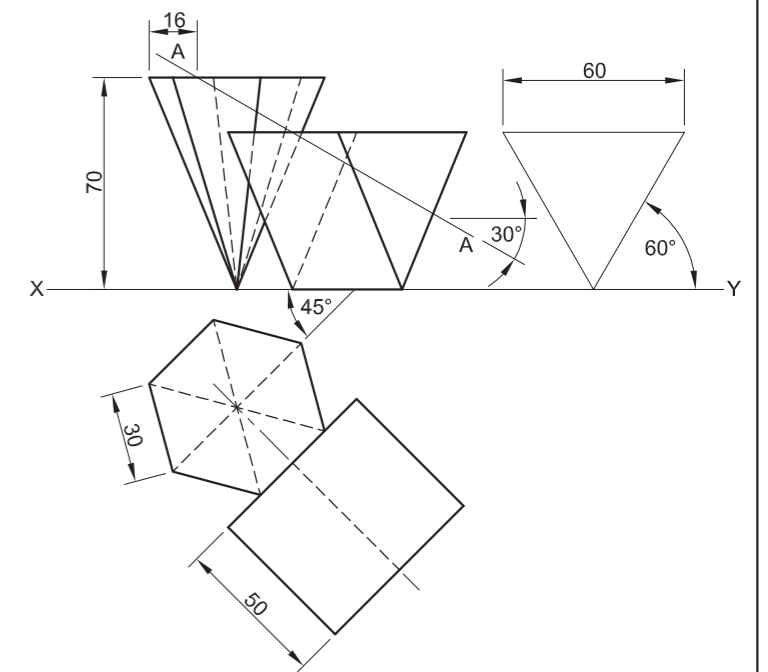
- The two solids do not touch.
- Both solids are cut by cutting plane AA.

**Instructions:**

Draw, to scale 1 : 1, the following views of the TWO solids:

- 2.1 The given front view
- 2.2 The sectional top view
- 2.3 The sectional right view

- Planning is essential.
- Show ALL necessary construction.
- Show ALL hidden detail on all three views. [37]



ASSESSMENT CRITERIA			
1	CONSTRUCTION	3	
2	FRONT VIEW	9	
3	SECTIONAL TOP VIEW	11	
4	SECTIONAL RIGHT VIEW	14	
PENALTIES (-)			
<b>TOTAL</b>		<b>37</b>	
EXAMINATION NUMBER			
			3





**QUESTION 2: SOLID GEOMETRY**

**Given:**

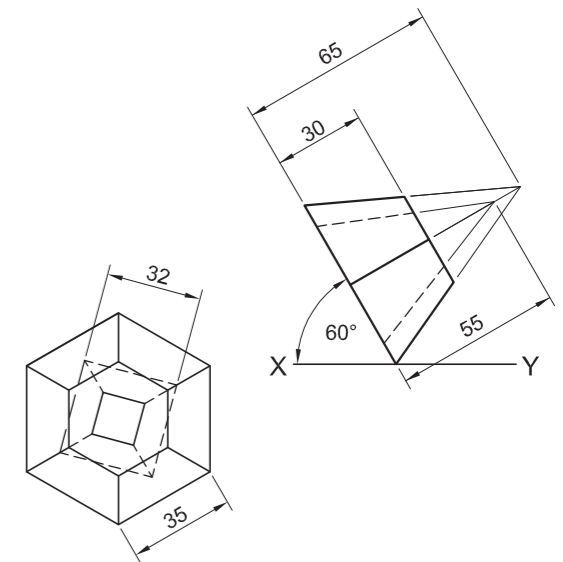
The front view and an auxiliary view of a truncated right regular hexagonal pyramid with a centrally placed right square pyramidal hole.

