

SA-STUDENT

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QUESTION 3: ISOMETRIC DRAWING

Given:

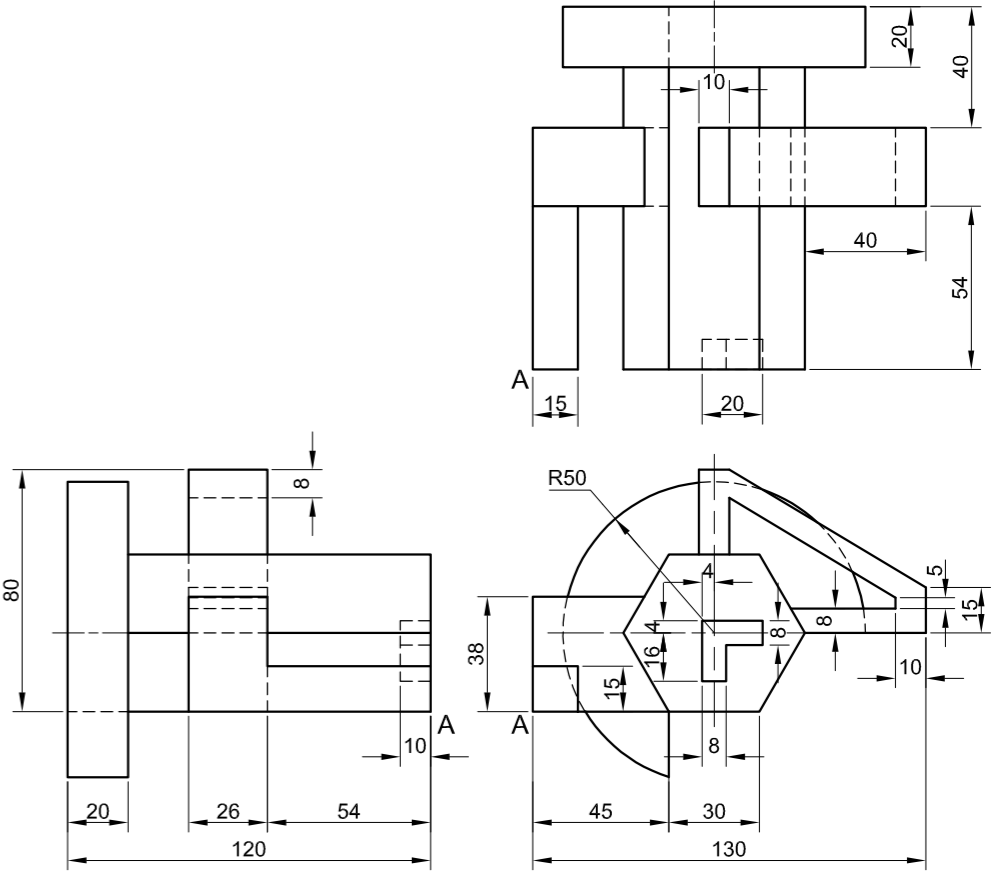
- The front view, top view and left view of a tool
- The position of point A on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the tool into an isometric drawing.

- Make A the starting and lowest point of the drawing.
- Show ALL construction.
- NO hidden detail is required.

[40]



↓
A

ASSESSMENT CRITERIA				
1	PLACING + AUX. VIEW	2		
2	BODY	20		
3	HANDLE	9 1/2		
4	CIRCLES + CONSTR. + CL	8 1/2		
PENALTIES (-)				
TOTAL		40		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4

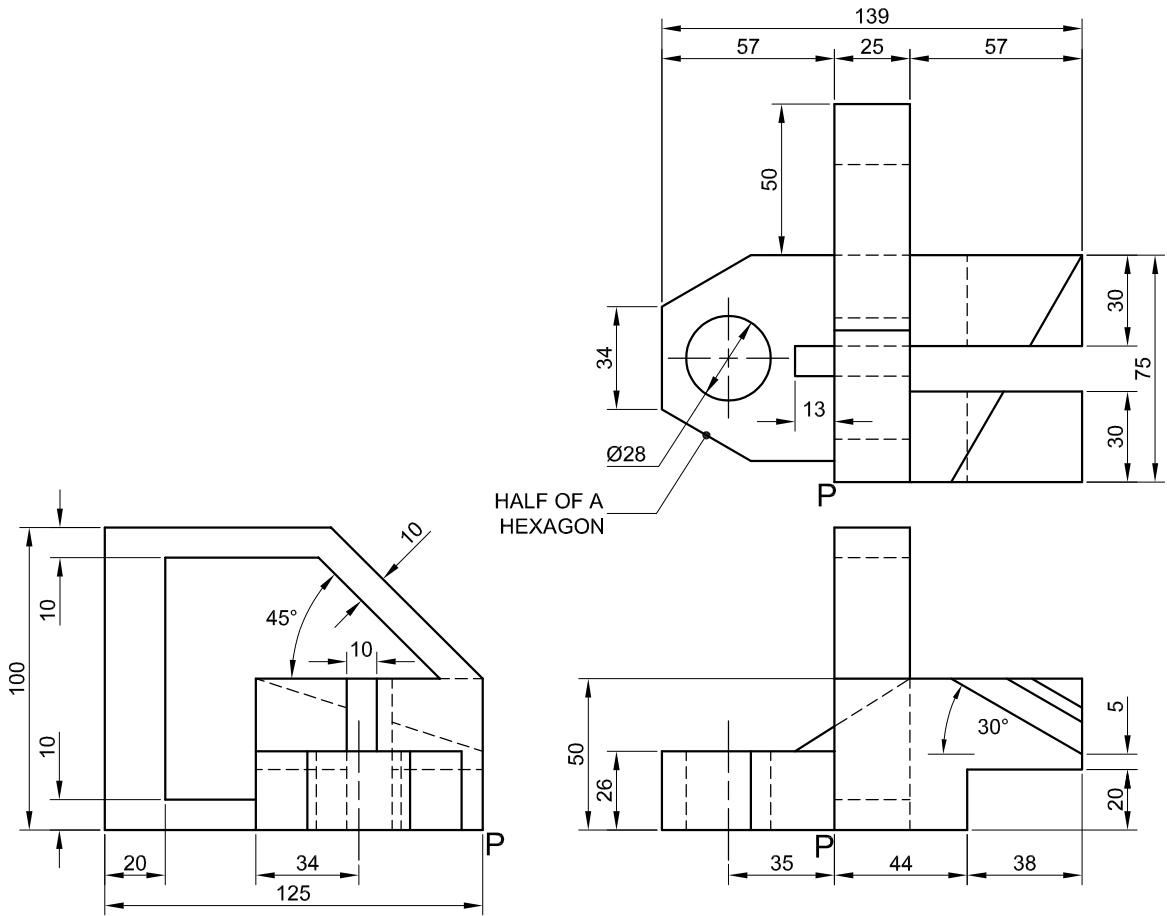


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a gauge
 - The position of point P on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the gauge into an isometric drawing.

- Use P as the starting point for the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [39]



P

ASSESSMENT CRITERIA				
1	PLACING + AUX VIEWS	4		
2	LEFT PART	17		
3	MIDDLE PART	7 1/2		
4	RIGHT PART	5		
5	CIRCLE + CENTRE LINES + CONSTR'	5 1/2		
PENALTIES (-)				
TOTAL		39		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



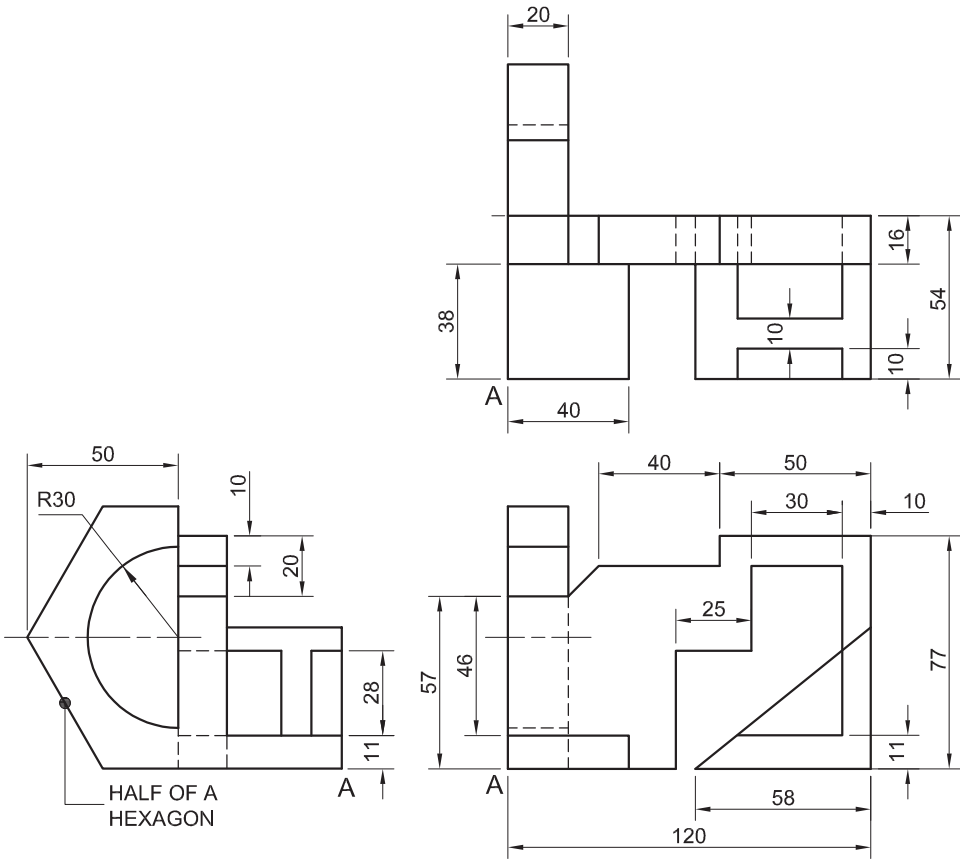


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a gauge
 - The position of point A on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the gauge into an isometric drawing.

