

# POKHARA UNIVERSITY

Level: Bachelor

Programme: BE

Course: Engineering Drawing

Semester: Spring

Year : 2012

Full Marks: 100

Pass Marks: 45

Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

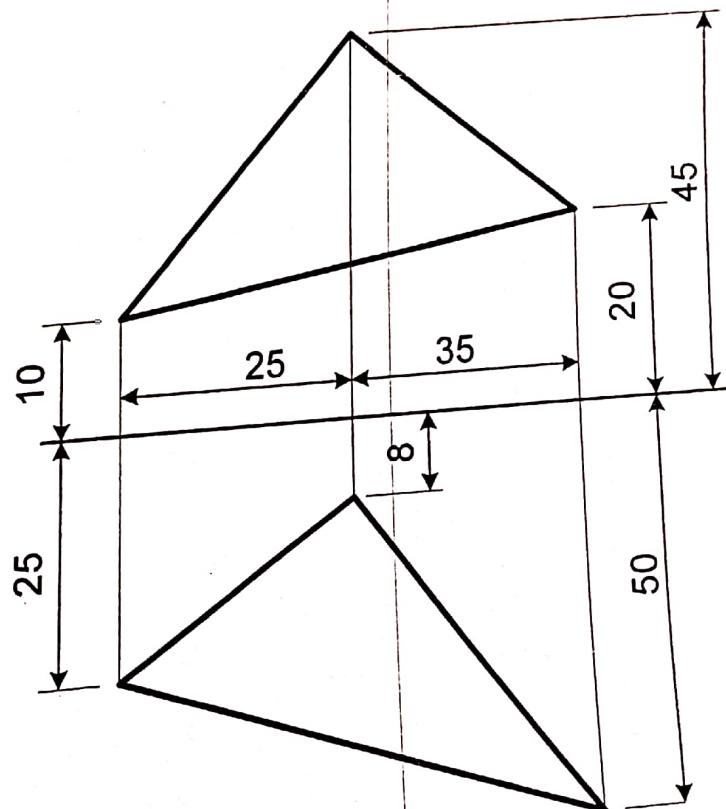
*Attempt all the questions.*

1. Draw an ellipse by auxiliary or concentric circles method, given the major and minor axes as 80 and 50 mm respectively.

14

2. Draw the true shape of the plane from the projections of the plane as shown.

14



3. Draw complete orthographic views (three views) of the given object (figure 1).

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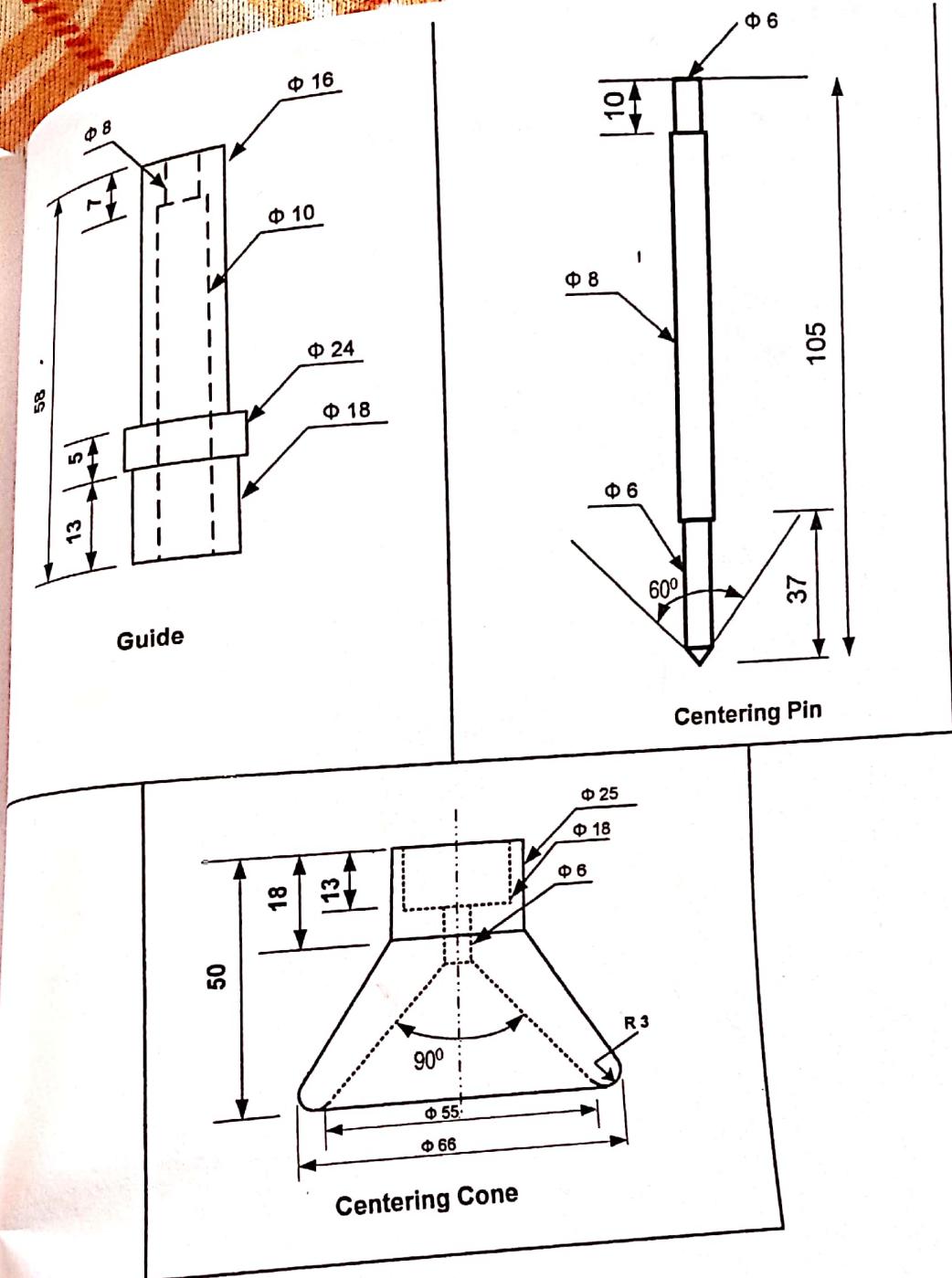
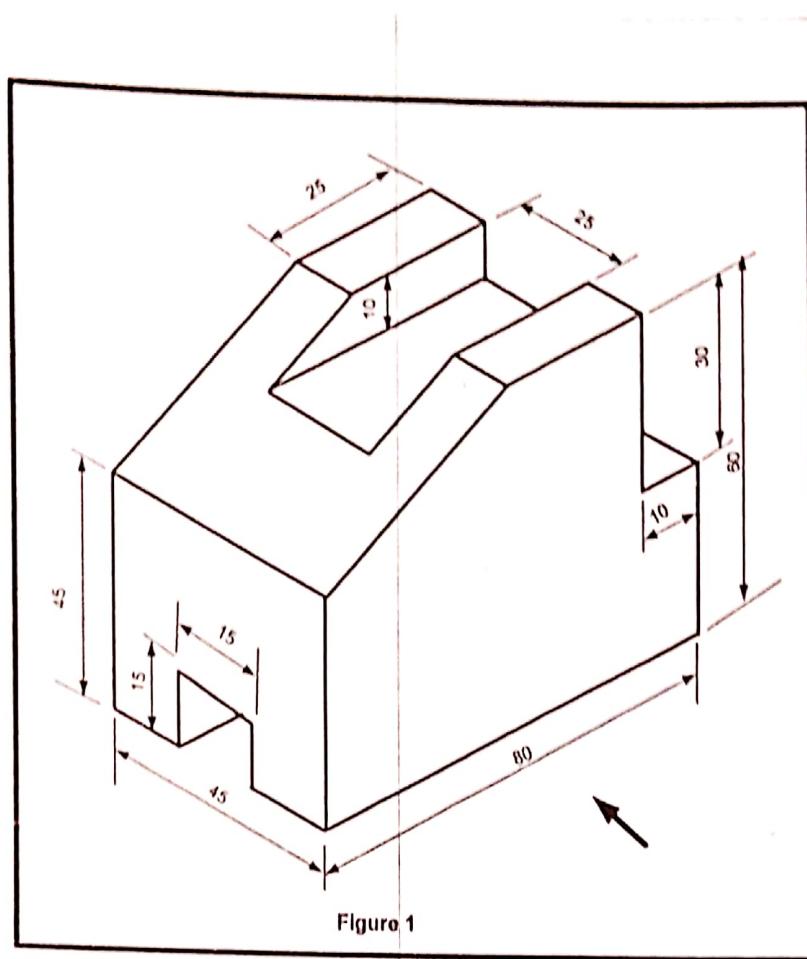


Figure 4



4. Draw the given views in figure 2 with curve of intersection.

18

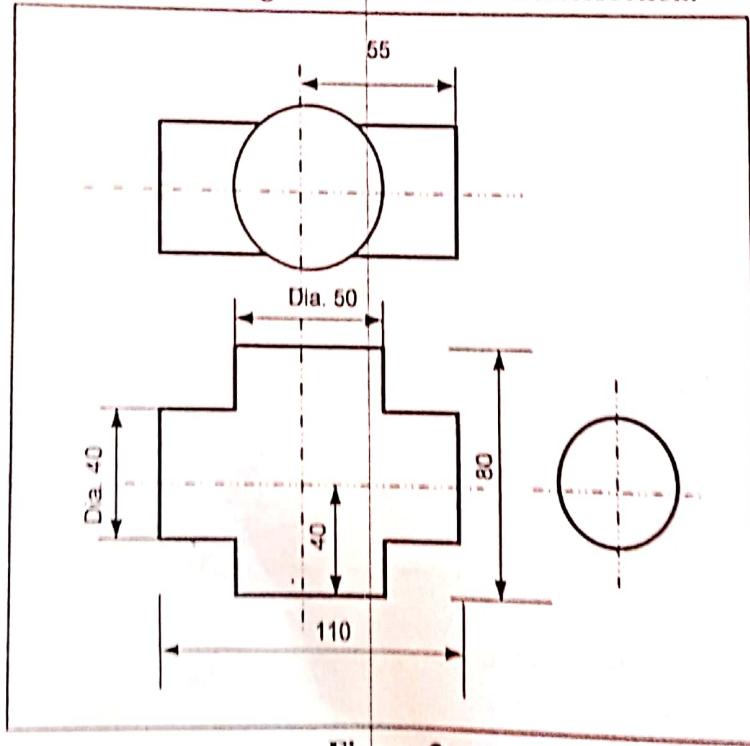


Figure 2

5. Figure below shows the detail drawing of a Stuffing box for a small steam engine. Assemble the parts and draw the half sectional view (figure 3)

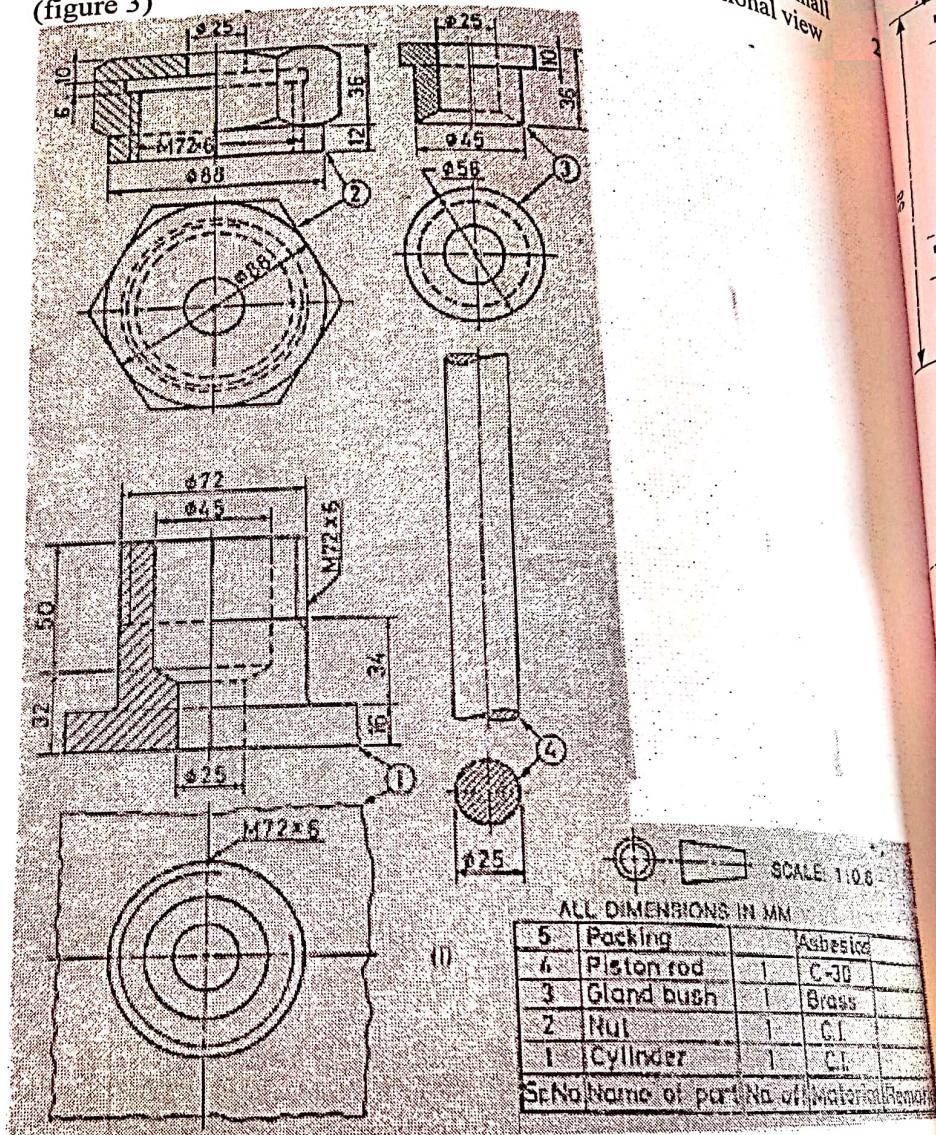


Figure 3

OR

Assemble the given parts of the Centering Cone and draw its full sectional (orthographic) front view. (figure 4)