**Instructions:**

Draw, to scale 1 : 1, the following views of the solid:

- 2.1 The given front view
- 2.2 The top view
- 2.3 The left view

- Show ALL hidden detail.
- Show ALL necessary construction. **[40]**



ASSESSMENT CRITERIA			
1	FRONT AND AUX. VIEW	7½	
2	TOP VIEW	15	
3	LEFT VIEW	17½	
PENALTIES (-)			
<b>TOTAL</b>		<b>40</b>	
EXAMINATION NUMBER			
EXAMINATION NUMBER			
			<b>3</b>





**QUESTION 2: SOLID GEOMETRY**

**Given:**

The front view and the top view of a right regular hexagonal prism with a right square hole and a right regular pentagonal pyramid

**Specifications:**

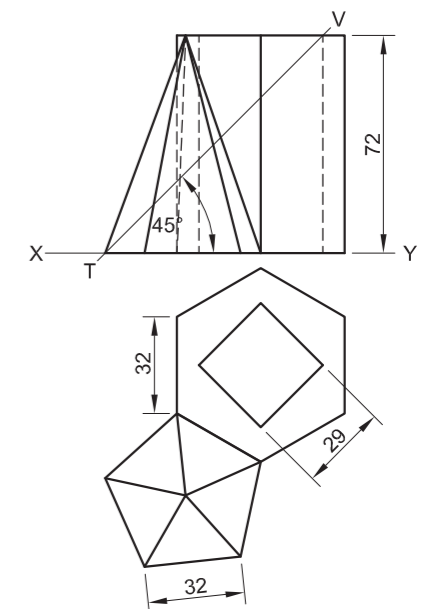
- One base edge of the hexagonal prism is in contact with one base edge of the pentagonal pyramid.
- Both solids are cut by a cutting plane VT.

**Instructions:**

Draw, to scale 1 : 1, the following views of the TWO solids:

- 2.1 The given front view
- 2.2 The sectional top view
- 2.3 The sectional left view. Show ALL hidden detail.

Show ALL necessary construction. **[38]**



ASSESSMENT CRITERIA			
1	CONST. + FRONT VIEW	7	
2	SECTIONAL TOP VIEW	12½	
3	SECTIONAL LEFT VIEW	15	
4	HATCHING	3½	
PENALTIES (-)			
<b>TOTAL</b>		<b>38</b>	
EXAMINATION NUMBER			
EXAMINATION NUMBER			
			<b>3</b>





**QUESTION 2: SOLID GEOMETRY**

**Given:**

- The front view and the top view of a right equilateral triangular prism and a right regular octagonal pyramid
- The auxiliary view of the triangular prism
- The position of base edge 'A-B' on the answer sheet

**Specifications:**

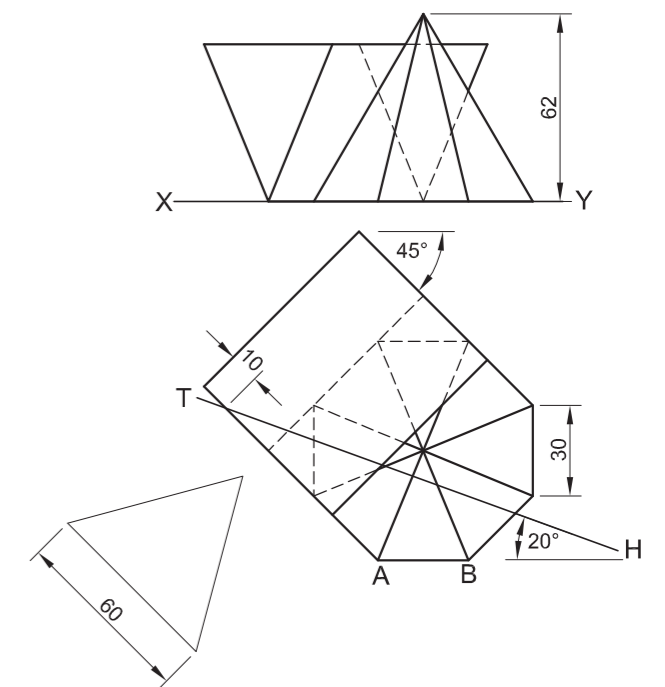
One face of the triangular prism is in contact with one face of the octagonal pyramid. Both solids are cut by a cutting plane HT.

**Instructions:**

Draw, to scale 1 : 1, the following views of the TWO solids:

- 2.1 The given top view
- 2.2 A sectional front view on cutting plane HT
- 2.3 The true shape of the cut surfaces

- Show ALL necessary construction and projection.
- Show ALL hidden detail. [38]



A ————— B

ASSESSMENT CRITERIA			
1	GIVEN TOP VIEW	7	
2	FRONT VIEW	21	
3	TRUE SHAPE	10	
<b>TOTAL</b>		<b>38</b>	
EXAMINATION NUMBER			
EXAMINATION NUMBER			
EXAMINATION NUMBER			3