- Make A the lowest point of the drawing.
- Show ALL construction.
- NO hidden detail is required. **[40]**



↓
A

ASSESSMENT CRITERIA					
1	PLACING + AUX. VIEW	2			
2	FRONT + MIDDLE SURFACES	16 ¹ / ₂			
3	SLOPED SURFACE	11			
4	CIRCLE + HEXAGON	10 ¹ / ₂			
PENALTIES (-)					
TOTAL		40			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4





QUESTION 3: ISOMETRIC DRAWING

Given:

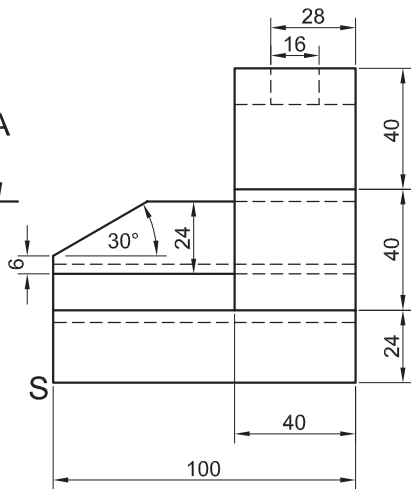
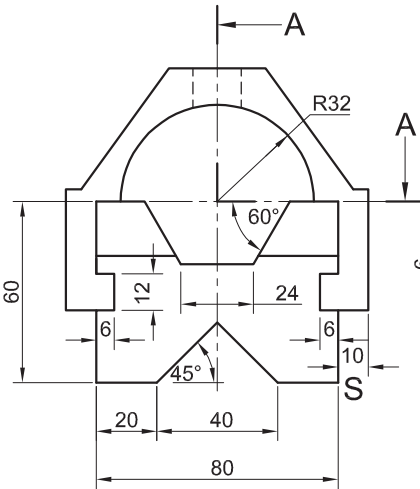
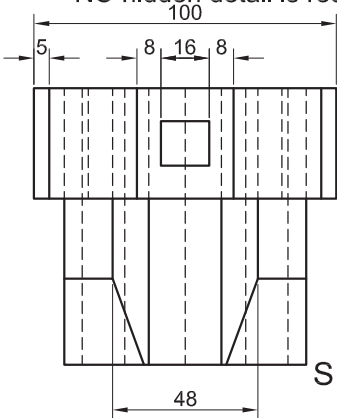
- The front view, top view and right view of a groove block and slider assembly
- The position of point S on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the groove block and slider assembly into a sectional isometric drawing on cutting plane A-A.

- Make S the lowest point of the drawing.
- Show ALL construction.
- NO hidden detail is required.

[42]



ASSESSMENT CRITERIA				
1	AUX. VIEW + PLACING	2		
2	LOWER PORTION	15		
3	UPPER PORTION	14		
4	SECTION	8		
5	ISO CIRCLES + CIRCLE CONSTR' + CENTRE LINES	3		
PENALTIES				
TOTAL		42		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



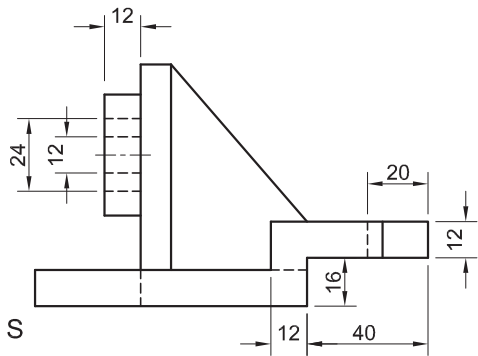
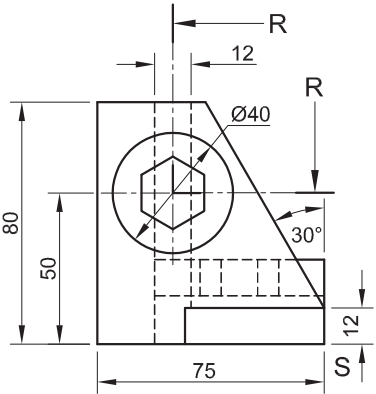
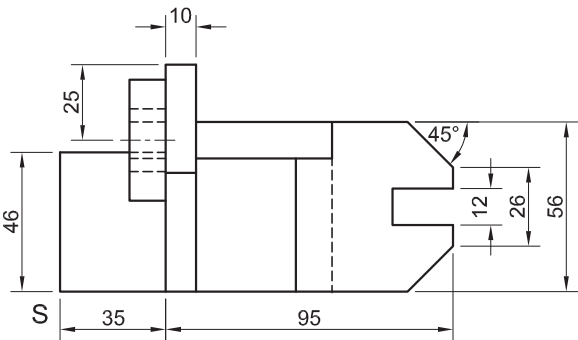


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a jig
 - The position of point S on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the jig into a sectional isometric drawing on cutting plane R-R.

- Make S the lowest point of the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [40]**



ASSESSMENT CRITERIA					
1	PLACEMENT + AUX VIEW	3			
2	BASE	13			
3	UPRIGHT	4½			
4	CIRCLE + HEZAGON	9½			
5	SECTION	10			
PENALTIES (-)					
TOTAL		40			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4



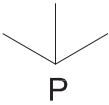
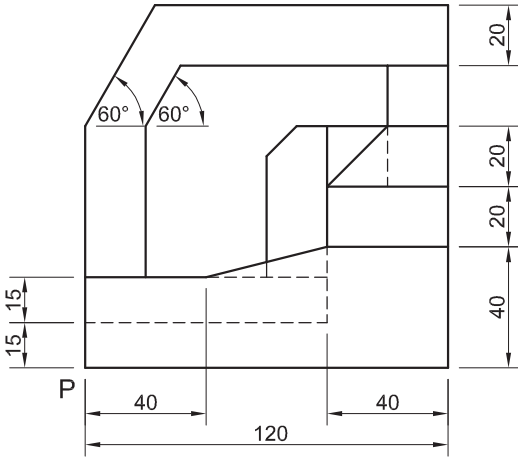
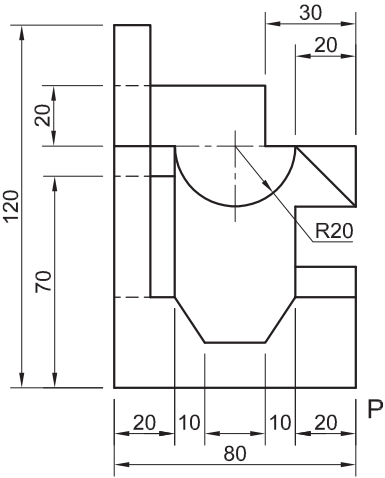
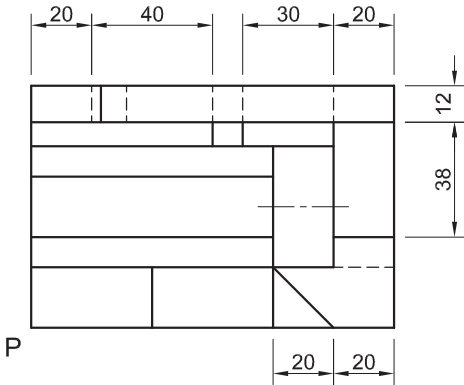


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a tool jig
 - The position of point P on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the tool jig into an isometric drawing.

- Make P the lowest point of the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [41]**



ASSESSMENT CRITERIA				
1	PLACEMENT + AUX. VIEW	3		
2	FRONT PORTION	11		
3	BACK PORTION	21 ¹ / ₂		
4	CIRCLE + CIRCLE CONSTRUCTION + CL	5 ¹ / ₂		
PENALTIES (-)				
TOTAL		41		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

Given:

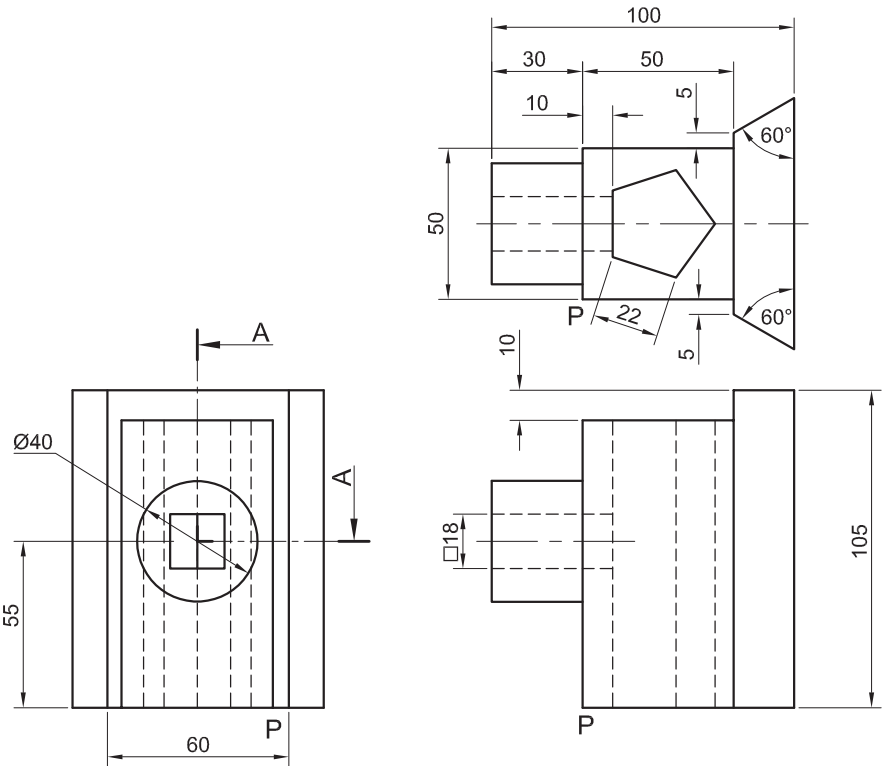
- The front view, top view and left view of a punch guide with a regular pentagonal hole
- The position of point P on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the punch guide into a sectional isometric drawing on cutting plane A-A.

- Make P the lowest point of the drawing.
- Show ALL construction.
- NO hidden detail is required.