or a small  
view

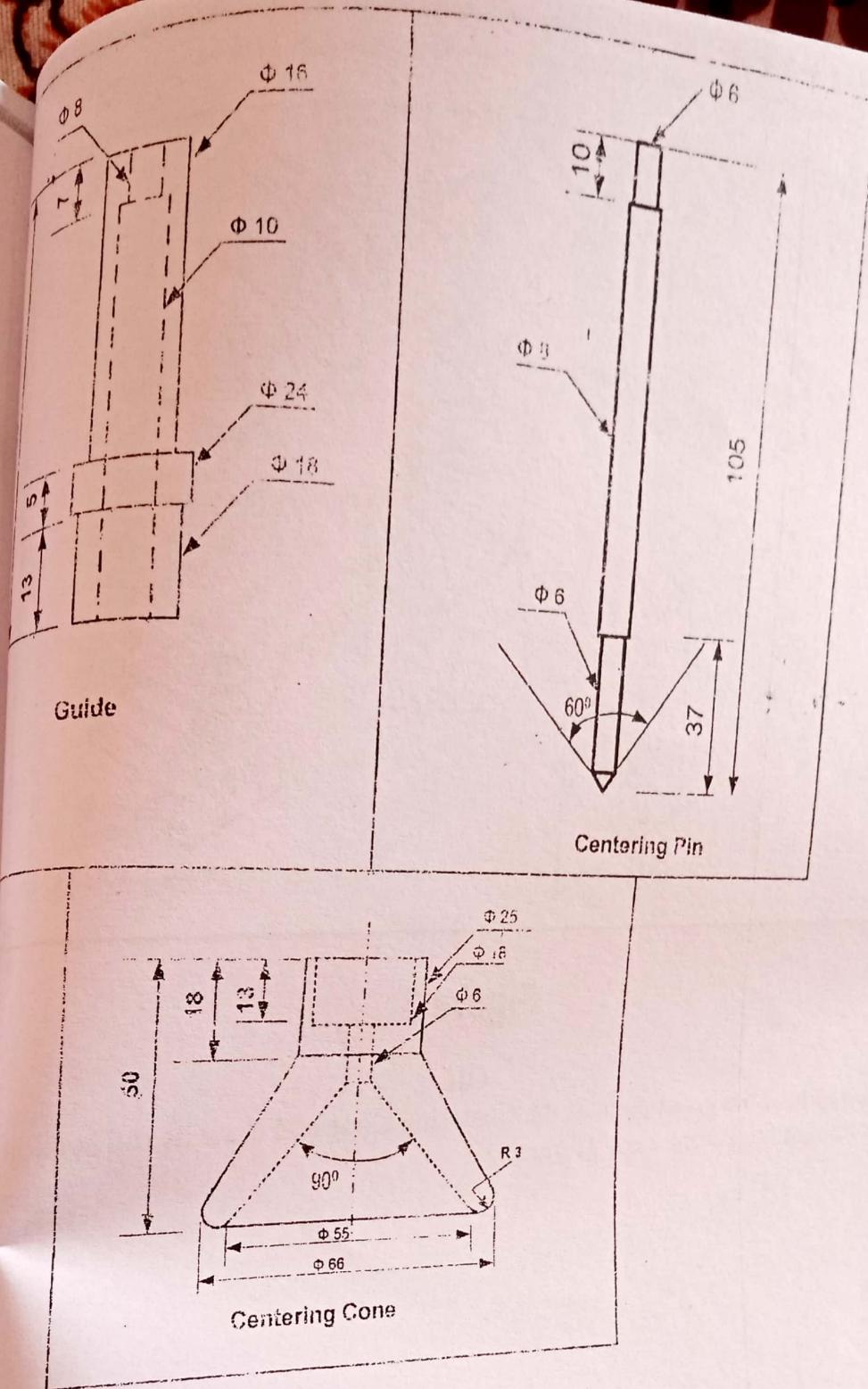


Figure 4

full

**POKHARA UNIVERSITY**

Level: Bachelor

Semester - Fall

Programme: BE Civil

Year : 2012

Course: Engineering Drawing

Full Marks: 100

Pass Marks: 45

Time : 3 hrs.

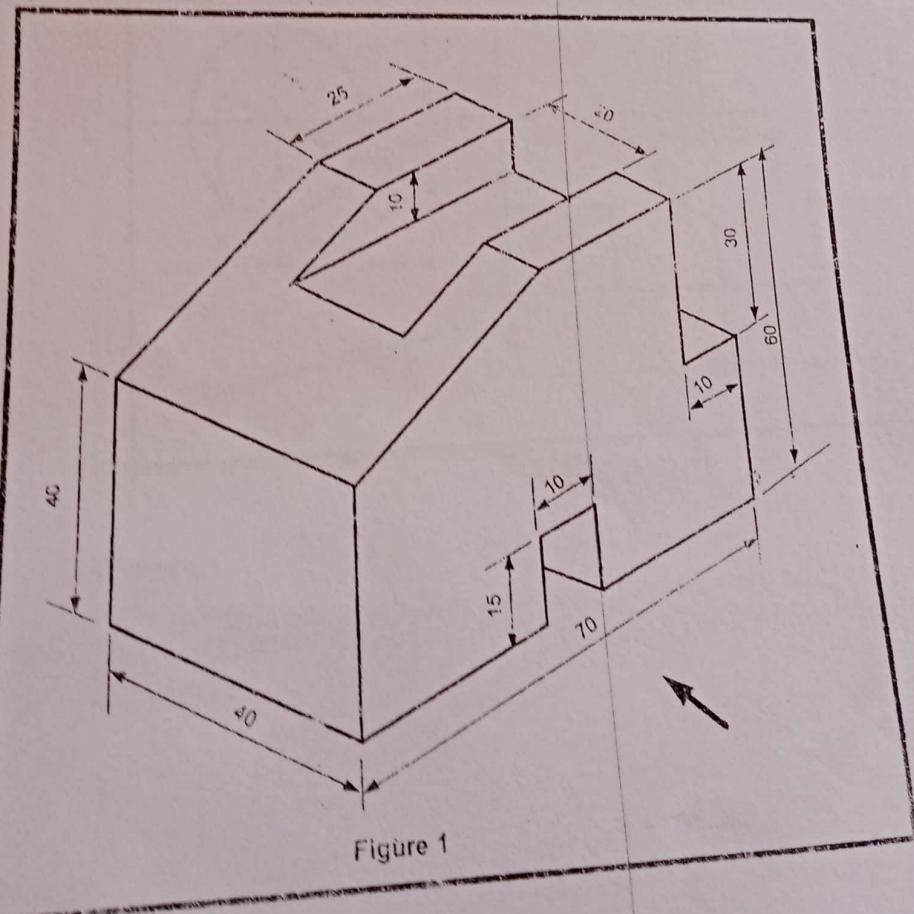
*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks. All dimensions are in mm.  
Attempt all the questions.*

Construct a cycloid of a circle having diameter 40 mm. 14

A regular pentagon ABCDE of 25 mm sides has its corner A in HP and the side CD parallel to HP. Draw its projections when its plane is parallel to and 10 mm from the VP. 14

Draw complete orthographic views (three views) of the given object (figure 1). 30



1. Draw the given views in figure 2 with curve of intersection.

18

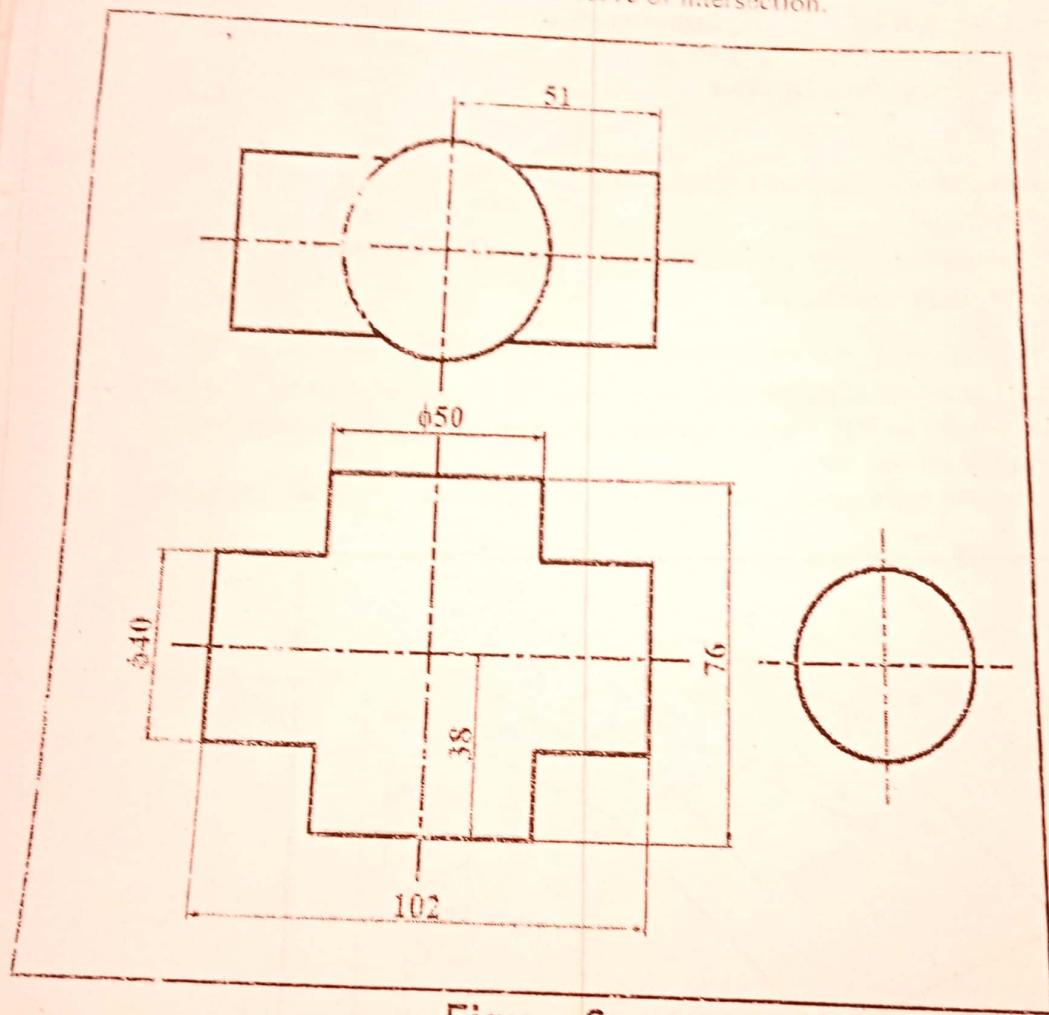
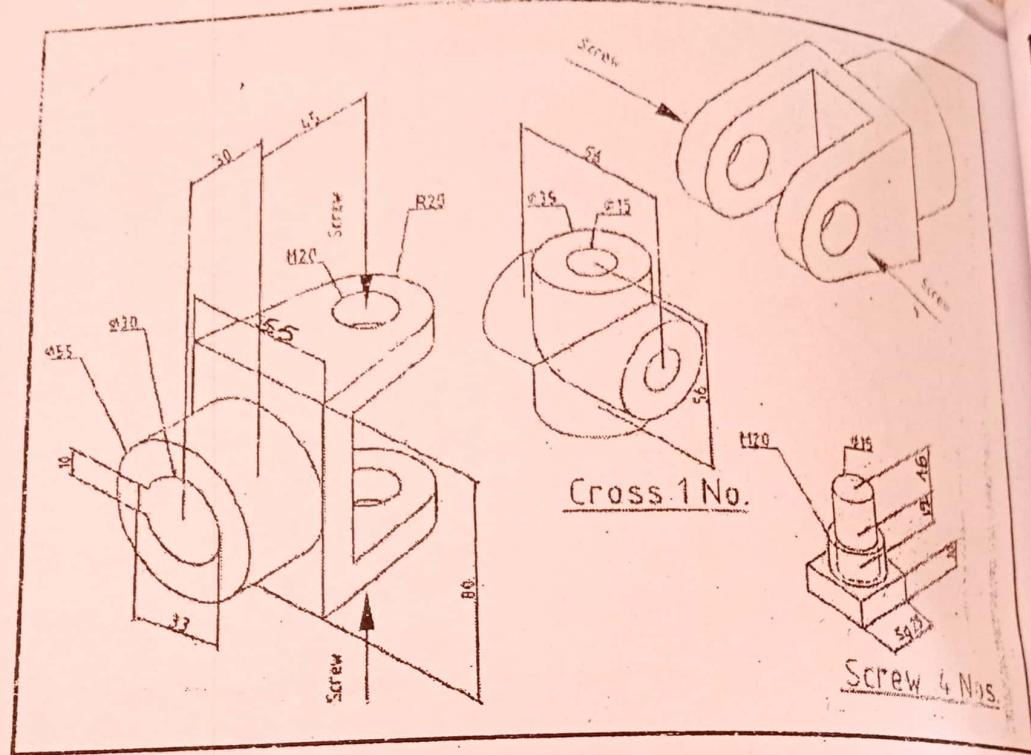


Figure 2

Assemble the given parts of the universal coupling and draw the full sectional (orthographic) front view (figure 3).

24



**Figure 3**

**OR**

Assembled the given parts of the Centering Cone and draw its full sectional (orthographic) front view. (figure 4)

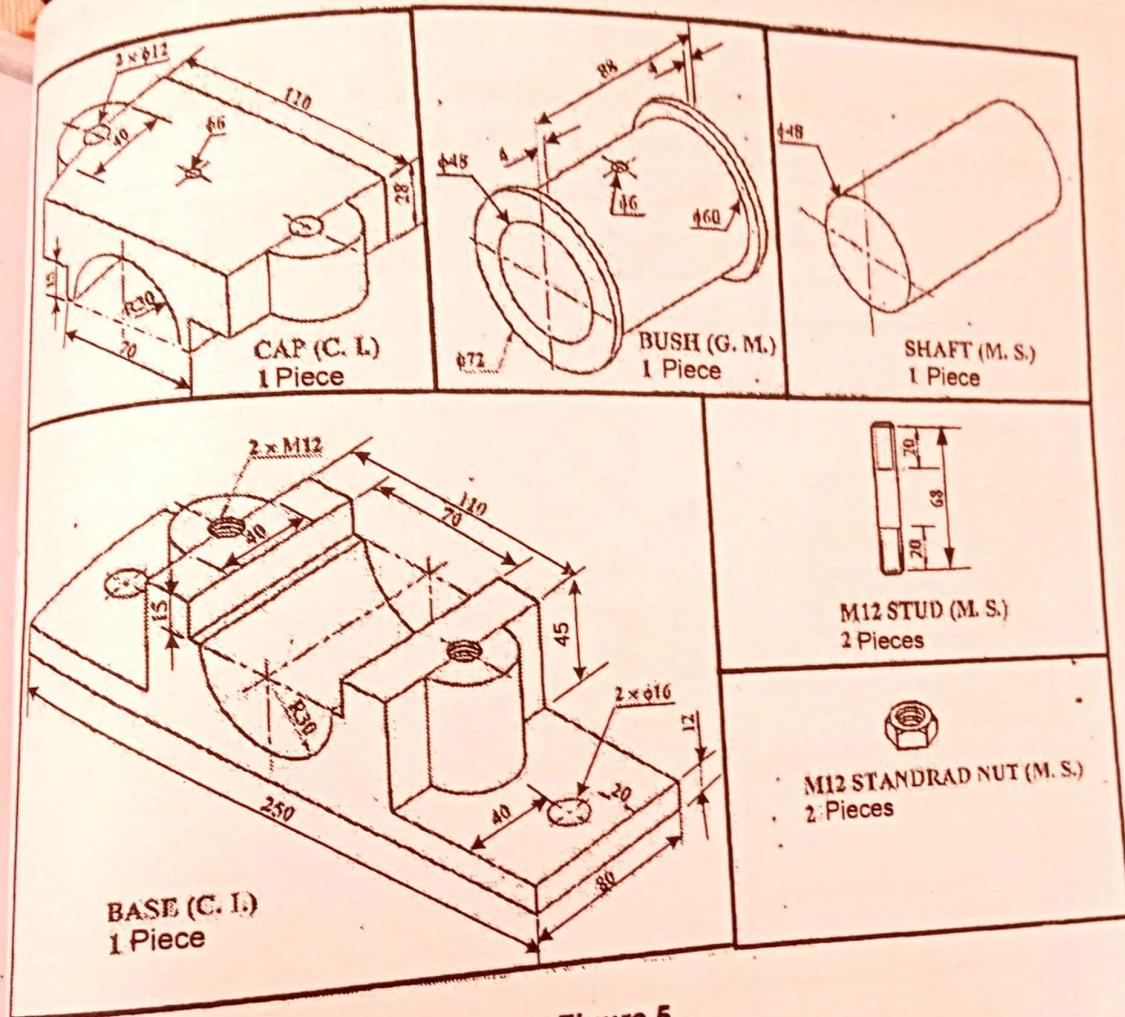


Figure 5

# POKHARA UNIVERSITY

Level: Bachelor

Semester: Spring

Year : 2012

Programme: BE

Full Marks: 100

Course: Engineering Drawing

Pass Marks: 45

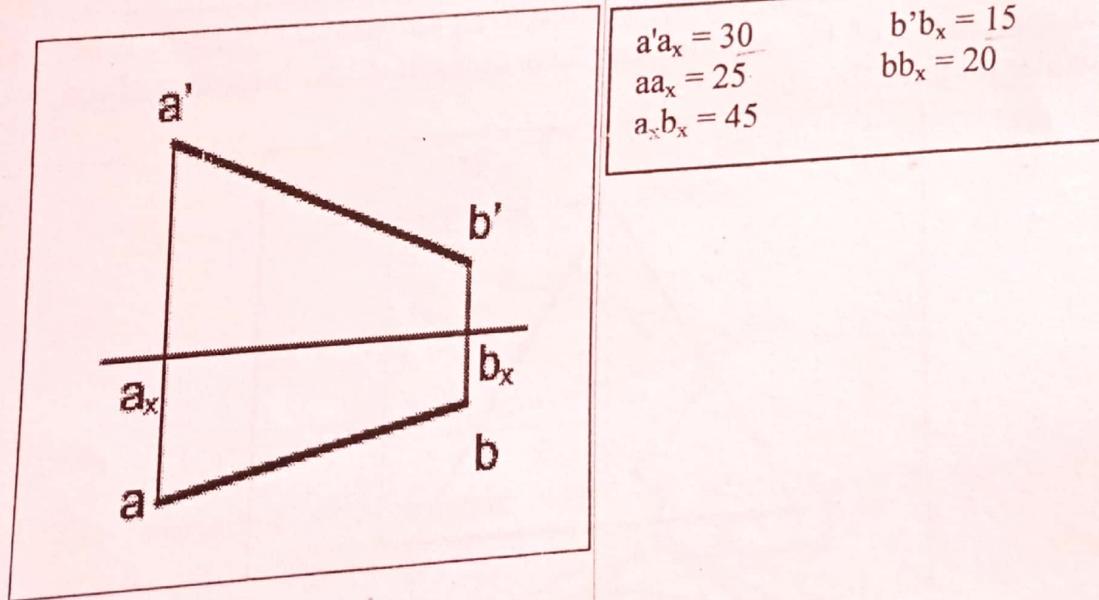
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. Construct a uncrossed tangent line (open belt type) between two circles having diameter 50 mm and 30 mm. and center to center distance between them is 80 mm. 14
2. Reproduce the given views of the lines and determine the true length. (figure 1) 14



**Figure 1**

3. Draw complete orthographic views (three views) of the given object (figure 2). 30

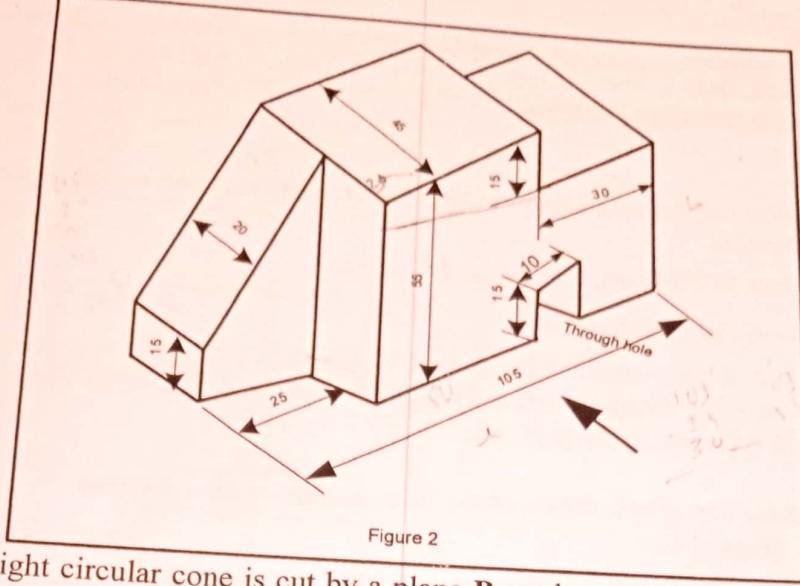


Figure 2

4. A right circular cone is cut by a plane  $P$  as shown in figure 3. Find 18  
the true shape of the section and also construct the lateral surface  
development of the object.

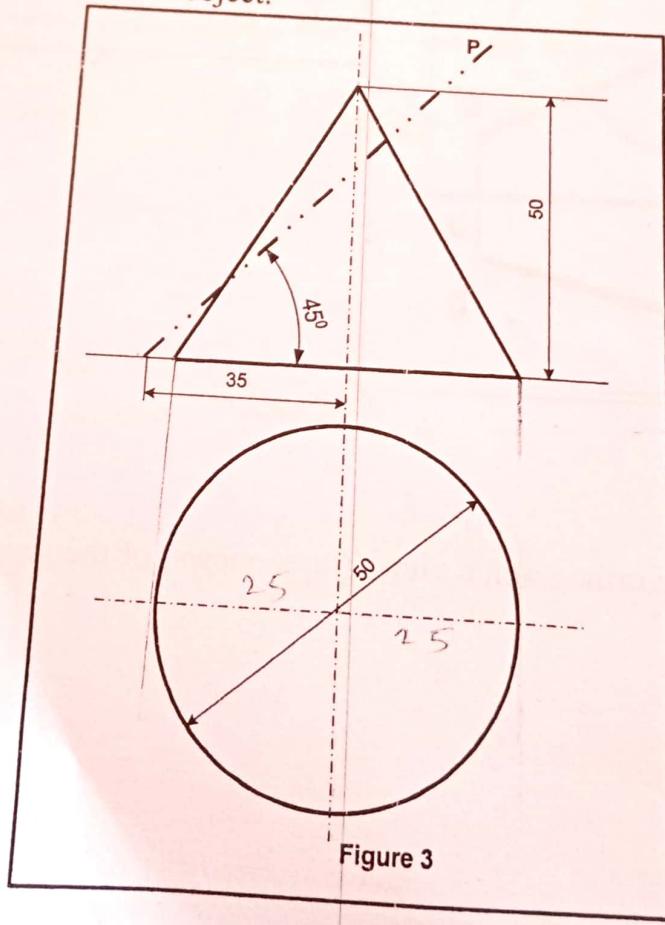


Figure 3

5. Assembled the given parts of the Screw Jack and draw its full sectional (orthographic) front view. (figure 4)

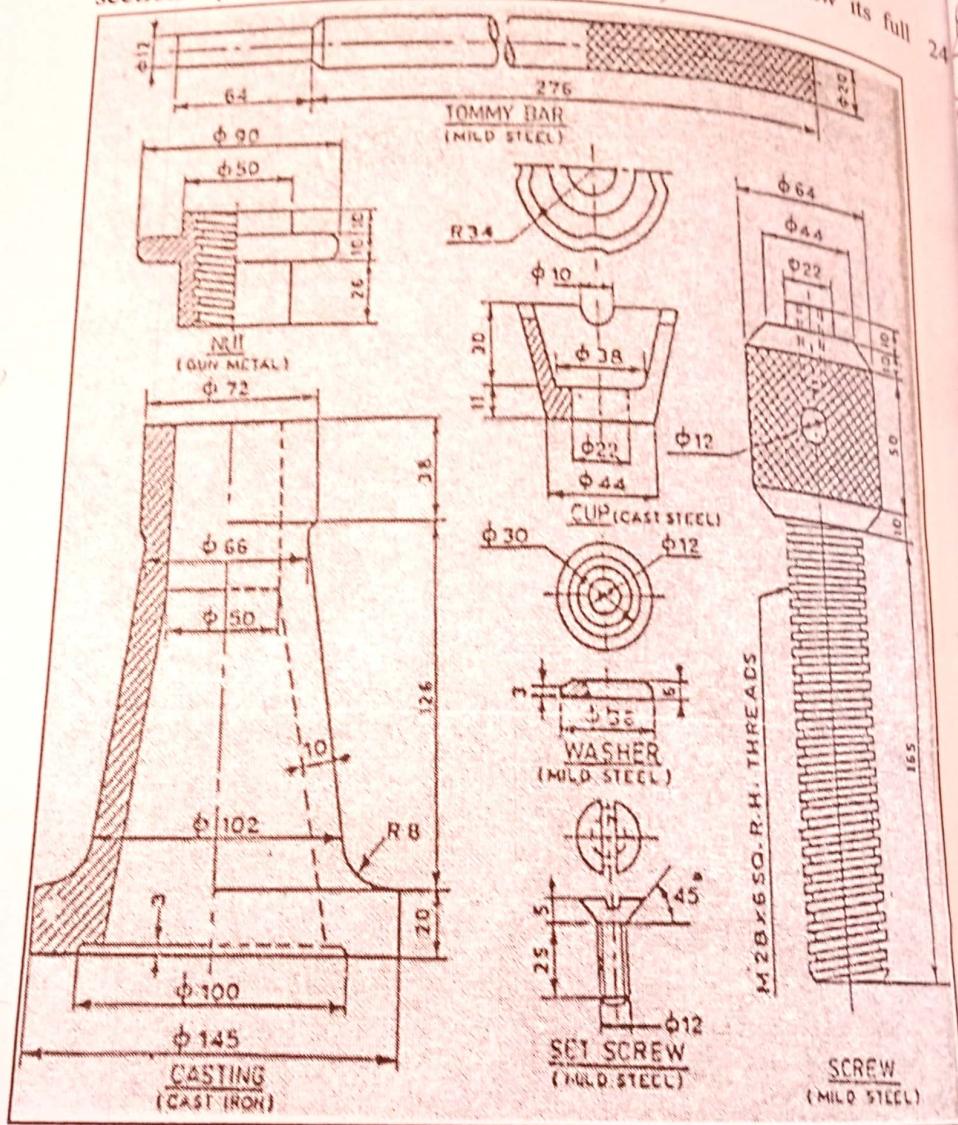


Figure 4

OR

- Assemble the given parts of the split bearing and draw its full sectional (orthographic) front view. (figure 5)

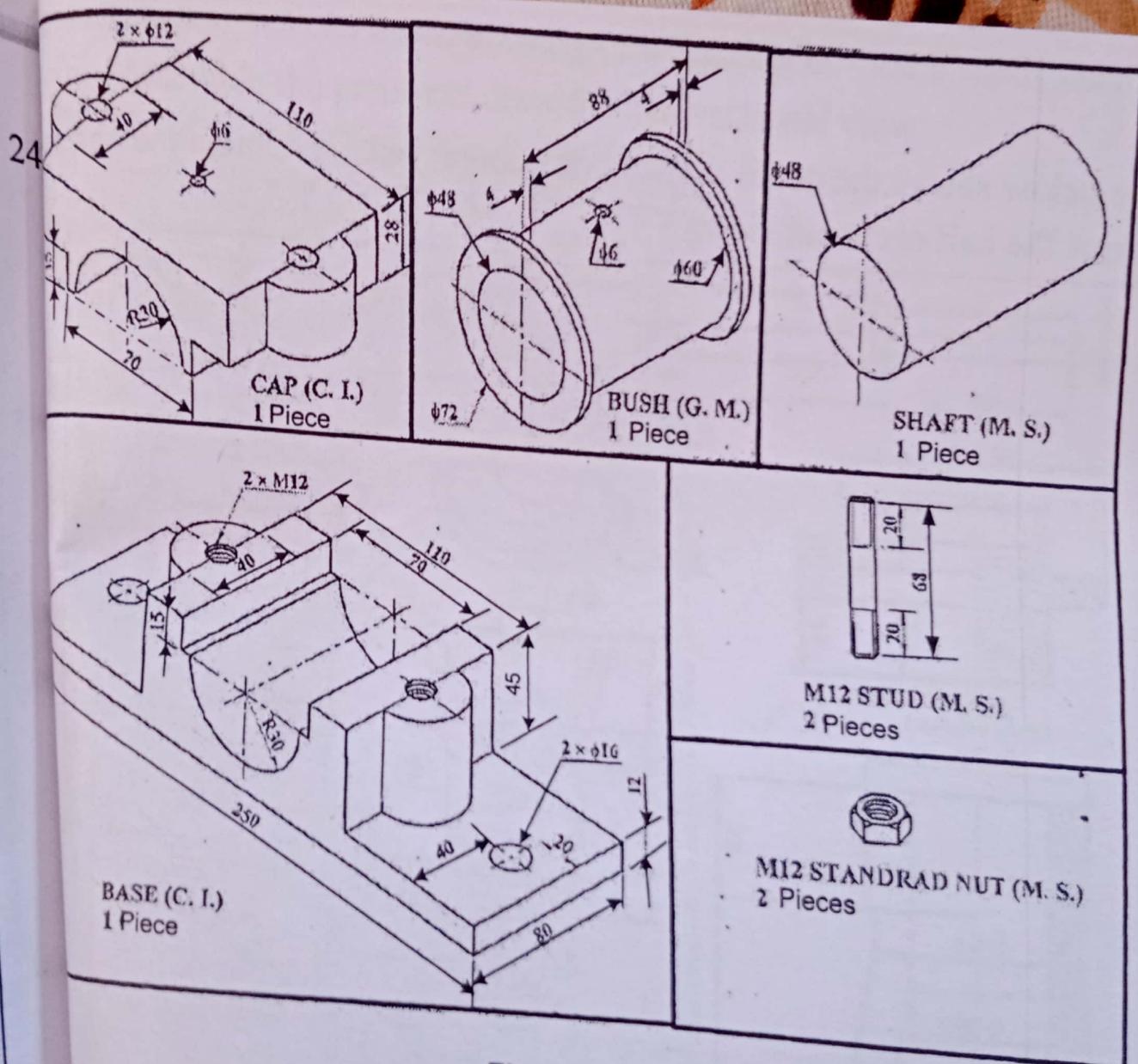


Figure 5

**POKHARA UNIVERSITY**

Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

Semester: Fall

Year : 2013  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. a) Draw an **ellipse** having major axis 90 mm and minor axis 60 mm by concentric circle method. 15
- b) Draw a **hexagon** having sides of length 40 mm. 5
2. Reproduce the given views of the plane and determine the true shape. (Figure 1). All dimensions are in mm. 8

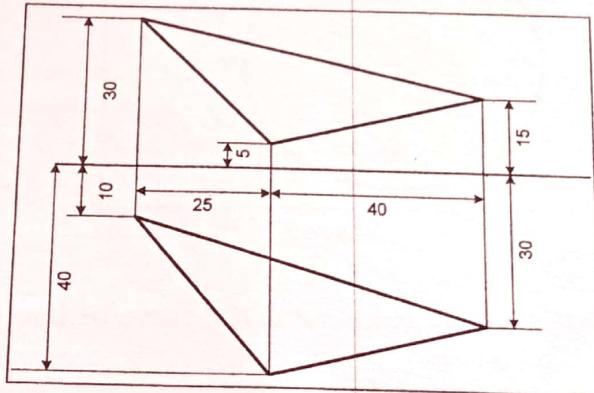


Figure 1

3. Draw the complete orthographic view of the following figure with sectional side view. (figure 2) 30

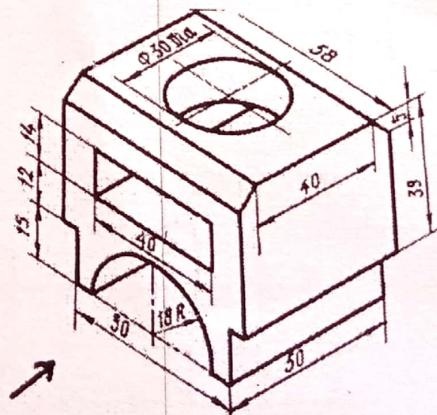


Figure 2

4. A right circular cone is cut by a plane P as shown in figure below. Find the true shape of the section and also construct the lateral surface development of the object. (figure 3)

18

5.