[38]



P

ASSESSMENT CRITERIA				
1	AUX. VIEW + PLACING	3		
2	ISOMETRIC + NON-ISO' LINES	14		
3	ISOMETRIC CIRCLES + CIRCLE CONSTR'	7		
4	SECTIONED SURFACES + HATCHING	14		
PENALTIES				
TOTAL		38		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



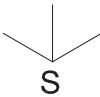
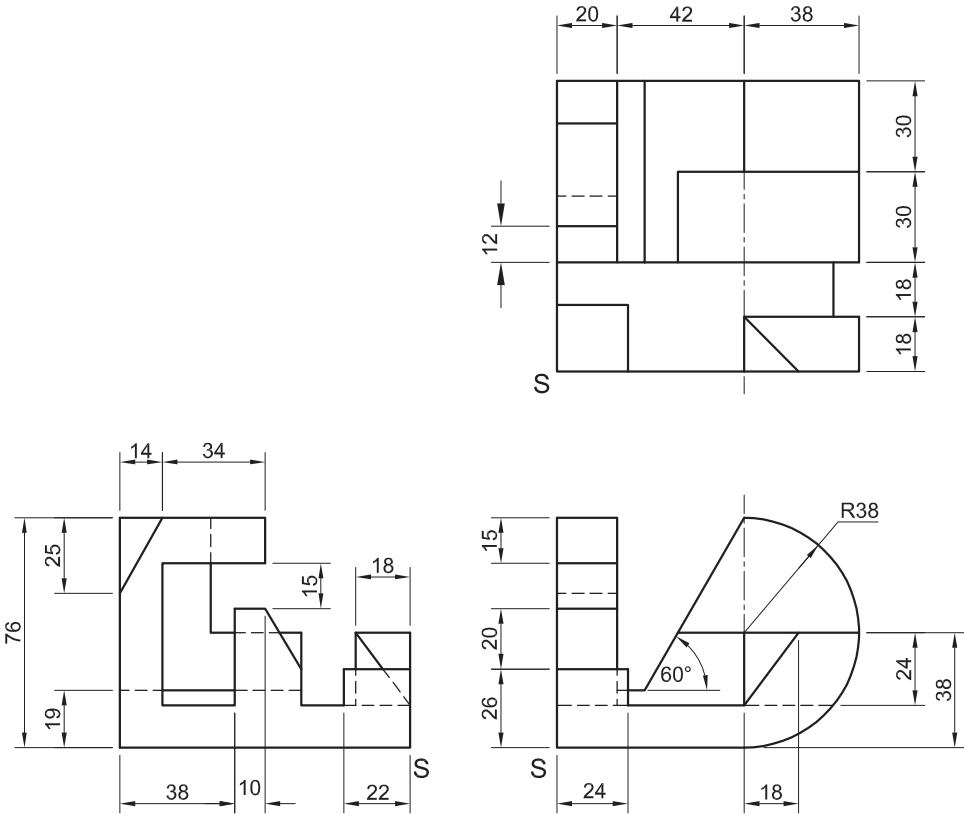


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a bracket
 - The position of point S on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the bracket into an isometric drawing.

- Make S the lowest point of the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [38]



ASSESSMENT CRITERIA					
1	PLACEMENT + AUX. VIEW	2			
2	FRONT PORTION	23½			
3	BACK PORTION	5			
4	CIRCLE + CIRCLE CONSTRUCTION + CL	7½			
PENALTIES (-)					
TOTAL		38			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4



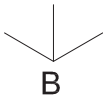
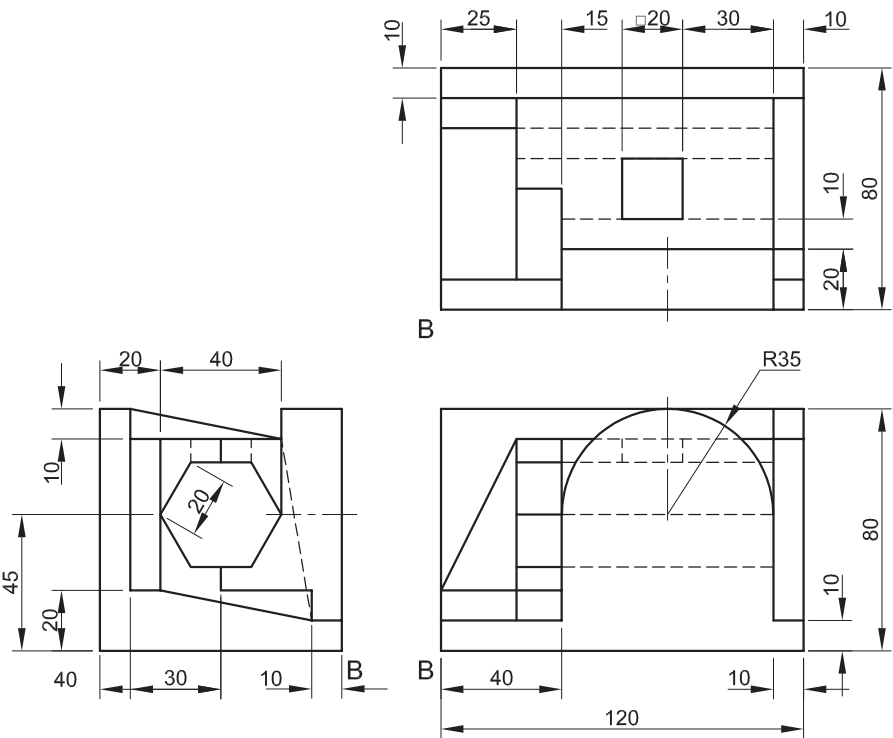


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a jig
 - The position of point B on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the jig into an isometric drawing.

- Make B the lowest point of the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [41]**



ASSESSMENT CRITERIA					
1	PLACEMENT + AUX. VIEW	2			
2	ISOMETRIC + NON ISOMETRIC LINES	24 1/2			
3	HEXAGON + SQUARE	10			
4	CIRCLE + CIRCLE CONSTRUCTION + CL	4 1/2			
PENALTIES (-)					
TOTAL		41			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4



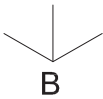
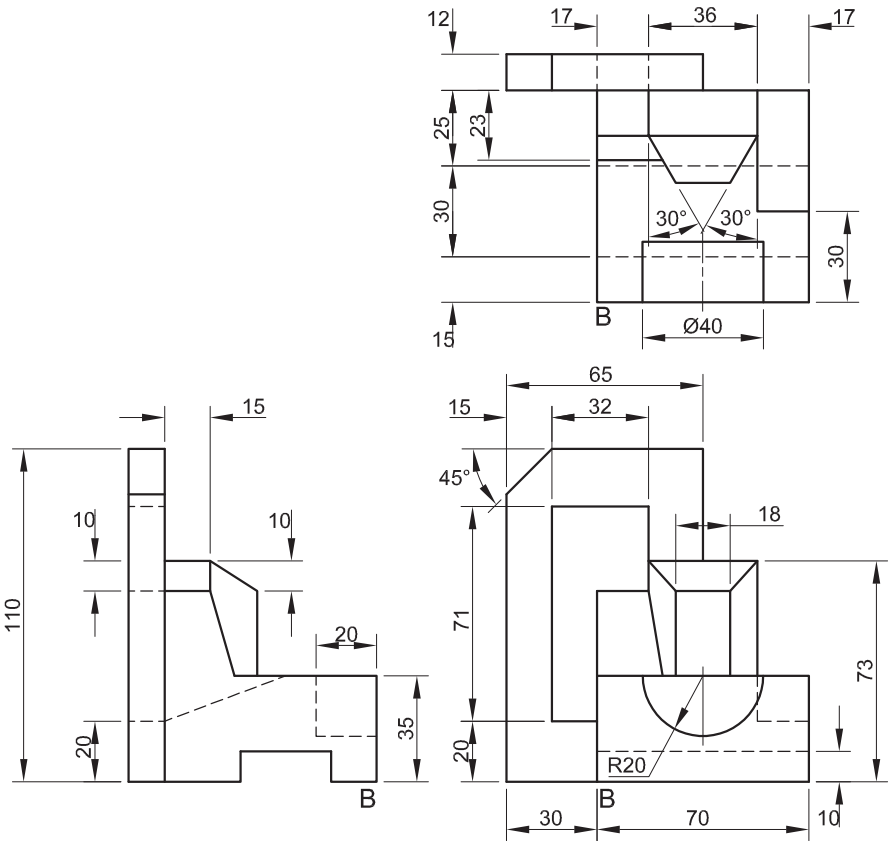


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a guide
 - The position of point B on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the guide into an isometric drawing.

- Make B the lowest point of the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [36]



ASSESSMENT CRITERIA				
1	PLACEMENT + AUX. VIEW	2		
2	FRONT + REAR	18		
3	MIDDLE SECTION	10		
4	CIRCLE + CIRCLE CONSTRUCTION + CL	6		
PENALTIES (-)				
TOTAL		36		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



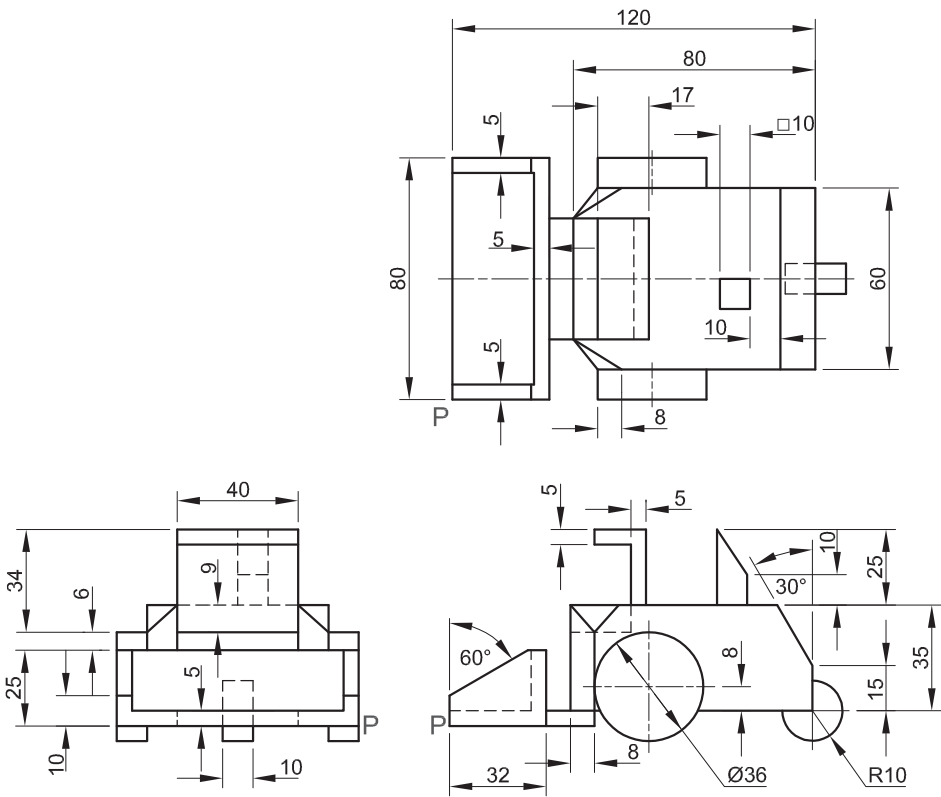


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a toy
 - The position of point P on the drawing sheet