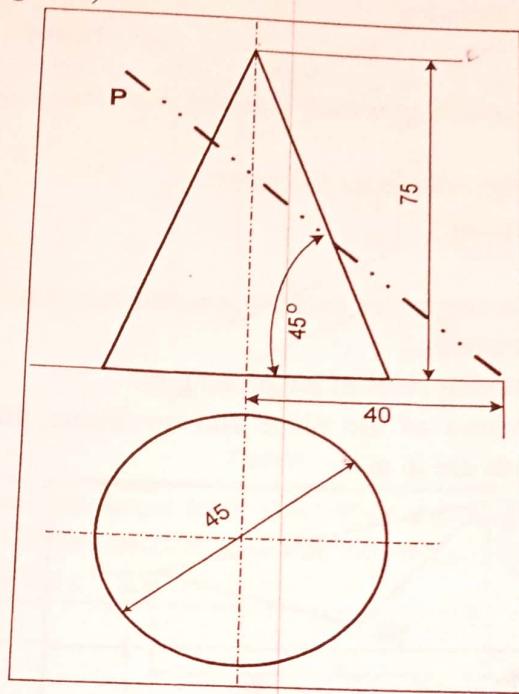


Figure 3

**OR**

- Draw the given views of in figure below with the curve of intersection. (figure 4)

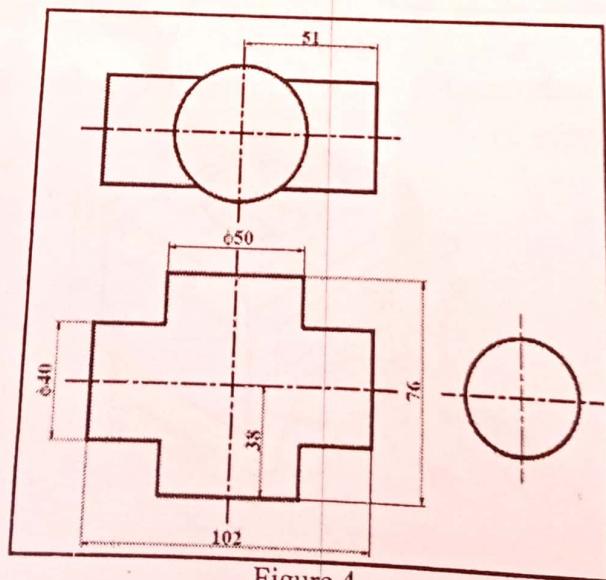
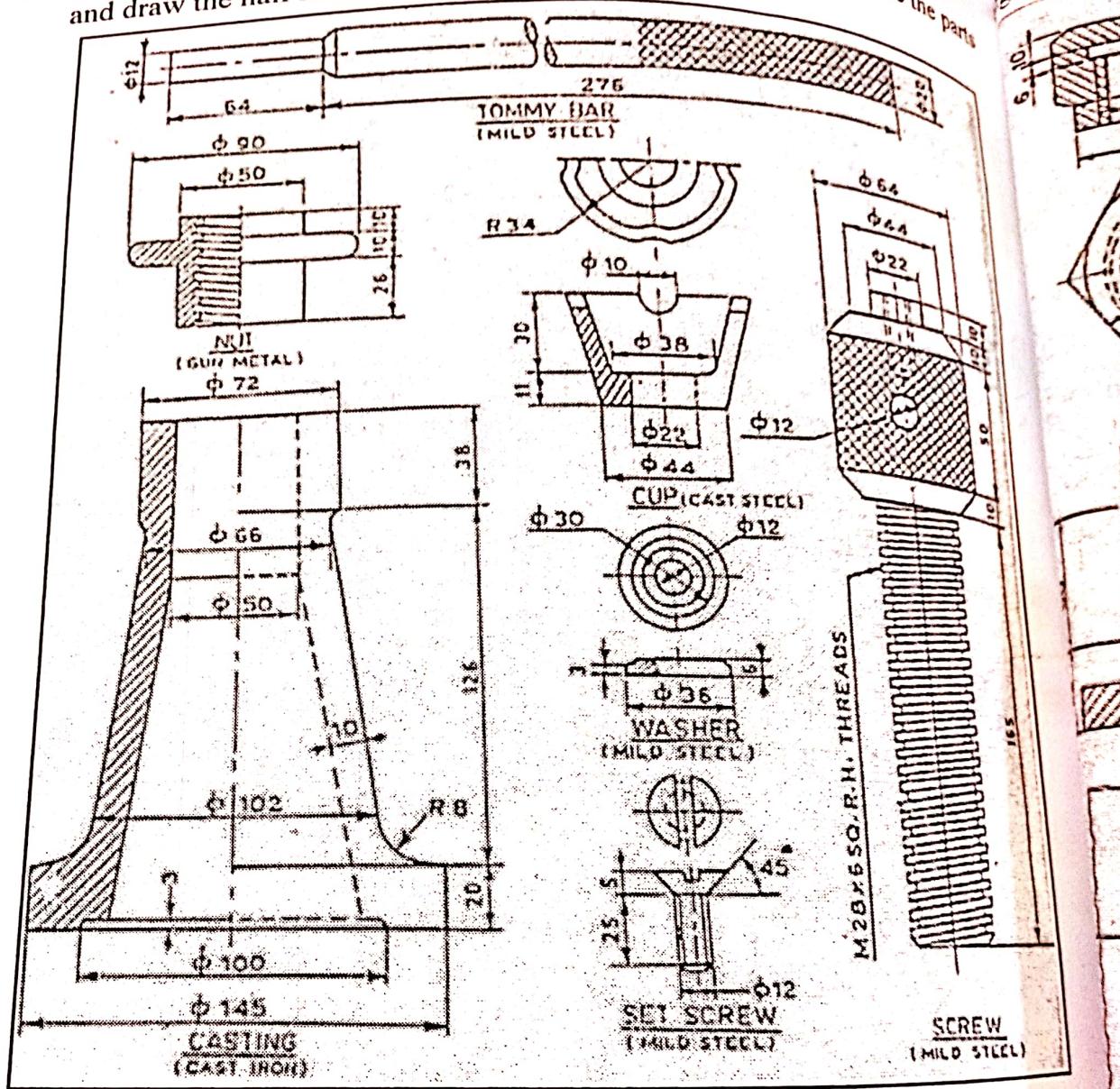


Figure 4

5. Figure below shows the detail drawing of a screw jack. Assemble the parts and draw the half sectional view.

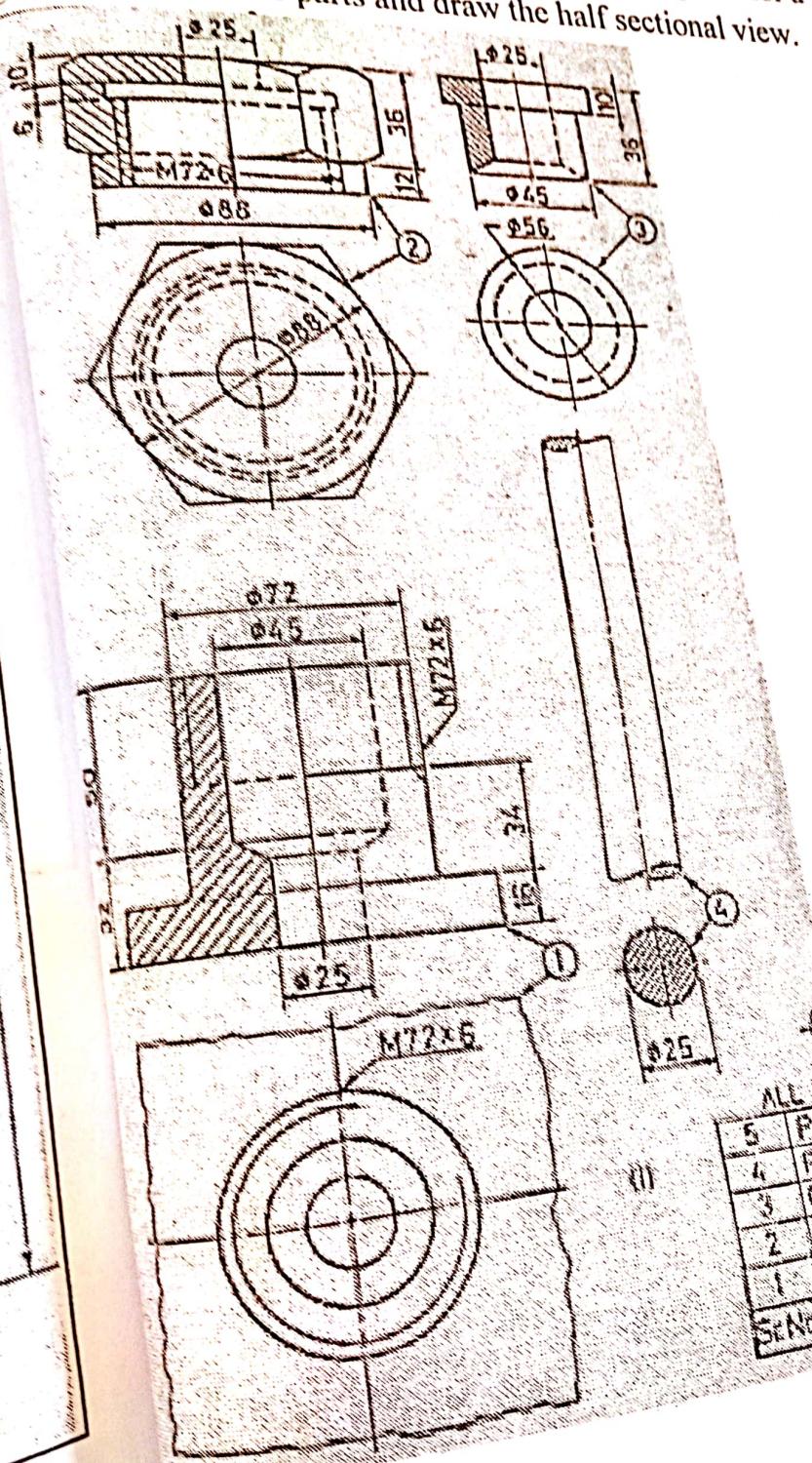
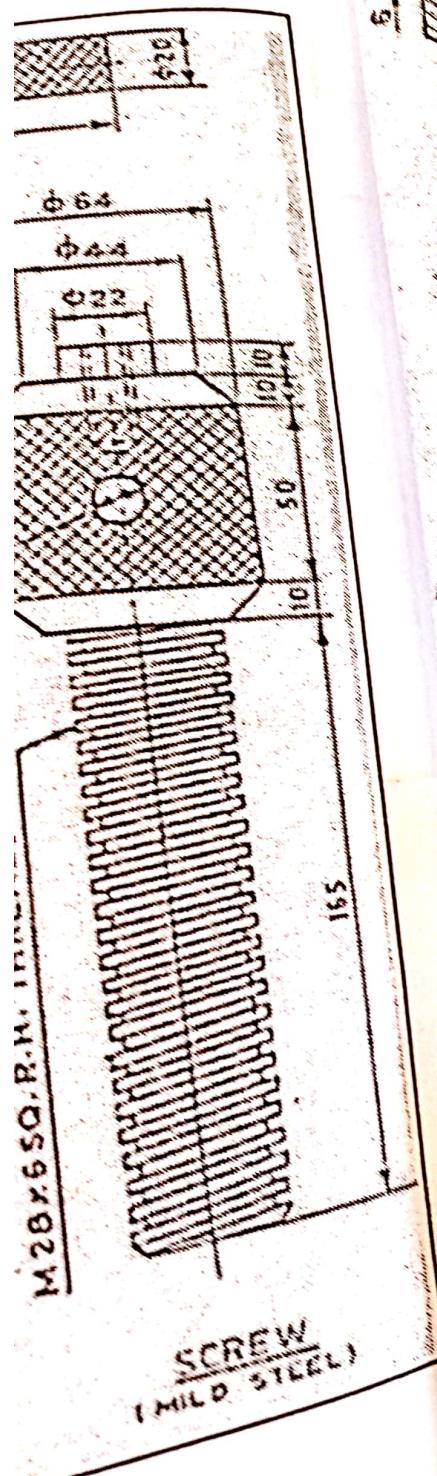


OR

- Figure below shows the detail drawing of a split bearing. Assemble the parts and draw the half sectional view.

Figure below shows the detail drawing of a Stuffing box for a small steam engine. Assemble the parts and draw the half sectional view.

Assemble the parts



ALL DIMENSIONS IN MM			SCALE: 1:10
5	Packing		Asbestos
4	Piston rod		C - JC
3	Gland bush		Brass
2	Nut	1	C.I.
1	Cylinder	1	C.I.
Sc Name of P.O. No. 01/MG			

**POKHARA UNIVERSITY**

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Programme: BE  
Course: Engineering Drawing

Semester: Fall

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*Candidates are required to give their answers in their own words as far as practicable.  
The figures in the margin indicate full marks.  
Attempt all the questions.*

1. a) Draw an **involute** of a circle having radius of 25 mm. 10
- b) Draw a **Pentagon** having sides of length 40 mm. 10
2. Reproduce the given views of the lines and determine the true length. 8

$a'a_x = 10\text{mm}$	$b'b_x = 30\text{mm}$
$a_x a = 45\text{mm}$	$b_x b = 20\text{mm}$
$\overline{a_x b_x} = 80\text{mm}$	

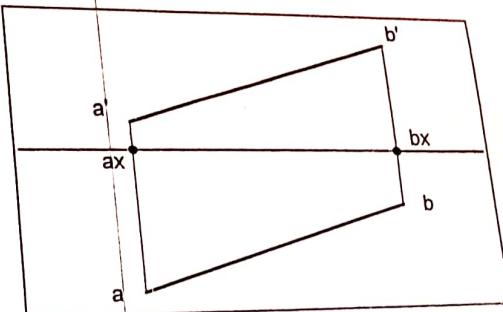


Figure 1

3. Draw the complete orthographic view of the following figure with 30 sectional side view.

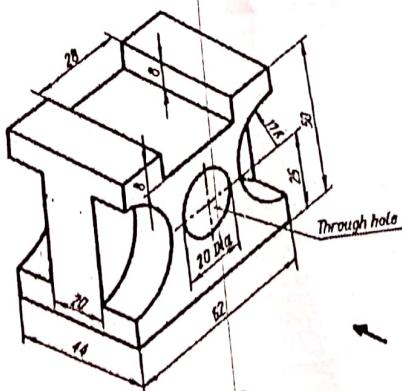


Figure 2

4. A pyramid is cut by a Plane P as shown in the figure below. Find the true 18

1

shape of the section and construct the lateral surface development of the object.