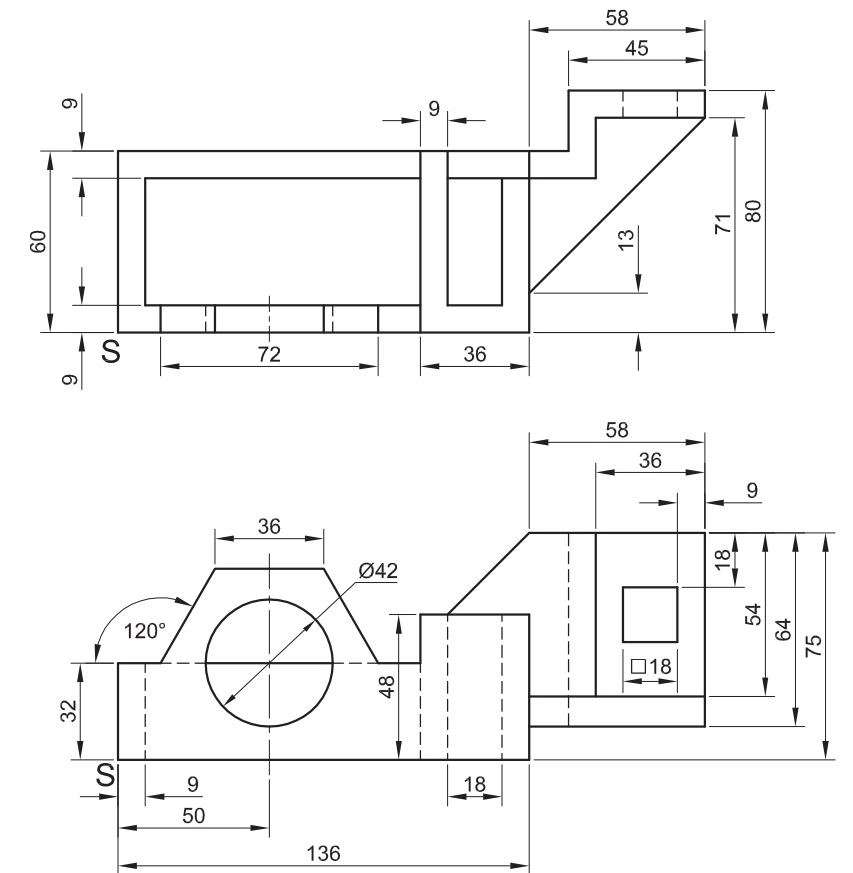
Instructions:
Using scale 1 : 1, convert the orthographic views of the toy to an isometric drawing.

- Make P the lowest point of the drawing.
 - Show ALL construction.
 - NO hidden detail is required.
- [44]



ASSESSMENT CRITERIA					
1	PLACEMENT + AUX VIEW	2			
2	SCOOP + BODY	22			
3	CABIN + EXHAUST	11 1/2			
4	CIRCLE + CIRCLE CONSTRUCTION + CL	8 1/2			
TOTAL		44			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4





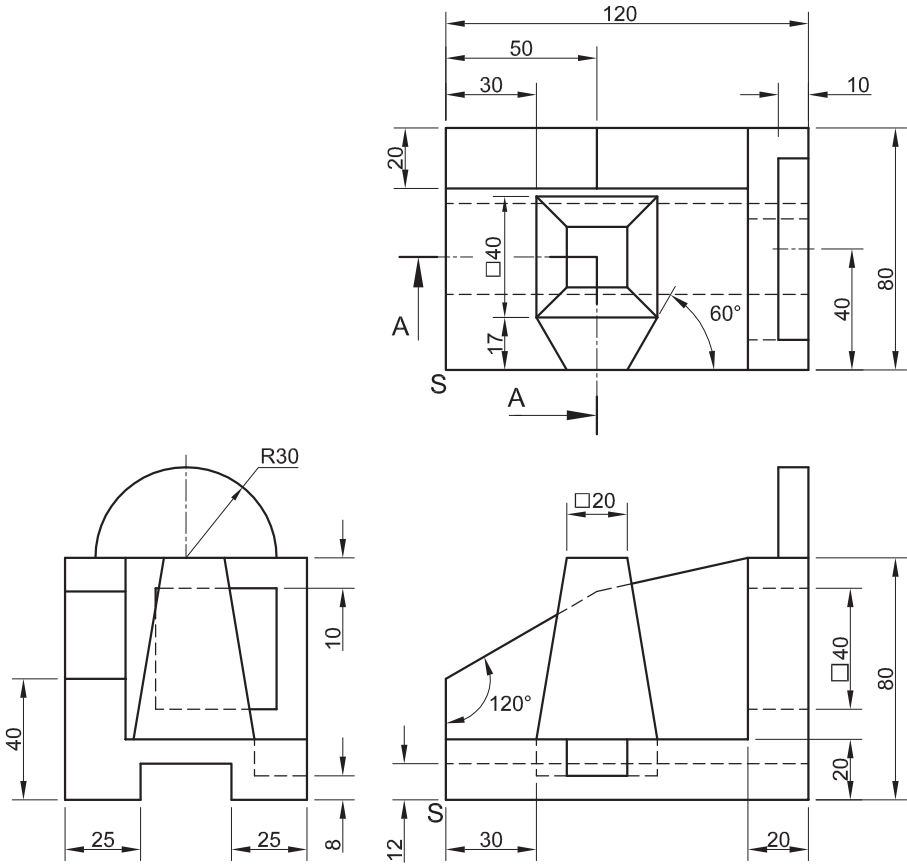
[39]

Please turn over



QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a jig
 - The position of point S on the drawing sheet
- Instructions:**
- Using scale 1 : 1, convert the orthographic views of the jig into a sectional isometric drawing on cutting plane A-A.
- Make S the lowest point of the drawing.
 - Show ALL necessary construction.
 - NO hidden detail is required.
- [40]



ASSESSMENT CRITERIA				
1	AUX. VIEW + PLACING	2 1/2		
2	ISOMETRIC + NON-ISOMETRIC LINES	23		
3	SECTIONED SURFACES	9		
4	ISOMETRIC CIRCLES + CIRCLE CONSTR'	5 1/2		
TOTAL		40		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

Given:

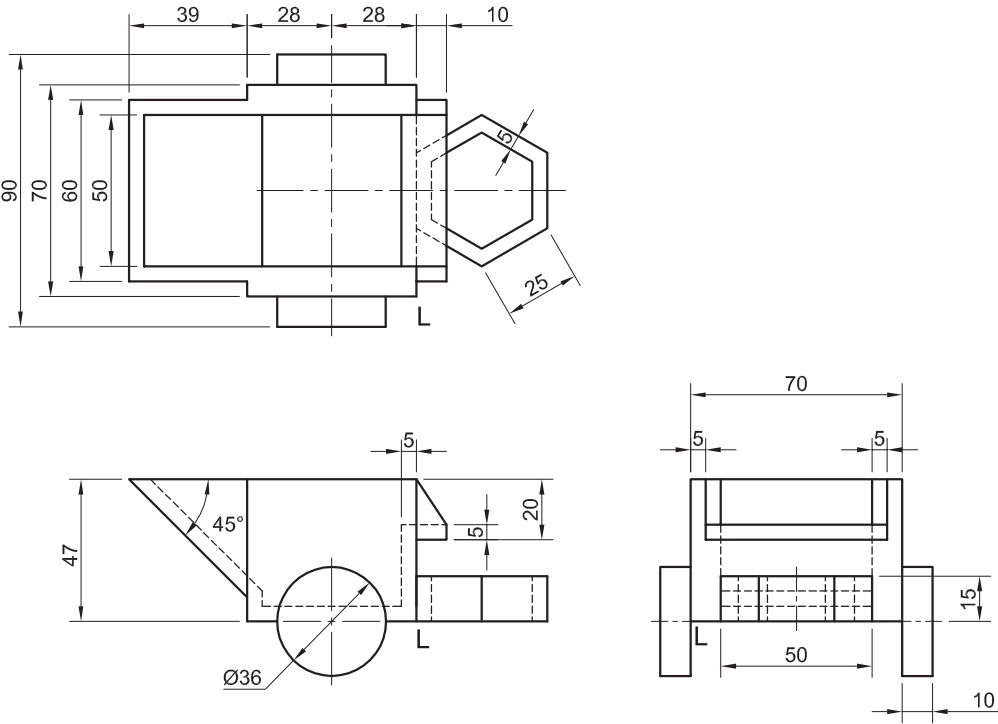
- The front view, top view and right view of a toy planter
- The position of corner L on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the toy planter into an isometric drawing.

- Use corner L as the starting point of the drawing.
- Show ALL necessary construction.
- NO hidden detail is required.

[40]



ASSESSMENT CRITERIA				
1	AUXILIARY VIEWS + PLACING	2		
2	ISOMETRIC + NON-ISOMETRIC LINES	18 ½		
3	HEXAGON	12		
4	CIRCLES + CONSTRUCTION + CENTRE LINES	7 ½		
PENALTIES (-)				
TOTAL		40		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

Given:

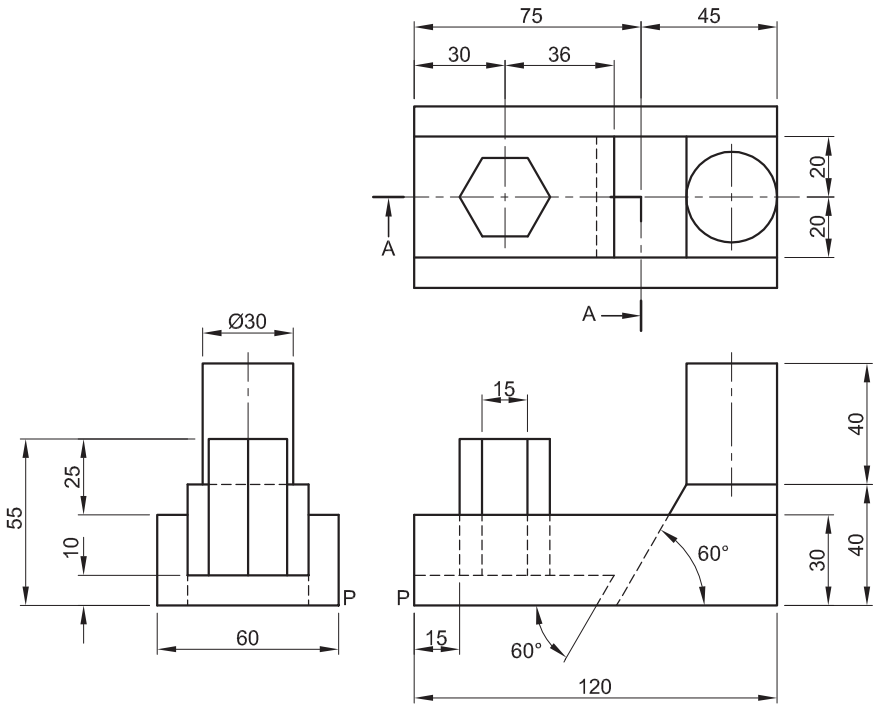
- The front view, top view and left view of a woodworking plane
- The position of point P on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the woodworking plane into a sectional isometric drawing on cutting plane A-A.

- Make P the lowest point of the drawing.
- Show ALL necessary construction.
- NO hidden detail is required.

[34]



P

ASSESSMENT CRITERIA					
1	AUXILLIARY VIEW + PLACING	3			
2	ISOMETRIC + NON-ISOMETRIC	12 ½			
3	HEXAGON	2 ½			
4	CIRCLES + CONSTRUCTION + CL	6			
5	SECTION	8			
6	HATCHING	2			
PENALTIES (-)					
TOTAL		34			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4



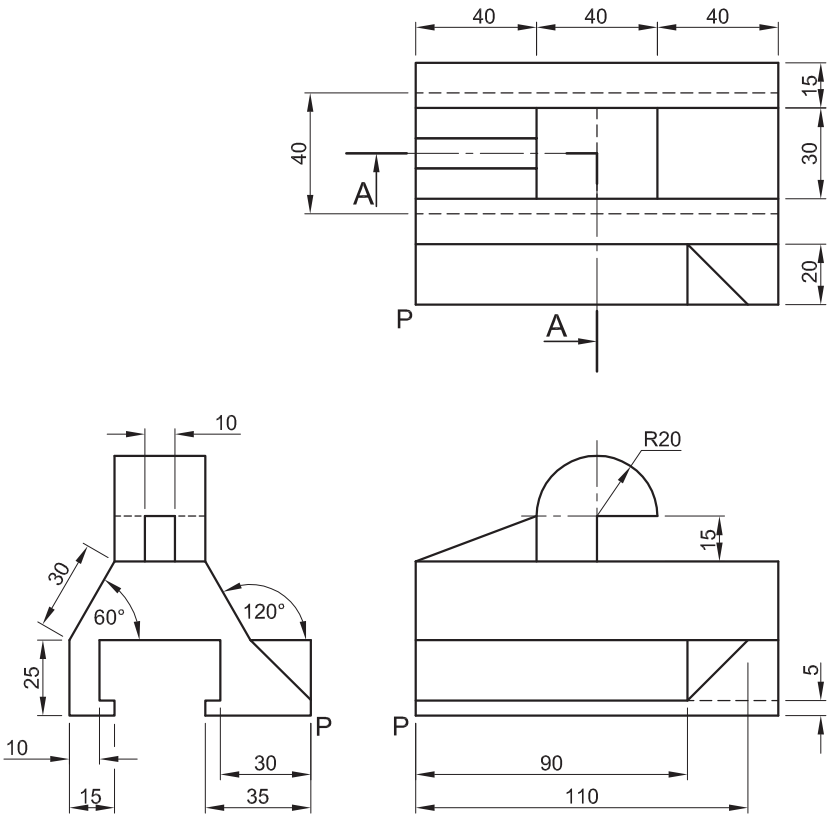


QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and left view of a machine switch with cutting plane A-A
 - The position of point P on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the machine switch into a sectional isometric drawing on cutting plane A-A.

- Make P the lowest point of the drawing.
 - Show ALL necessary construction.
 - NO hidden detail is required.
- [39]



ASSESSMENT CRITERIA					
1	AUX. VIEW + PLACING	3			
2	ISOMETRIC + NON-ISOMETRIC LINES	16½			
3	ISO' CIRCLES + CIRCLE CONSTRUCTION	5			
4	SECTIONED SURFACES	11			
5	HATCHING	3½			
PENALTIES (-)					
TOTAL		39			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4





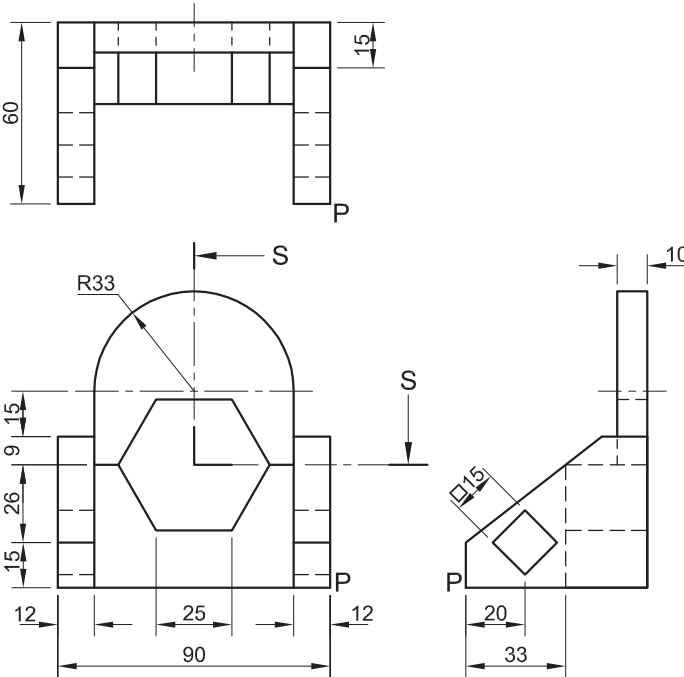
QUESTION 3: ISOMETRIC DRAWING

- Given:**
- The front view, top view and right view of a bracket
 - The position of point P on the drawing sheet

Instructions:
Using scale 1 : 1, convert the orthographic views of the bracket into a sectional isometric drawing on cutting plane S-S.

- Make P the lowest point of the drawing.
- Show ALL necessary construction.
- NO hidden detail is required.

[37]



ASSESSMENT CRITERIA					
1	AUX. VIEW + PLACING	3			
2	ISOMETRIC + NON-ISO'	13			
3	HEXAGON + SQUARES	9 1/2			
4	CIRCLES + CONST.	4			
5	SECTION	5			
6	HATCHING	2 1/2			
PENALTIES (-)					
TOTAL		37			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4

↓
P





QUESTION 3: ISOMETRIC DRAWING

Given:

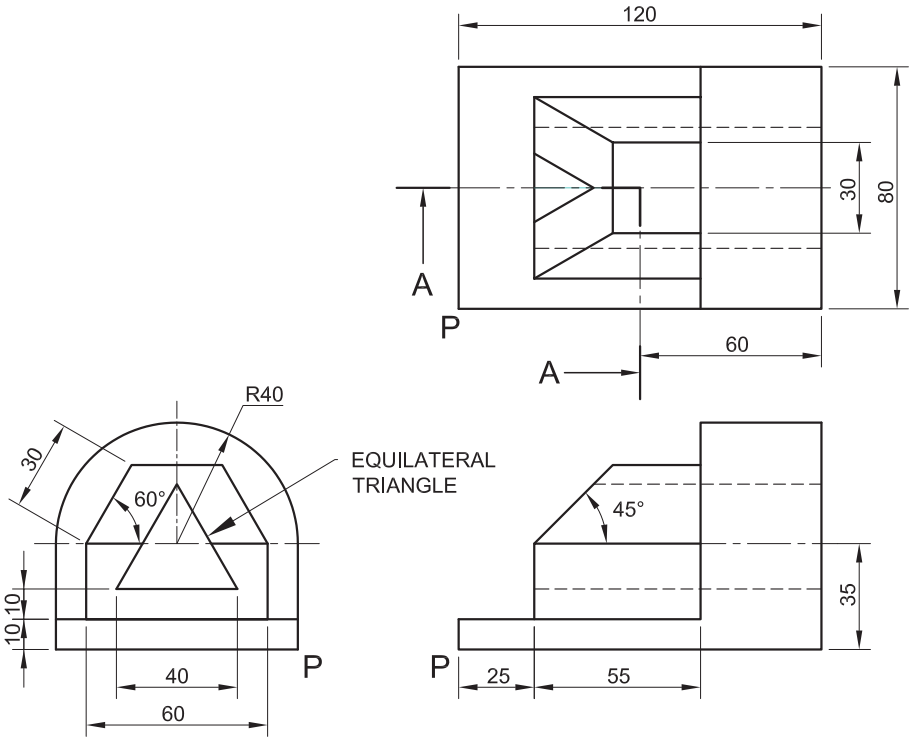
- The front view, top view and left view of a support
- The position of point P on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the support into a sectional isometric drawing on cutting plane A-A.

- Make P the lowest point of the drawing.
- Show ALL necessary construction.
- NO hidden detail is required.