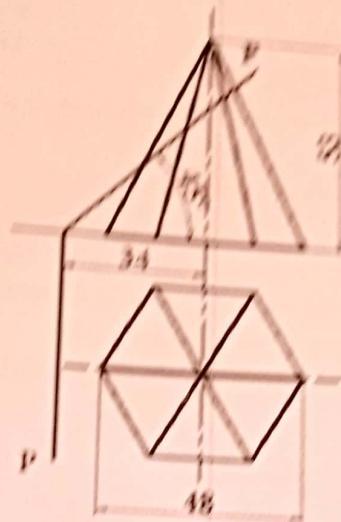
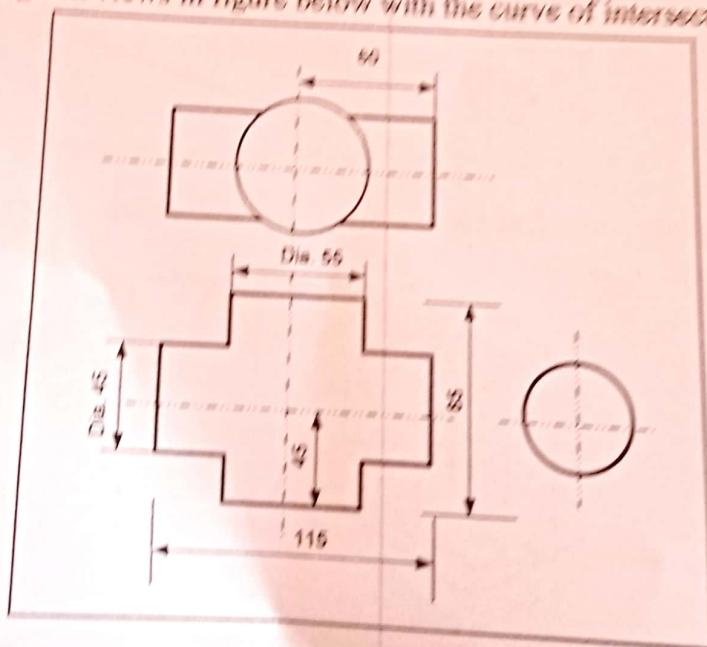


Figure 3

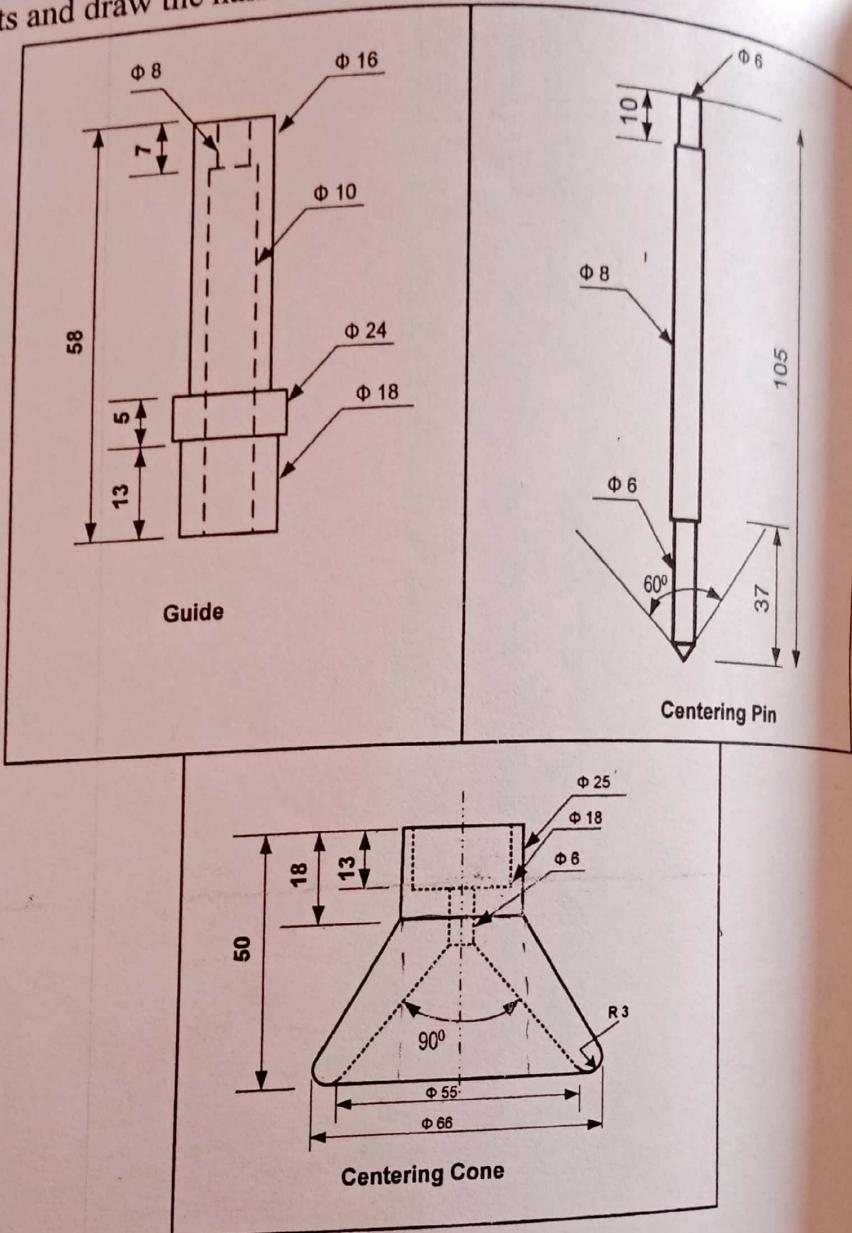
OR

Draw the given views in figure below with the curve of intersection.



5. Figure below shows the detail drawing of a Centering Cone. Assemble the 24

parts and draw the half sectional view.



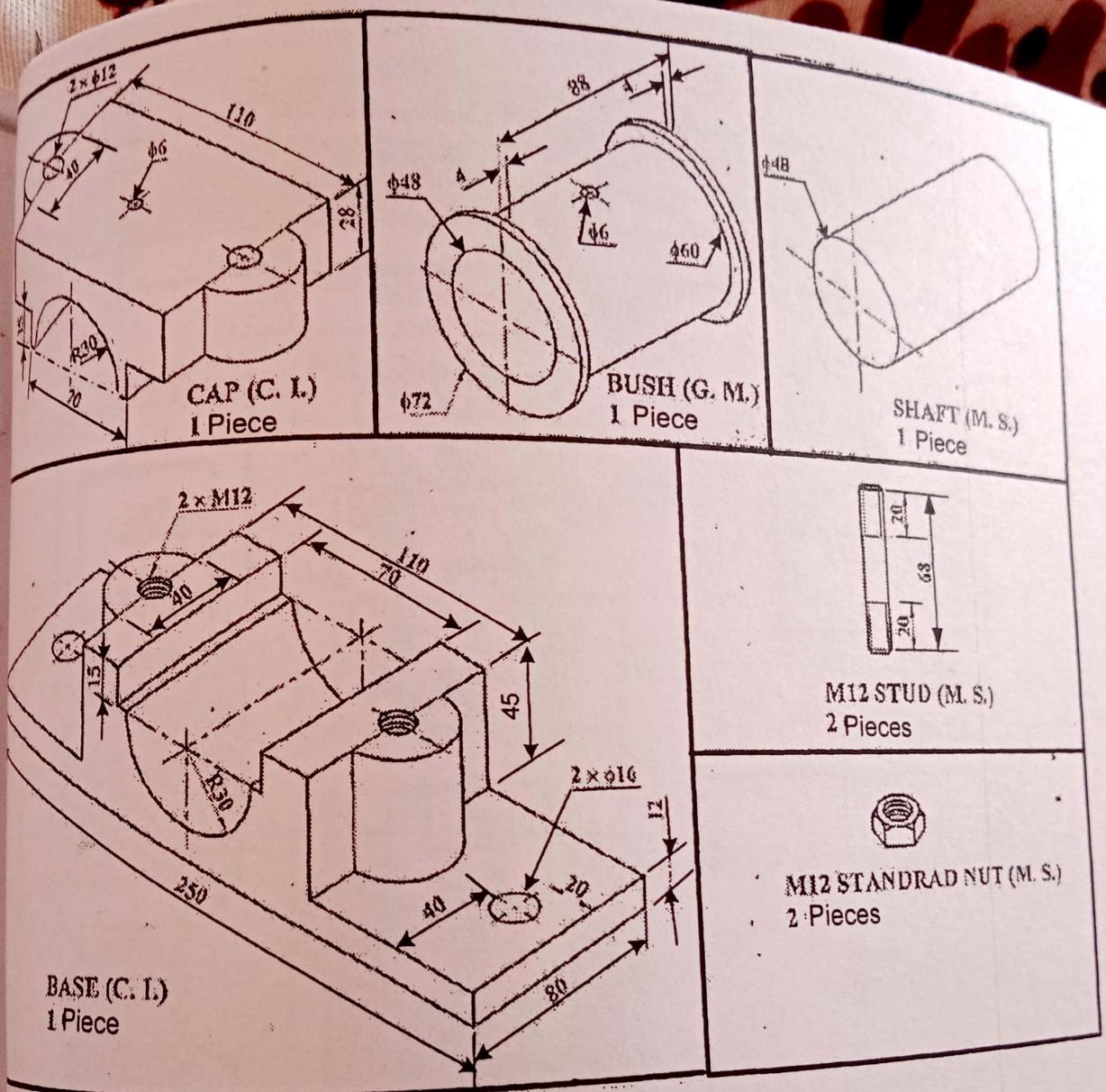


Figure 5

Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

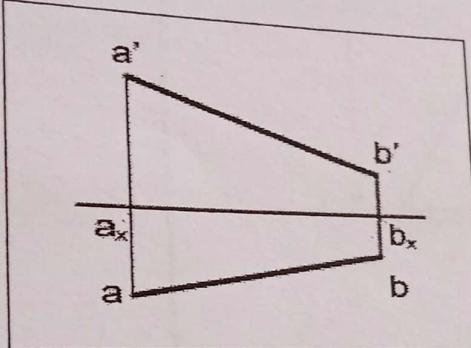
POKHARA UNIVERSITY  
Semester: Spring

Year : 2013  
Full Marks : 100  
Pass Marks : 45  
Time : 3 hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.  
Attempt all the questions.

1. Draw an ellipse having major axis 90mm and minor axis 60 mm by definition method. 14
2. Reproduce the given views of the lines and determine the true length. 14  
(figure 1)



$$\begin{array}{ll} a'a_x = 35 & b'b_x = 15 \\ aa_x = 20 & bb_x = 20 \\ a_x b_x = 40 \end{array}$$

Figure 1

3. Draw complete orthographic views (three views) of the given object. 30  
(figure 2)

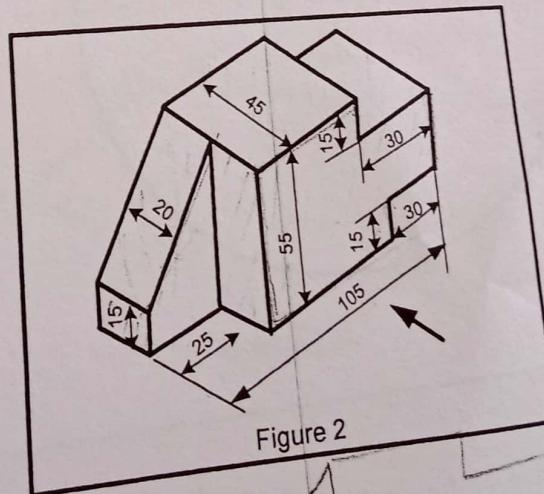
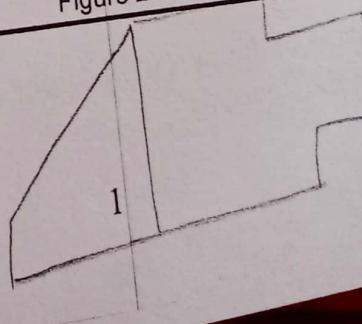
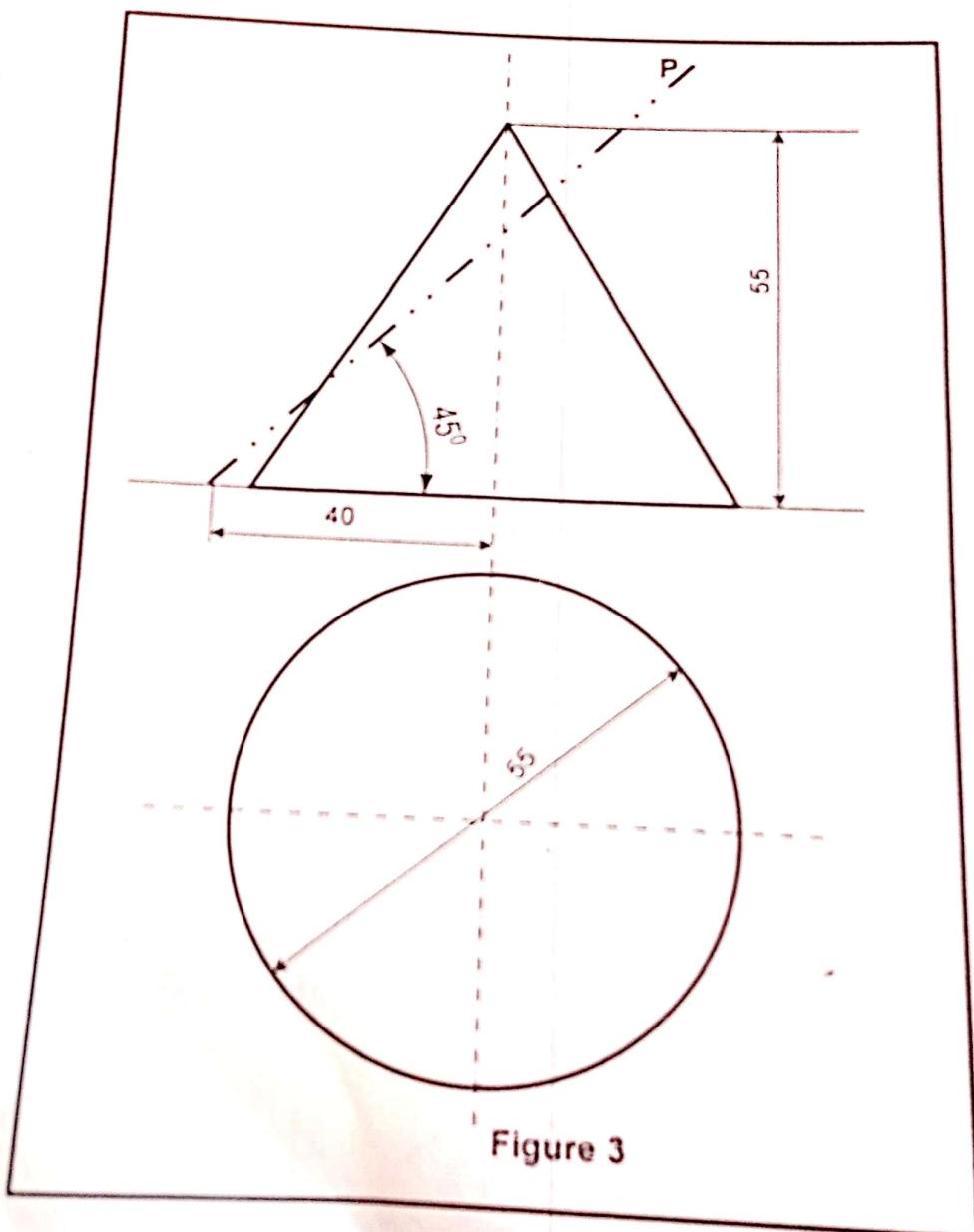


Figure 2



- 4 ✓ A right circular cone is cut by a plane P as shown in figure 3. Find the true shape of the section and also construct the lateral surface development of the object.



5. Assembled the given parts of the Screw Jack and draw its full sectional (orthographic) front view. (figure 4)

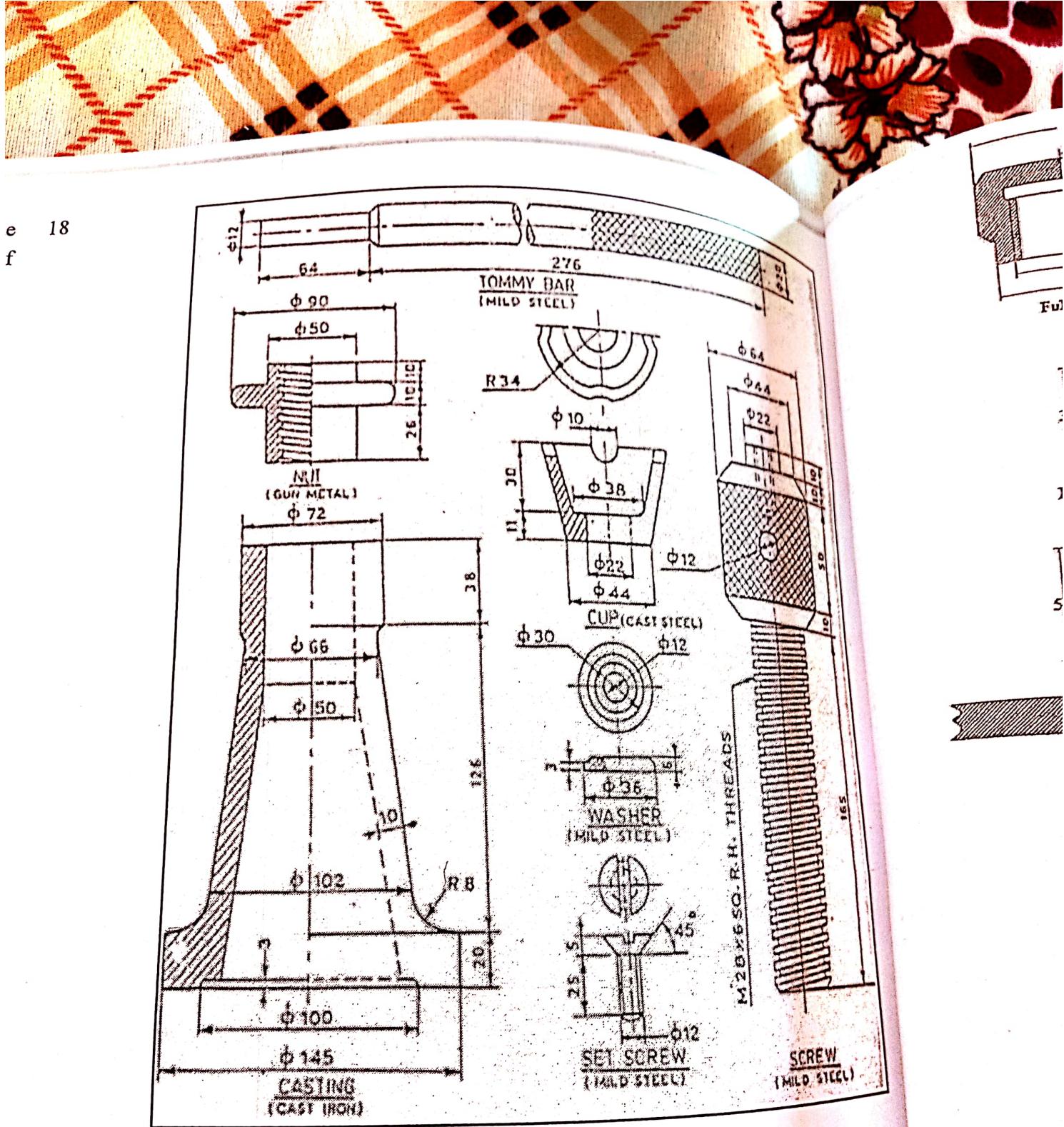
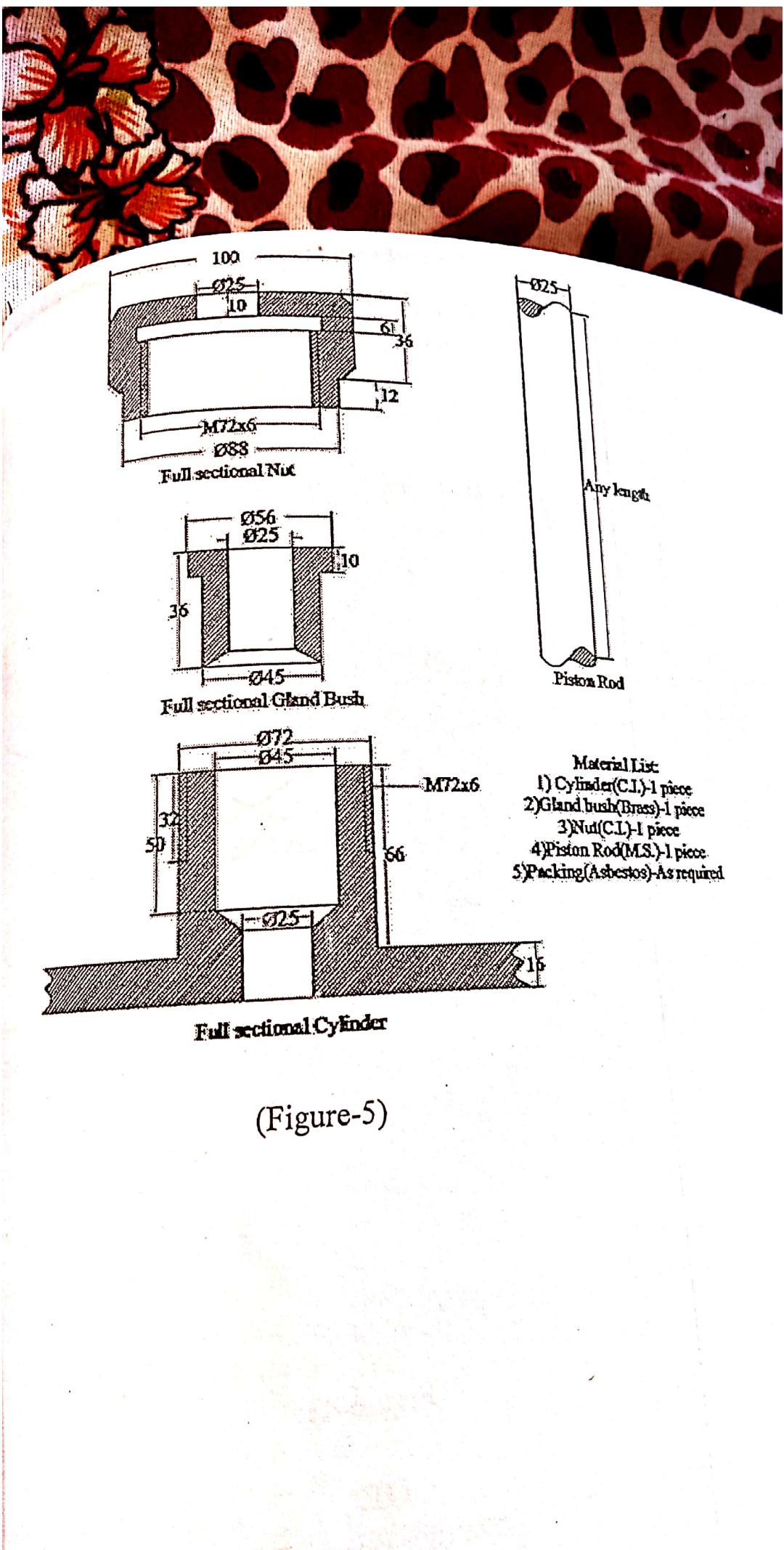


Figure 4

OR

Assemble the given parts of the split bearing and draw its full sectional (orthographic) front view. (figure 5)



(Figure-5)

POKHARA UNIVERSITY

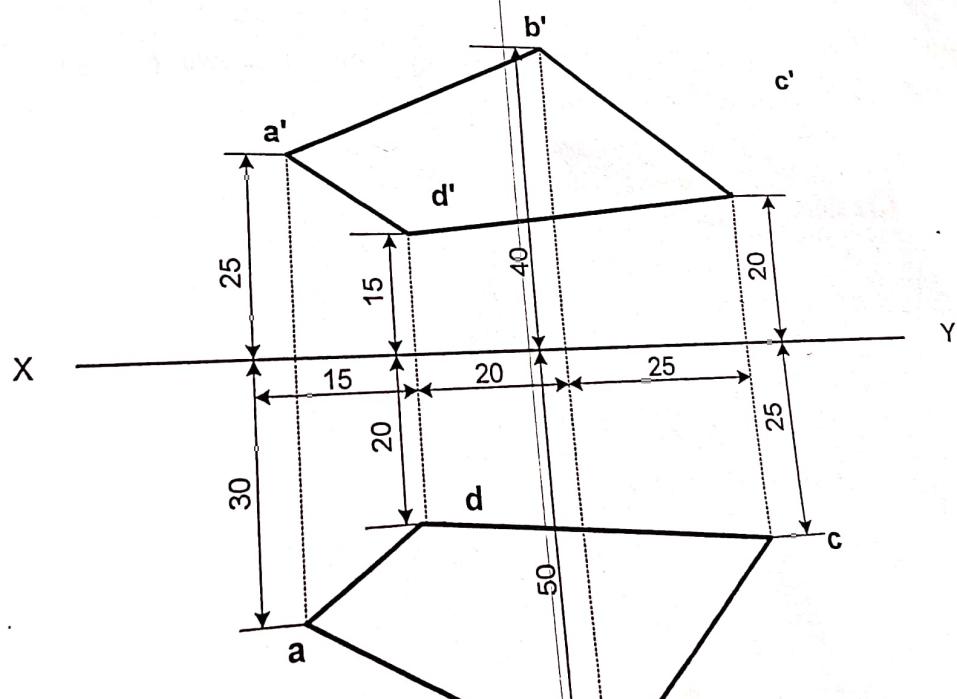
Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

Semester: Fall

Year : 2014  
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Pass Marks: 45  
Time : 3 hrs.

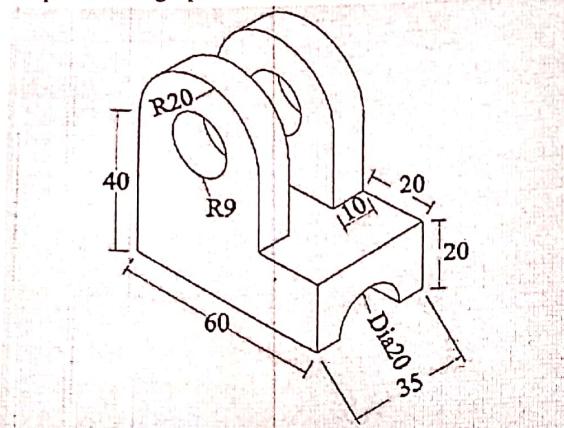
*Candidates are required to give their answers in their own words as far as practicable.  
The figures in the margin indicate full marks.  
Attempt all the questions.*

1. Draw a conical helix of one convolution, where the base diameter of cone is 40 mm and axial height is 60 mm. Also find the top view of the helix. 14
2. Reproduce the given views of plane ABCD and find its true shape. 14  
(Figure-1).



(Fig.-1)

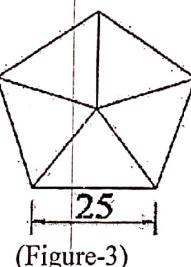
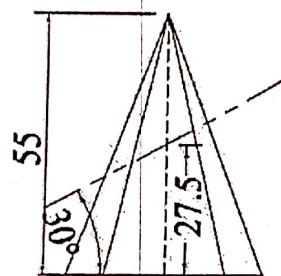
3. Draw the complete orthographic views of the given object. (Figure-2).



(Figure-2)

4. A pentagonal pyramid is cut by a cutting plane as shown in figure-3. 18  
Reproduce the given figure and draw:

- Sectional top view.
- True shape of the section.
- Lateral surface development of the object.



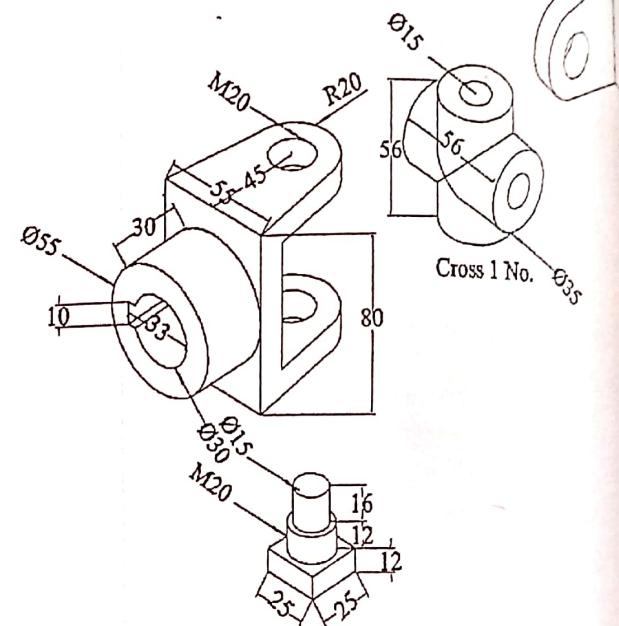
2

(Figure-3)

30

5. Assemble the given parts of Universal Coupling and draw its sectional front view (Figure-4).

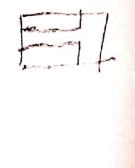
Details of Universal Coupling



(Figure-4)

OR

- Assemble the given parts of Stuffing Box and draw its full size view (Figure-5).