[36]



ASSESSMENT CRITERIA					
1.	AUX. VIEW + PLACING	4			
2.	ISOMETRIC + NON-ISOMETRIC LINES	13			
3.	ISOMETRIC CIRCLES	4			
4.	CIRCLE CONSTRUCTION	2			
5.	SECTIONED SURFACES	9			
6.	HATCHING	4			
TOTAL		36			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4



QUESTION 3: ISOMETRIC DRAWING

Given:

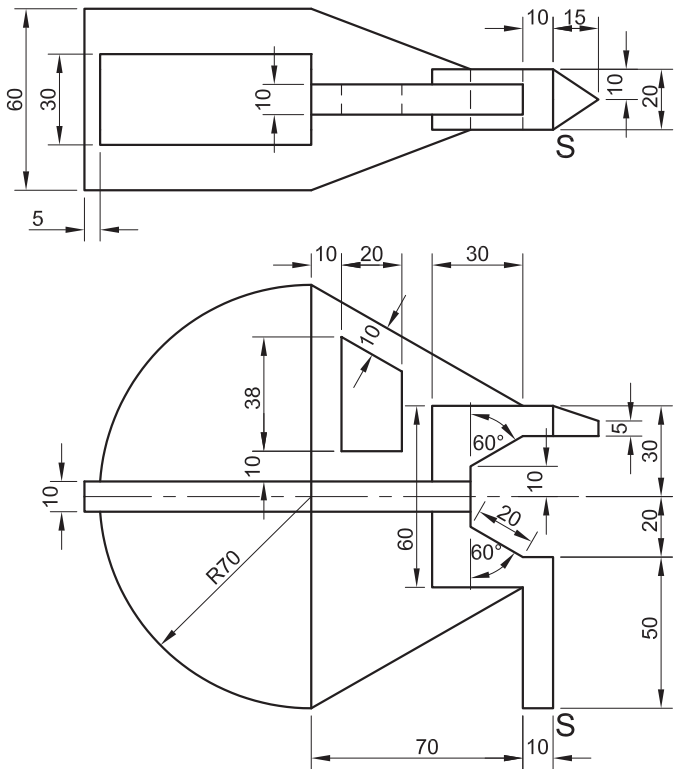
- The front view and top view of a jig
- The position of point S on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the jig to an isometric drawing.

- Make S the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

[41]



S

ASSESSMENT CRITERIA				
1	AUX. + PLACEMENT	2		
2	FRONT	19		
3	MIDDLE	14		
4	CONSTR. + CIRCLE	6		
TOTAL		41		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

Given:

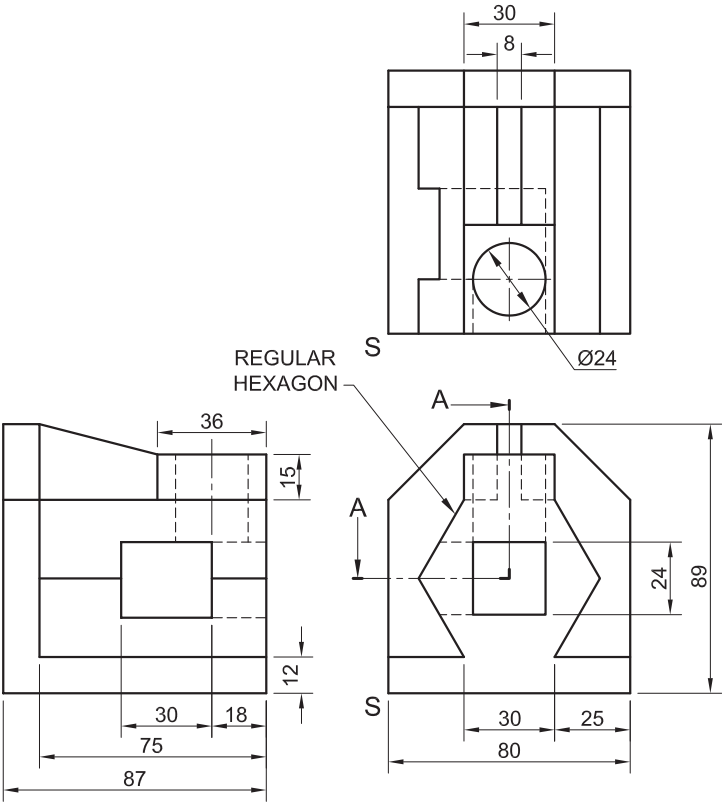
- The front view, top view and left view of a bracket
- The position of point S on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the bracket to a sectional isometric drawing on cutting plane A-A.

- Make S the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

[41]



↓
S

ASSESSMENT CRITERIA					
1	AUX' VIEW + PLACEMENT	2			
2	BASE	8			
3	HEXAGONAL PRISM	10			
4	CIRCLES	5			
5	SECTION	12			
6	HATCHING	4			
TOTAL		41			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4





QUESTION 3: ISOMETRIC DRAWING

Given:

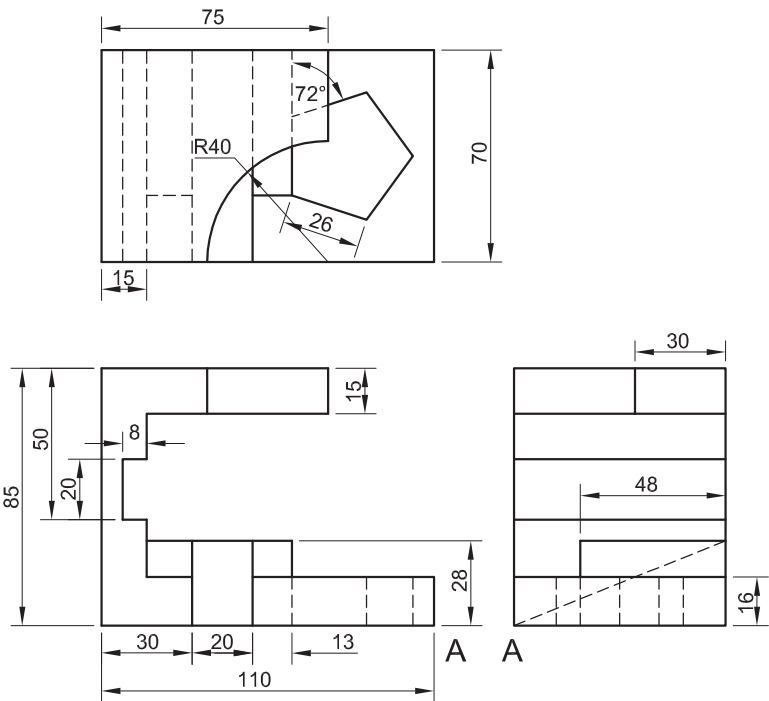
- The front view, top view and right view of a bracket with a regular pentagonal hole
- The position of point A on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the bracket into an isometric drawing.

- Make A the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

[37]



↓
A

ASSESSMENT CRITERIA				
1	AUX' VIEW + CIRCLE PENTAGON + PLACING	12		
2	LOWER PORTION	15½		
3	UPPER PORTION	9½		
TOTAL		37		
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

Given:

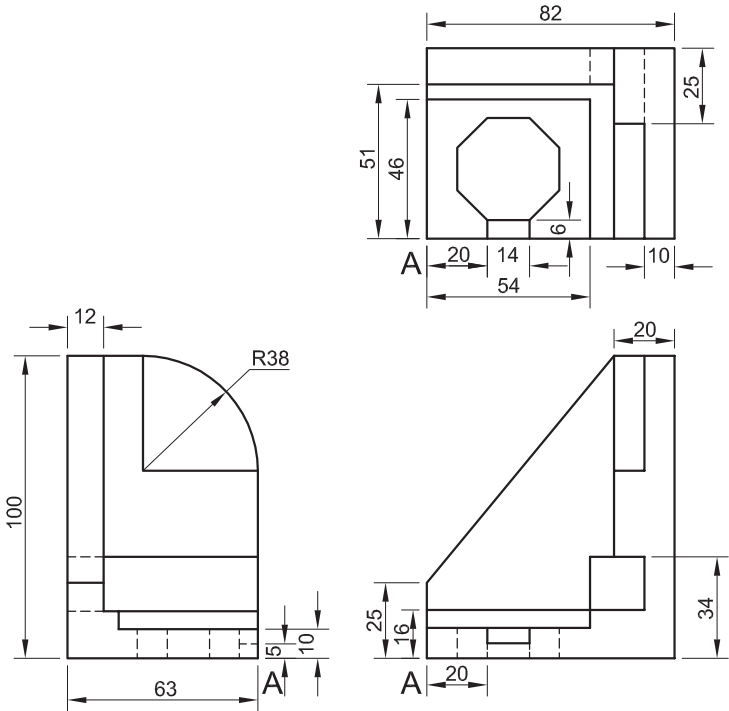
- The front view, top view and left view of a bracket with a regular octagonal hole
- The position of point A on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the bracket into an isometric drawing.

- Make A the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

[36]



↓
A

ASSESSMENT CRITERIA					
1	AUX' VIEWS + CIRCLE + CONSTR' + PLACE	5			
2	OCTAGONAL HOLE	10			
3	ISO' + NON-ISO' LINES	21			
TOTAL		36			
EXAMINATION NUMBER					
EXAMINATION NUMBER					4





QUESTION 3: ISOMETRIC DRAWING

Given:

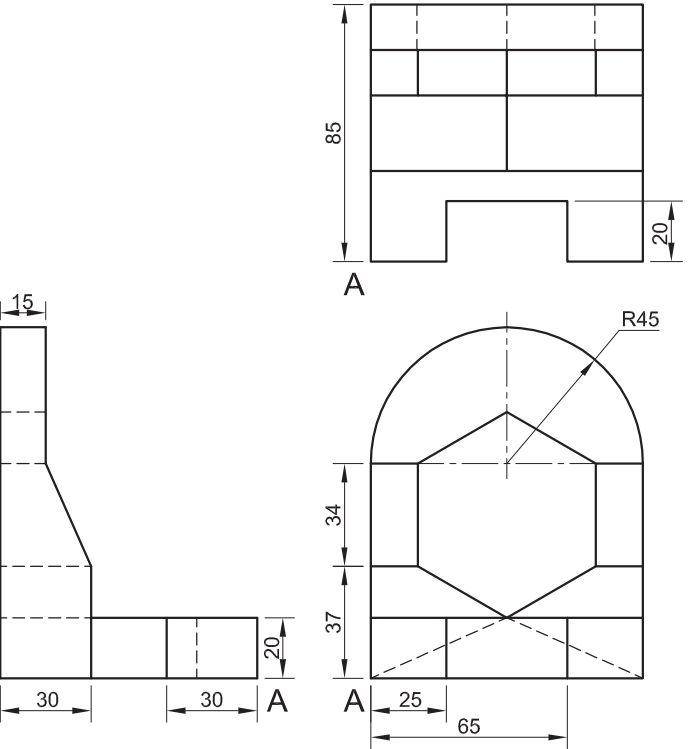
- The front view, top view and left view of a jig with a regular hexagonal hole
- The position of point A on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the jig into an isometric drawing.

- Make A the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

[39]



↓
A

ASSESSMENT CRITERIA				
1. AUXILIARY VIEW + PLACEMENT + CIRCLE CONSTRUCTION	5			
2. ISO' CIRCLES + CENTRE LINES	5			
3. ISO + NON-ISO' LINES	18			
4. HEXAGON	11			
TOTAL	39			
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



QUESTION 3: ISOMETRIC DRAWING

Given:

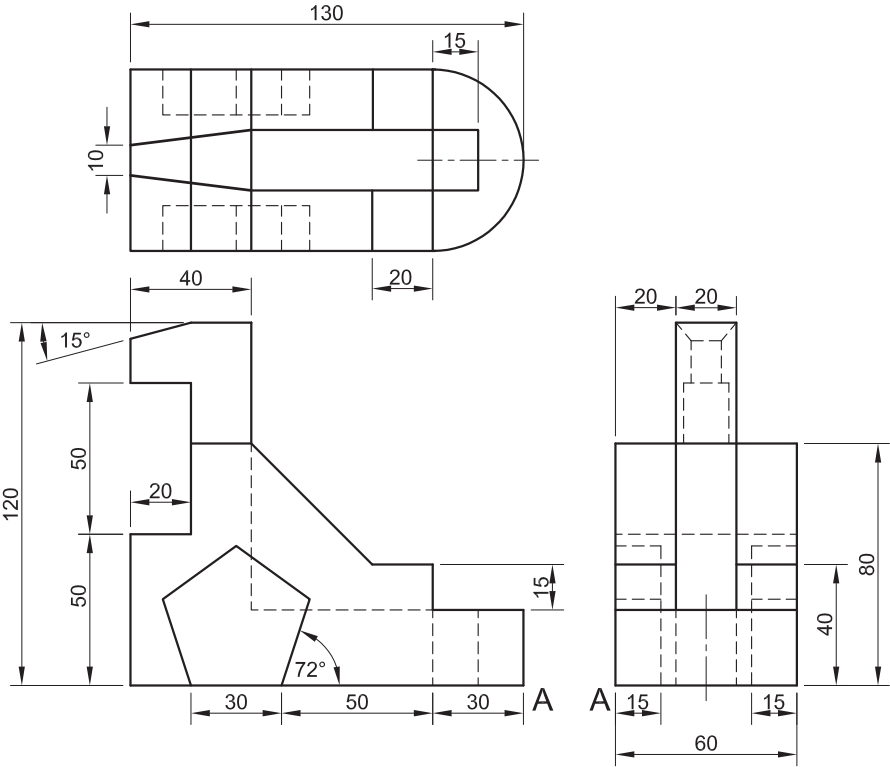
- The front view, top view and right view of a safety clip with TWO regular pentagonal slot holes
- The position of point A on the drawing sheet

Instructions:

Using scale 1 : 1, convert the orthographic views of the safety clip into an isometric drawing.

- Make A the lowest point of the drawing.
- Show ALL necessary construction.
- NO stencils may be used.
- NO hidden detail is required.

[40]



↓
A

ASSESSMENT CRITERIA				
AUXILIARY VIEWS + CIRCLE CONSTRUCTION + PLACE	6			
ISO' ARCS + PENTAGONAL HOLE	11			
ISO' + NON-ISO' LINES	23			
TOTAL	40			
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

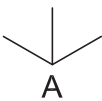
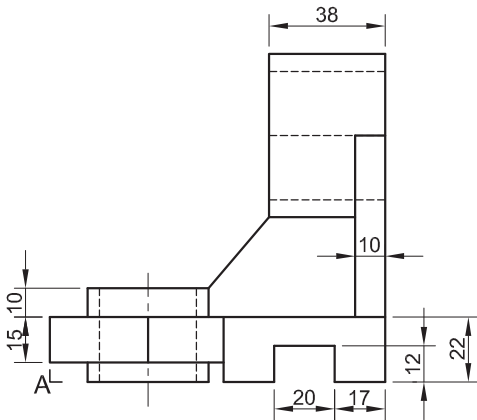
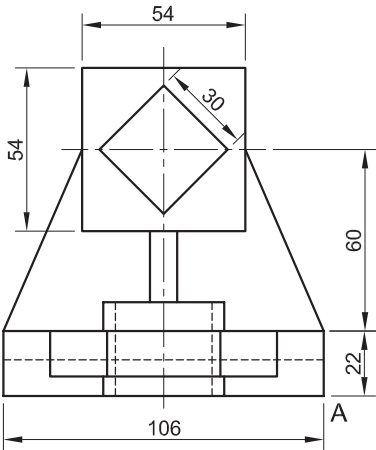
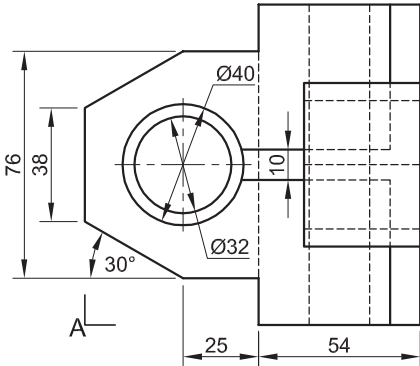
Given:

- The front view, top view and left view of a movable coupling
- The position of point A on the drawing sheet

Instructions:

Convert the orthographic views of the movable coupling into a scale 1 : 1 isometric drawing.

- Make corner A the lowest point of the drawing.
- Show ALL necessary circle and other construction.
- NO hidden detail is required. **[39]**



ASSESSMENT CRITERIA				
1. AUX. VIEW + PLACING	4			
2. ISOMETRIC LINES	20			
3. NON-ISOMETRIC LINES	6½			
4. ISOMETRIC CIRCLES	5½			
5. CIRCLE CONSTRUCTION	2			
6. CENTRE LINES	1			
TOTAL	39			
EXAMINATION NUMBER				
EXAMINATION NUMBER				4





QUESTION 3: ISOMETRIC DRAWING

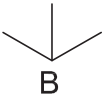
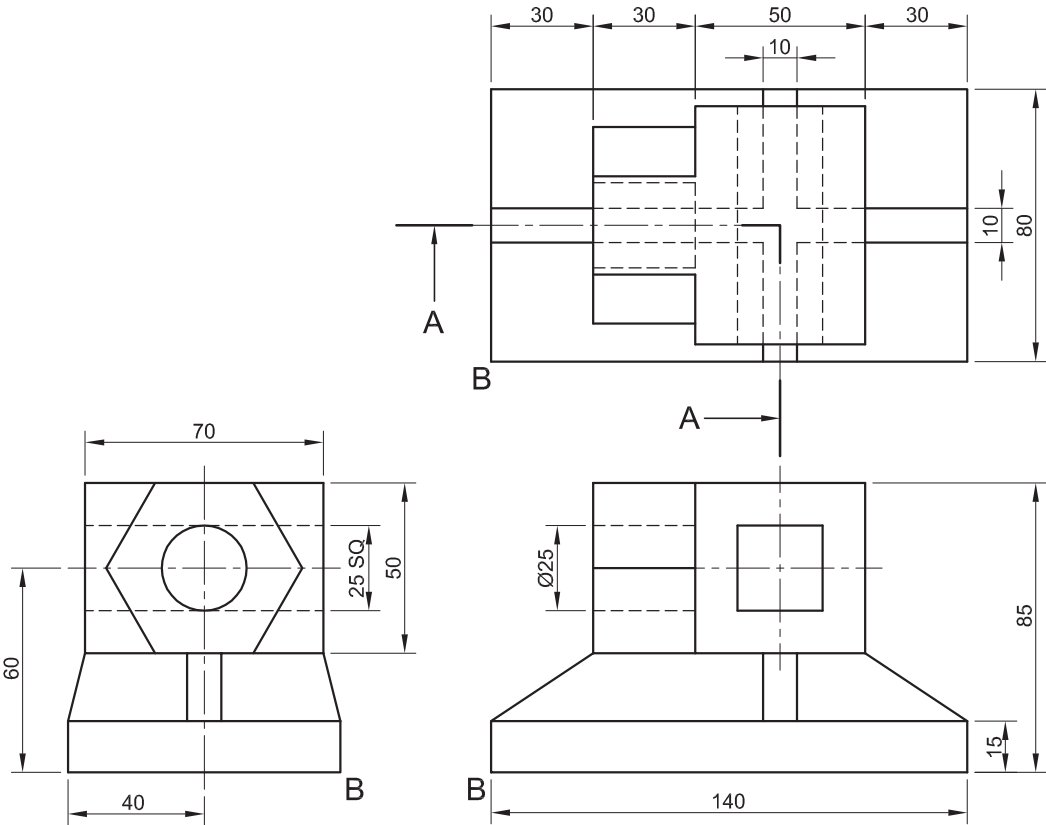
Given:

- The front view, top view and left view of a channel drilling jig with cutting plane A-A
- The position of point B on the drawing sheet

Instructions:

Convert the orthographic views of the channel drilling jig into a scale 1 : 1 sectional isometric drawing on cutting plane A-A.