3

**POKHARA UNIVERSITY**

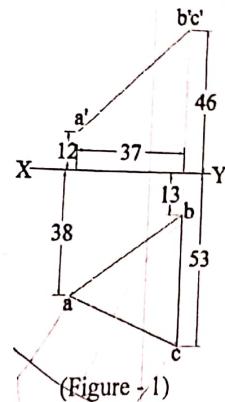
Level: Bachelor  
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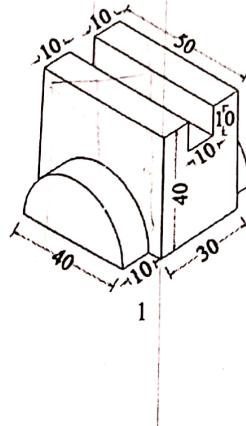
*Candidates are required to give their answers in their own words as far as practicable.  
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All provided dimensions are in mm.  
Attempt all the questions.*

1. Draw open belt tangent between two circles of 60mm and 30mm diameter, whose centers are 100mm apart. 14
2. Determine the true shape of the plane (figure - 1). 14



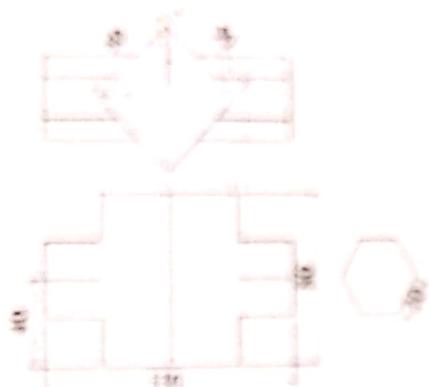
(Figure - 1)

3. Draw the complete orthographic views of the given object (figure - 2). 30



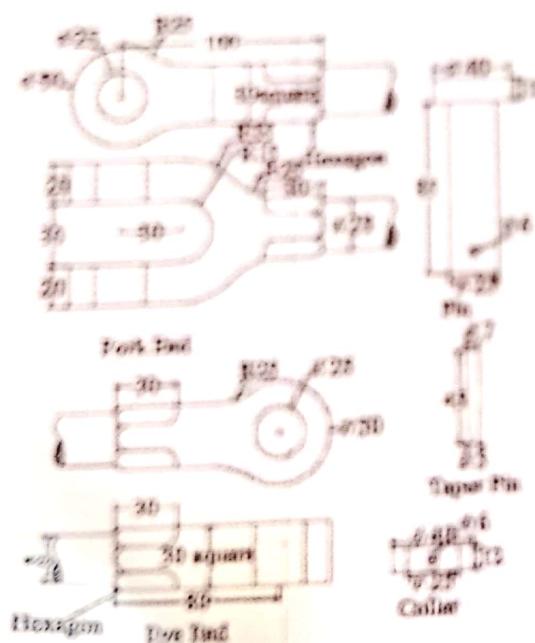
(Figure 2)

2. Draw the given views of the object and their law of association (Figures - 2).



(Figure - 3)

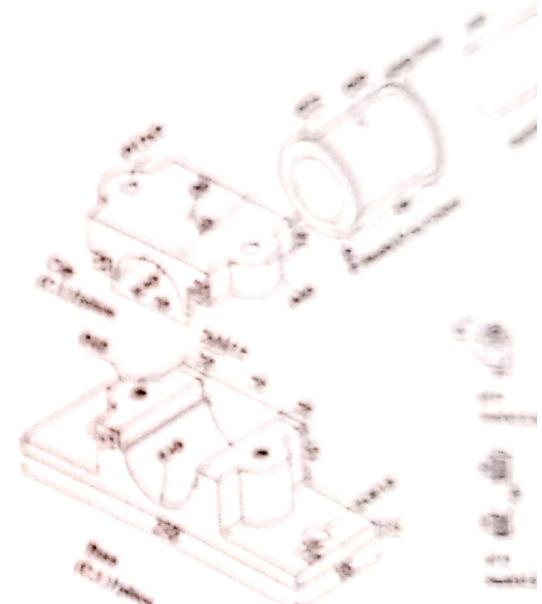
3. Assemble the given parts of Knuckle Joint and draw its full sectional front view (Figure - 4).



2

(Figure 2)

- Assembled the given parts of type drawing and draw its front view (Figure - 2).



(Figure 2)

4. Reproduce the given views of the object and draw line of intersection  
 (figure - 3).

18

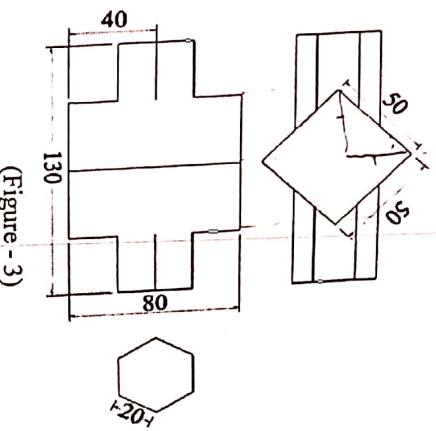
(Figure-4)  
 OR

Assembled the given parts of Split Bearing and draw its full view (figure- 5).

(Figure - 2)

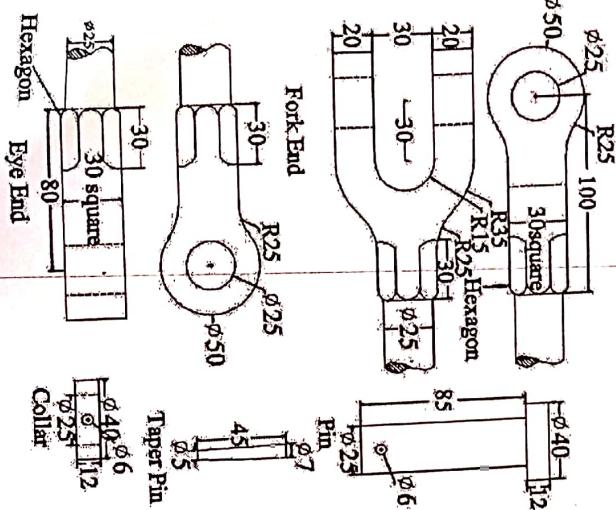
5. Assembled the given parts of Knuckle Joints and draw its full sectional front view (figure - 4).

24



(Figure - 3)

5. Assembled the given parts of Knuckle Joints and draw its full sectional front view (figure - 4).



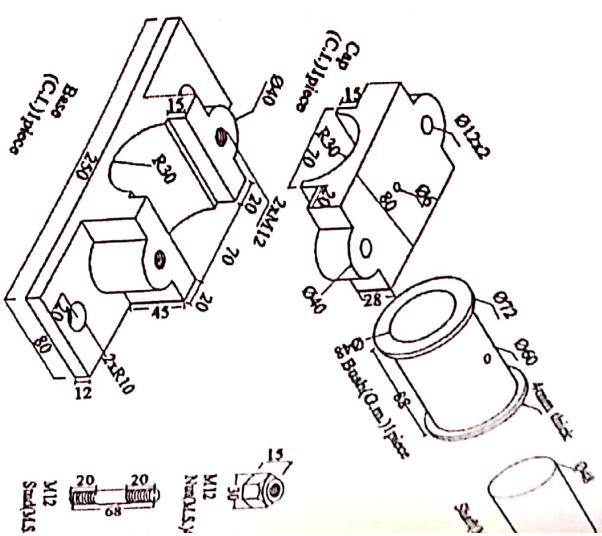
Fork End

Hexagon

Eye End

Collar

(Figure- 5)

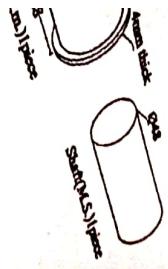


3

(Figure-4)

OR

ring and draw its full sectional front



assembled the given parts of split bearing and draw its full sectional front  
(Figure-5).

OR

attempt all the questions.

The figures in the margin indicate full marks

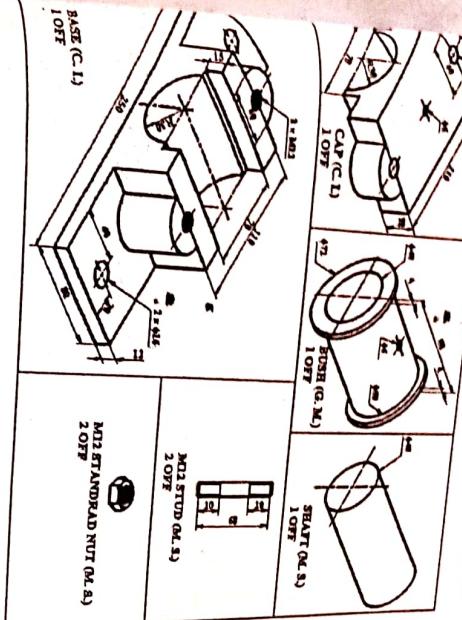
POKHARA UNIVERSITY

Level: Bachelor  
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Semester: Fall  
Year : 2015  
Full Marks: 100  
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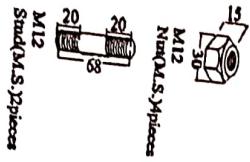
Candidates are required to give their answers in their own words as far as practicable.  
Attempt all the questions.

1. Construct an uncrossed tangent line between two circles having diameter 50 mm and 30 mm and center to center distance between them is 80 mm.
2. Reproduce the given view of the plane and determine the true shape of the plane.

(Figure-1).  
16 U. 100



(Figure-5)

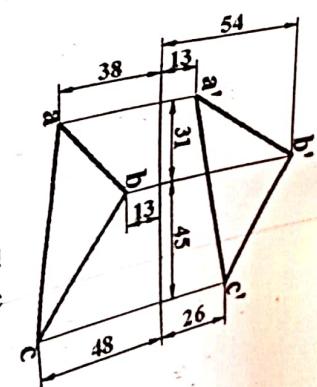


M12  
Nuts(M.S.),12 pieces

20  
10  
30

M12  
Studs(M.S.),12 pieces

20  
10  
30

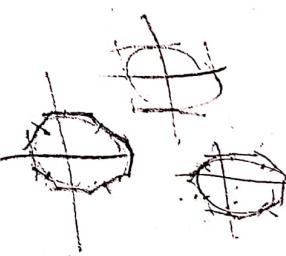


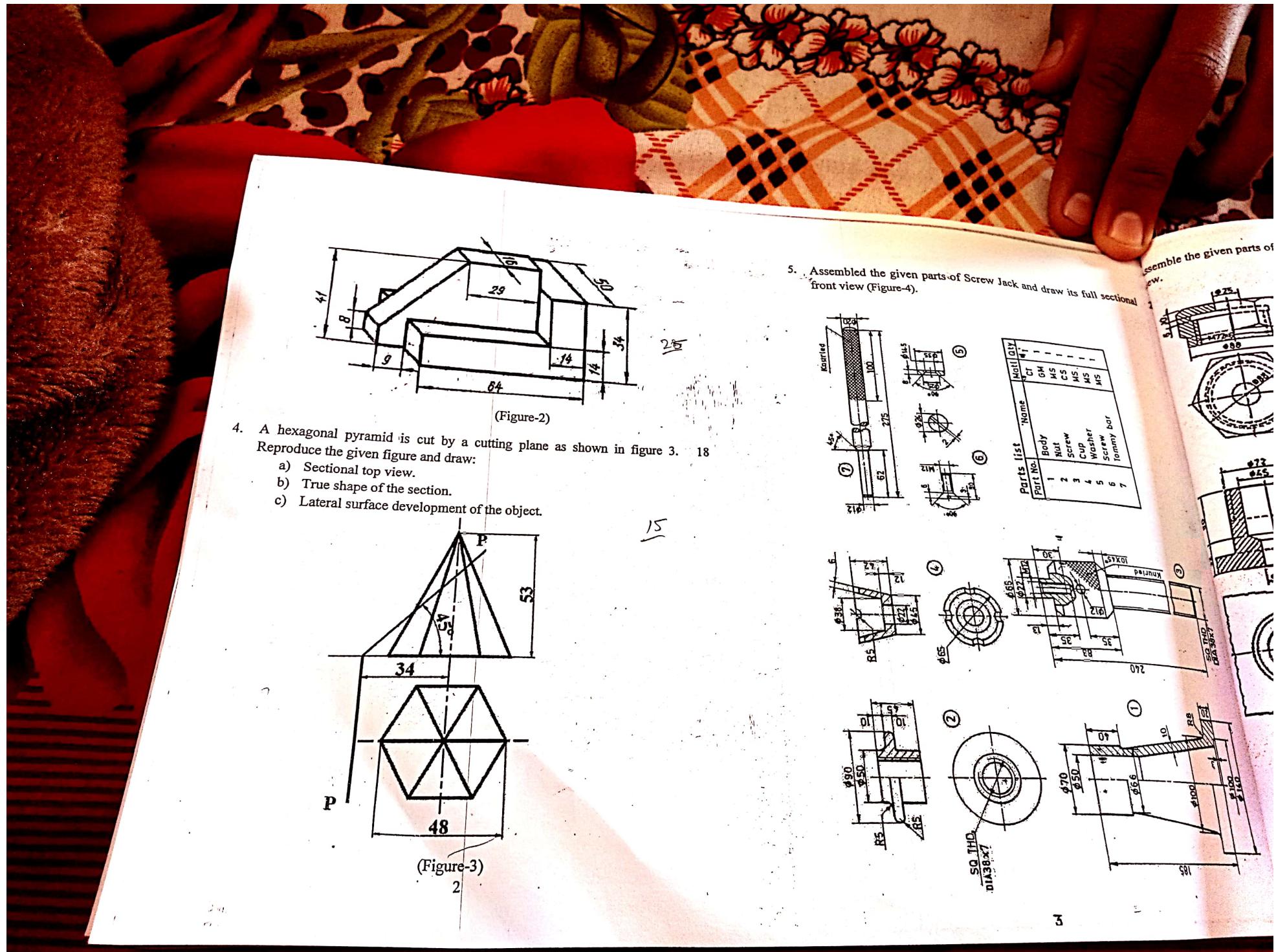
(Fig.-1)

3. Draw the complete orthographic views of the given object (Figure-2).

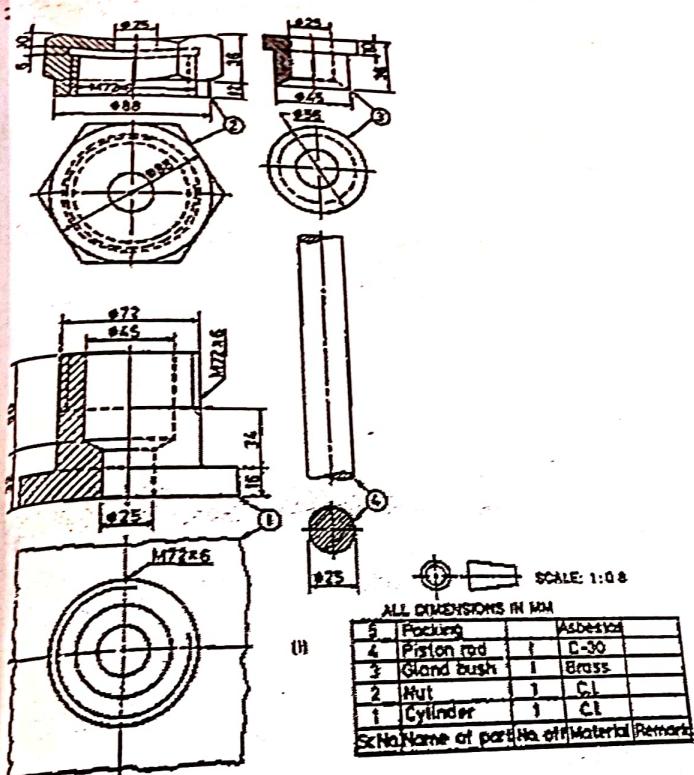
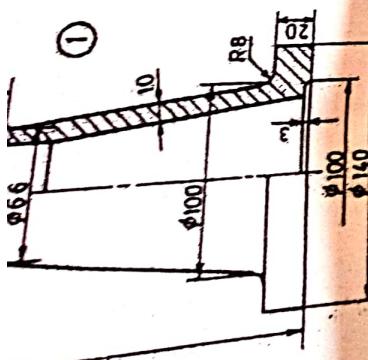
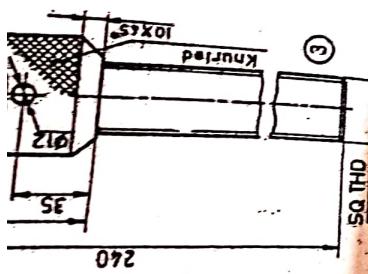
30

4





Name	Matrial	Gty
Body	Cr	1
Nut	GM	1
Screw	MS	1
Cup	CS	1
Washer	MS	1
Screw	MS	1
Tommy bar	MS	1

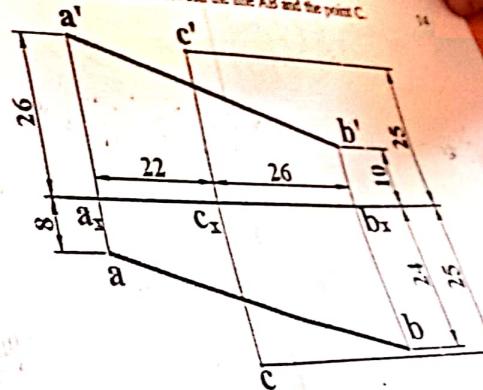


POKHARA UNIVERSITY  
Semester: Fall  
Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

Year : 2066  
Full Marks: 100  
Pass Marks: 45  
Time: 3 hrs.