- Make corner B the lowest point of the drawing.
- Show ALL necessary circle and other construction.
- NO hidden detail is required. [40]



ASSESSMENT CRITERIA				
1. AUX. VIEW + PLACING	3			
2. ISOMETRIC LINES	11			
3. NON-ISOMETRIC LINES	3			
4. ISOMETRIC CIRCLES	3			
5. CIRCLE CONSTRUCTION	1½			
6. CENTRE LINES	1½			
7. SECTIONED SURFACES	13			
8. HATCHING	4			
TOTAL	40			
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



QUESTION 3: ISOMETRIC DRAWING

Given:

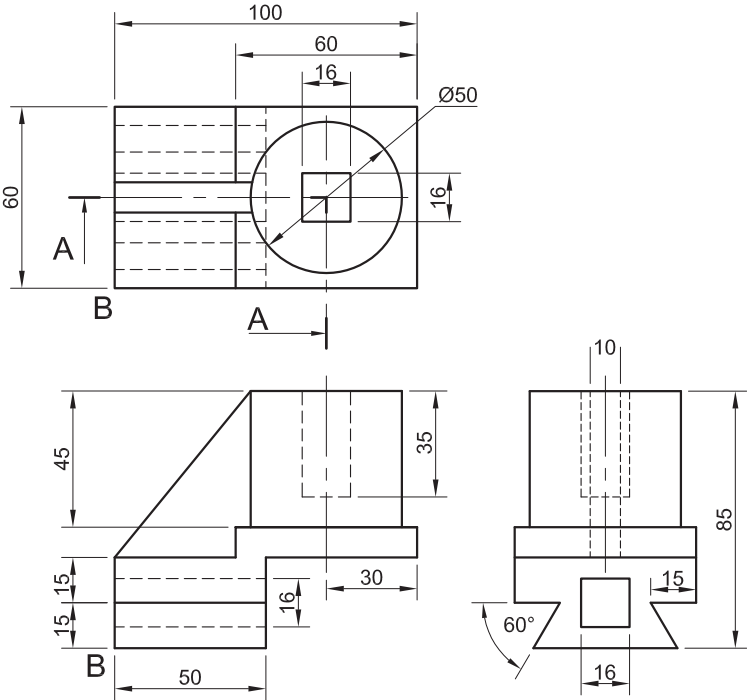
- The front view, top view and right view of a cross slide with a cutting plane A-A
- The position of point B on the drawing sheet

Instructions:

Convert the orthographic views of the cross slide into a sectional isometric drawing on cutting plane A-A.

- Make corner B the lowest point of the drawing.
- Show ALL necessary circle construction.
- NO hidden detail is required.

[43]



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B

ASSESSMENT CRITERIA				
AUXILIARY VIEW + PLACING	3			
ISO' CIRCLES + CONSTR' + CENTRE LINES	9			
ISO' + NON-ISO' LINES	15½			
SECTIONED SURFACES	11½			
HATCHING/NO HATCHING	4			
TOTAL	43			
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



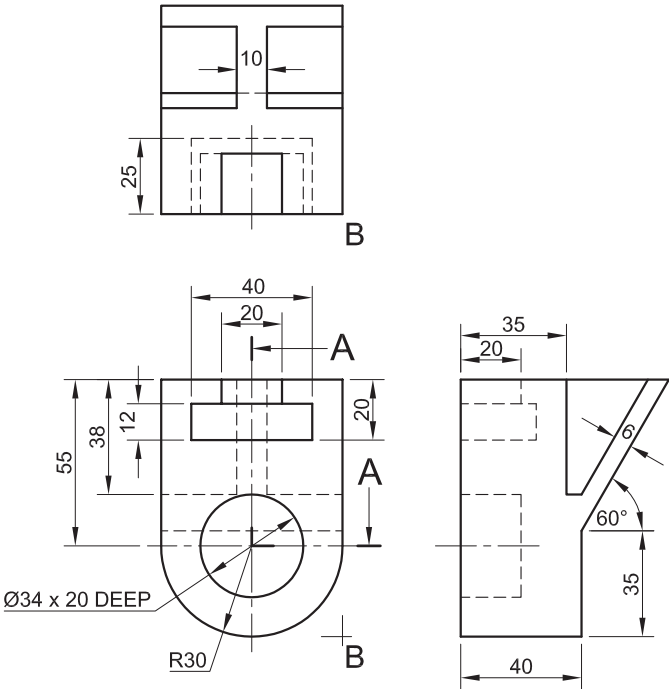
QUESTION 3: ISOMETRIC DRAWING

Given:
The front view, top view and right view of a jig bracket with a cutting plane A-A.
The position of point B on the drawing sheet.

Instructions:
Convert the orthographic views of the jig bracket into a sectional isometric drawing on cutting plane A-A.

- Make corner B the lowest point of the drawing.
- Show ALL necessary construction.
- NO hidden detail is required.

[44]



B

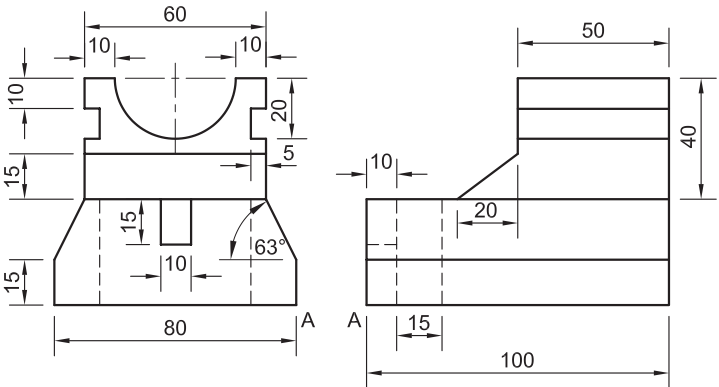
ASSESSMENT CRITERIA				
CONSTR' + AUX + B	8			
ISO' CIRCLES + CNTR LINES	8½			
ISO' + NON-ISO' LINES	12			
SECTIONED SURFACES	10½			
HATCHING	5			
TOTAL	44			
EXAMINATION NUMBER				
EXAMINATION NUMBER				4



QUESTION 3: ISOMETRIC DRAWING

Given:
The front view and left view of a pipe support.
The position of point A on the drawing sheet.

- Instructions:**
3. Convert the orthographic views of the pipe support into an isometric drawing.
- Make corner A the lowest point of the drawing.
 - Show ALL necessary construction.
 - NO hidden detail is required.
- [43]



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A

ASSESSMENT CRITERIA	
AUXILIARY VIEW	= 2
ISOMETRIC LINES	= 26
NON-ISOMETRIC LINES	= 5
ISOMETRIC CIRCLES	= 3
CIRCLE CONSTRUCTION	= 3
CENTRE LINES	= 3
PLACING ON A	= 1
TOTAL	= 43

EXAMINATION NUMBER	
EXAMINATION NUMBER	4

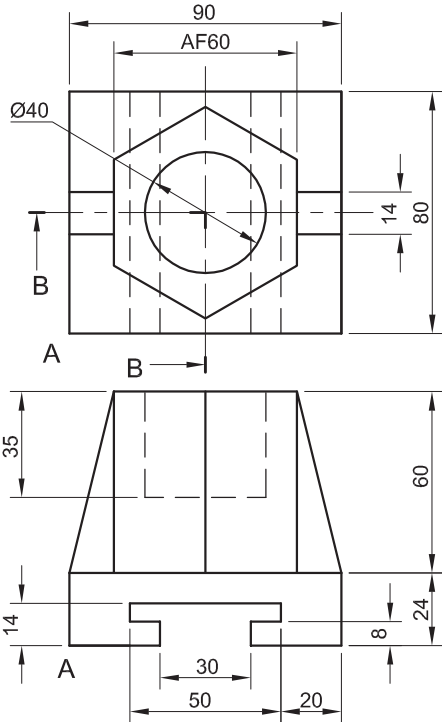


QUESTION 3: ISOMETRIC DRAWING

Given:
The front view and top view of a hexagonal slide plate that is cut by cutting plane B-B.

- Instructions:**
- Convert the orthographic views of the hexagonal slide plate into a sectional isometric drawing on B-B.
 - Make corner A the lowest point of the drawing so that the sectioned surfaces are visible.
 - Show ALL necessary construction.
 - NO hidden detail is required.

[40]



ASSESSMENT CRITERIA	
AUXILIARY VIEW	= 2
ISOMETRIC SURFACES	= 6
NON-ISOMETRIC LINES	= 2
SECTIONED SURFACE	= 9½
ISOMETRIC CIRCLES	= 4
CIRCLE CONSTRUCTION	= 3
HATCHING	= 4
CENTRE LINES	= 2½
HEXAGON	= 5
PLACING ON A	= 2
TOTAL	= 40

EXAMINATION NUMBER	
EXAMINATION NUMBER	4

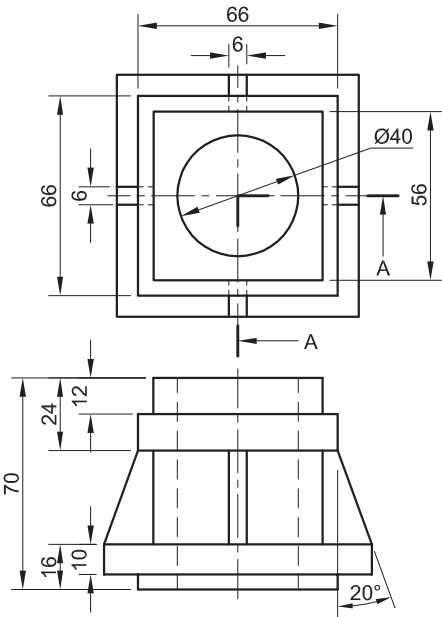


QUESTION 3: ISOMETRIC DRAWING

Given:
The front view and top view of a rod guide that is cut by cutting plane A-A.

- Instructions:**
- Convert the orthographic views of the rod guide into a sectional isometric drawing.
 - Position the answer so that the sectioned surfaces are visible.
 - Show the circle construction.
 - NO hidden detail is required.

[40]



ASSESSMENT CRITERIA	
AUXILIARY VIEW	= 2
ISOMETRIC SURFACES	= 8
NON-ISOMETRIC LINES	= 2
CUT	= 12
ISOMETRIC CIRCLES	= 4
CIRCLE CONSTRUCTION	= 4
HATCHING	= 6
CENTRE LINES	= 2
TOTAL	= 40

EXAMINATION NUMBER	
EXAMINATION NUMBER	4