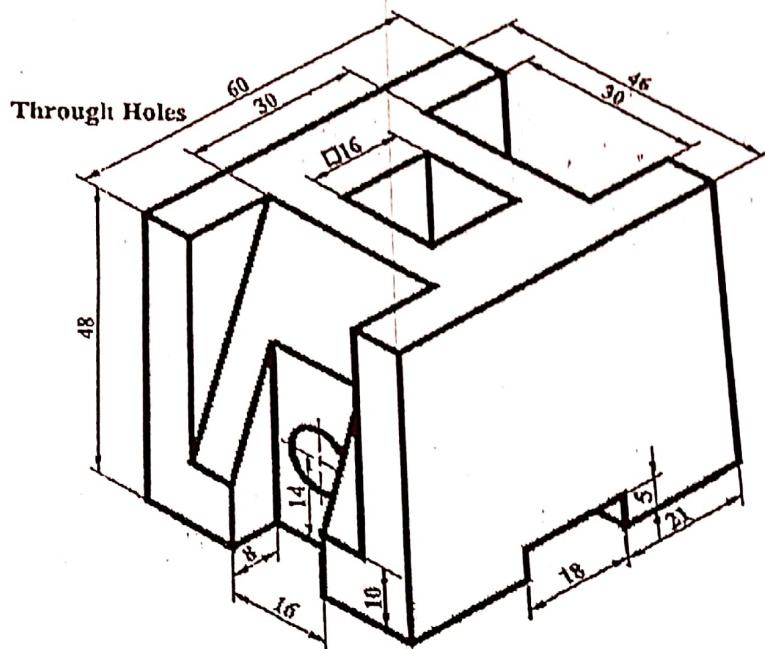
Candidates are required to give their answers in their own words so far as practicable.  
The figures in the margin indicate full marks.  
Attempt all the questions.

1. Construct one turn of cylindrical helix with diameter 14 mm and pitch of 14 mm.
2. Determine the shortest distance between the line AB and the point C.



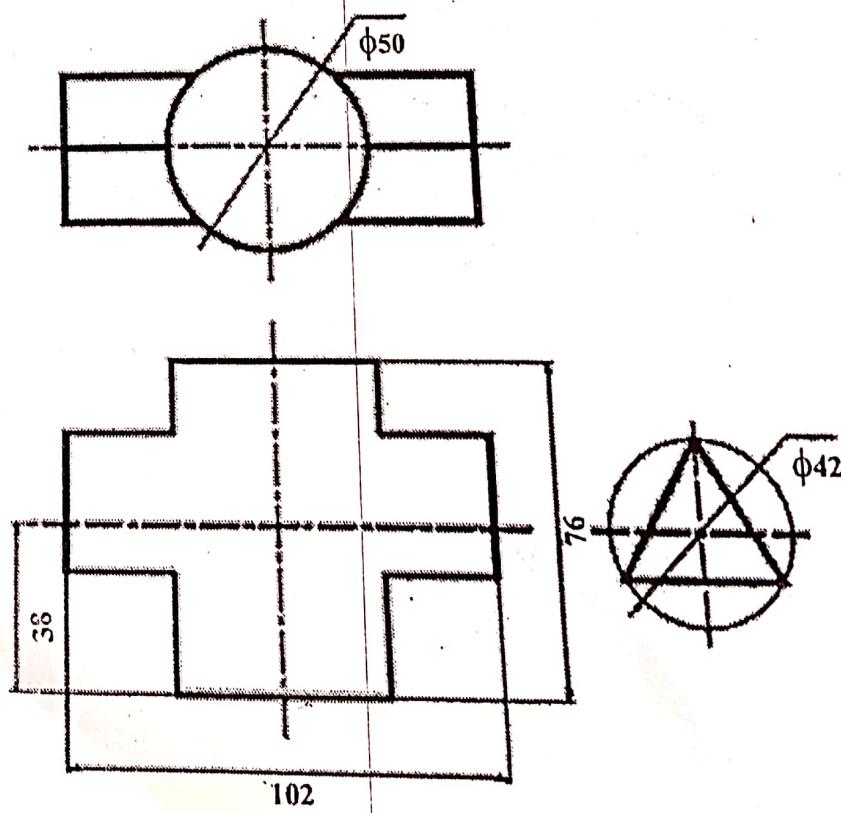
3. Draw complete orthographic views of the given object.

30



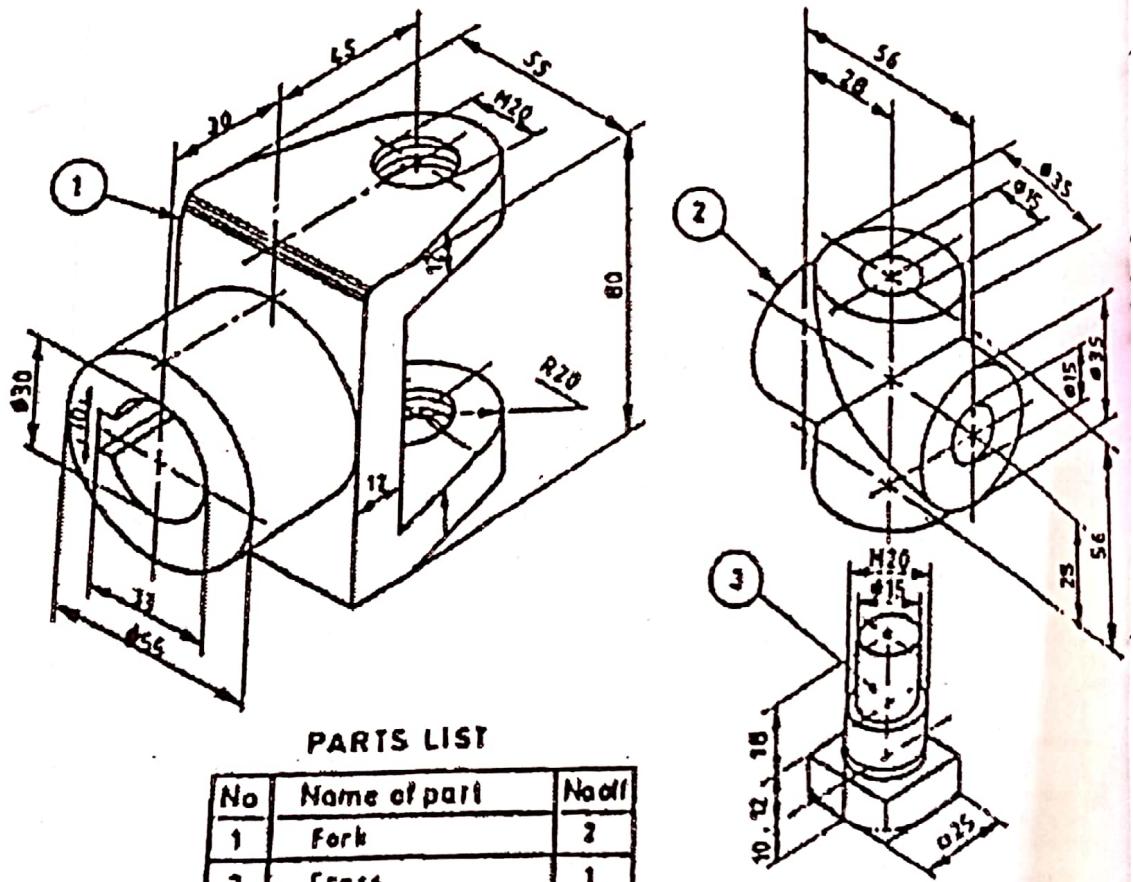
4. Draw the given views in the figure below with curve of intersection.

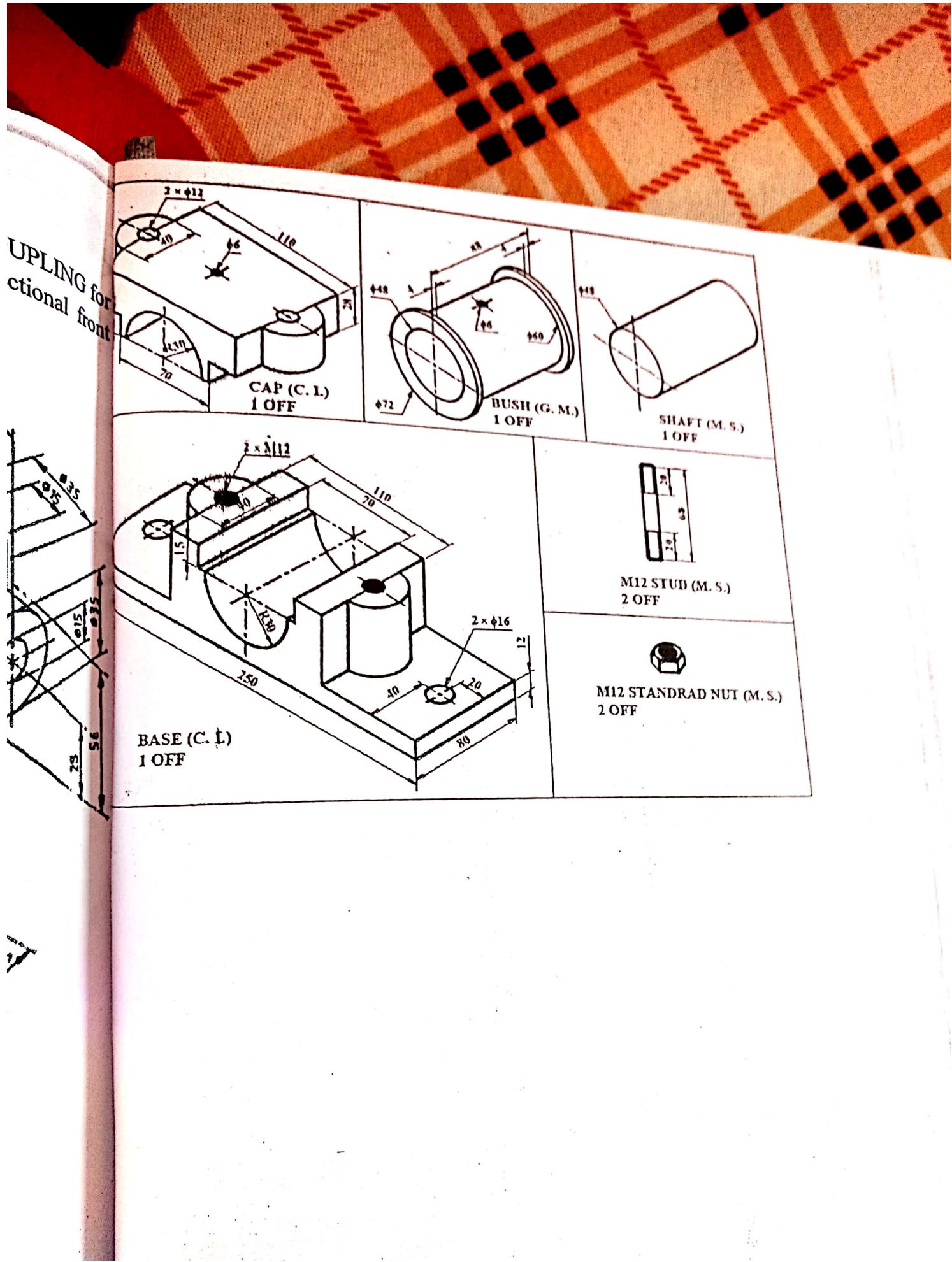
18



2

- 10
5. The figure below shows detail drawing of a UNIVERSAL COUPLING for connecting two shafts. Assemble the parts and draw the sectional front view of the assembly.





# POKHARA UNIVERSITY

Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

Semester: Fall

Year : 2016  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

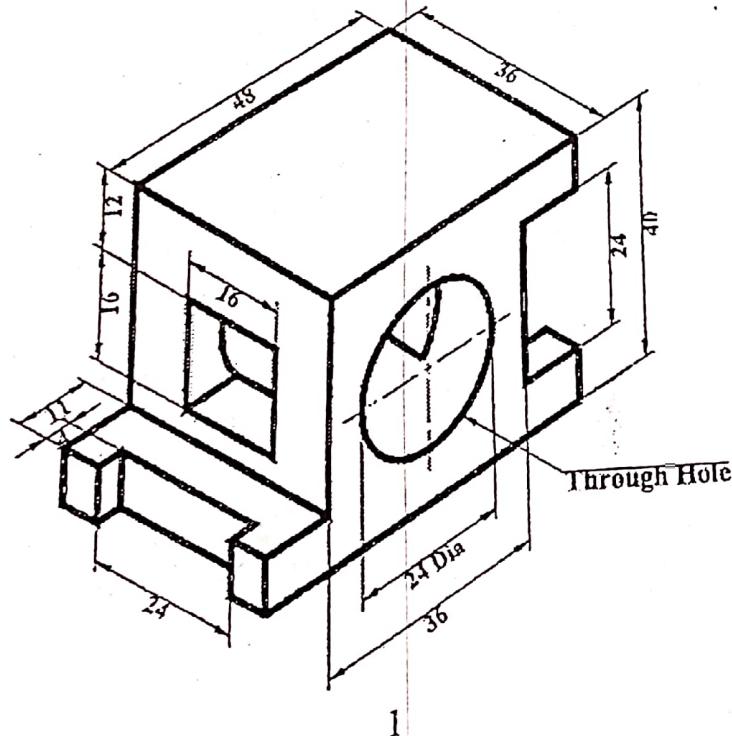
*Attempt all the questions.*

1. Construct a crossed line tangent (crossed belt type) between two circles having radii 20 mm and 15 mm and centre to centre distance between them is 75 mm. 14
2. a) Draw true shape of given triangular plane from given co-ordinates. 8

	X	Y	Z
A	75	20	10
B	40	10	45
C	0	50	20

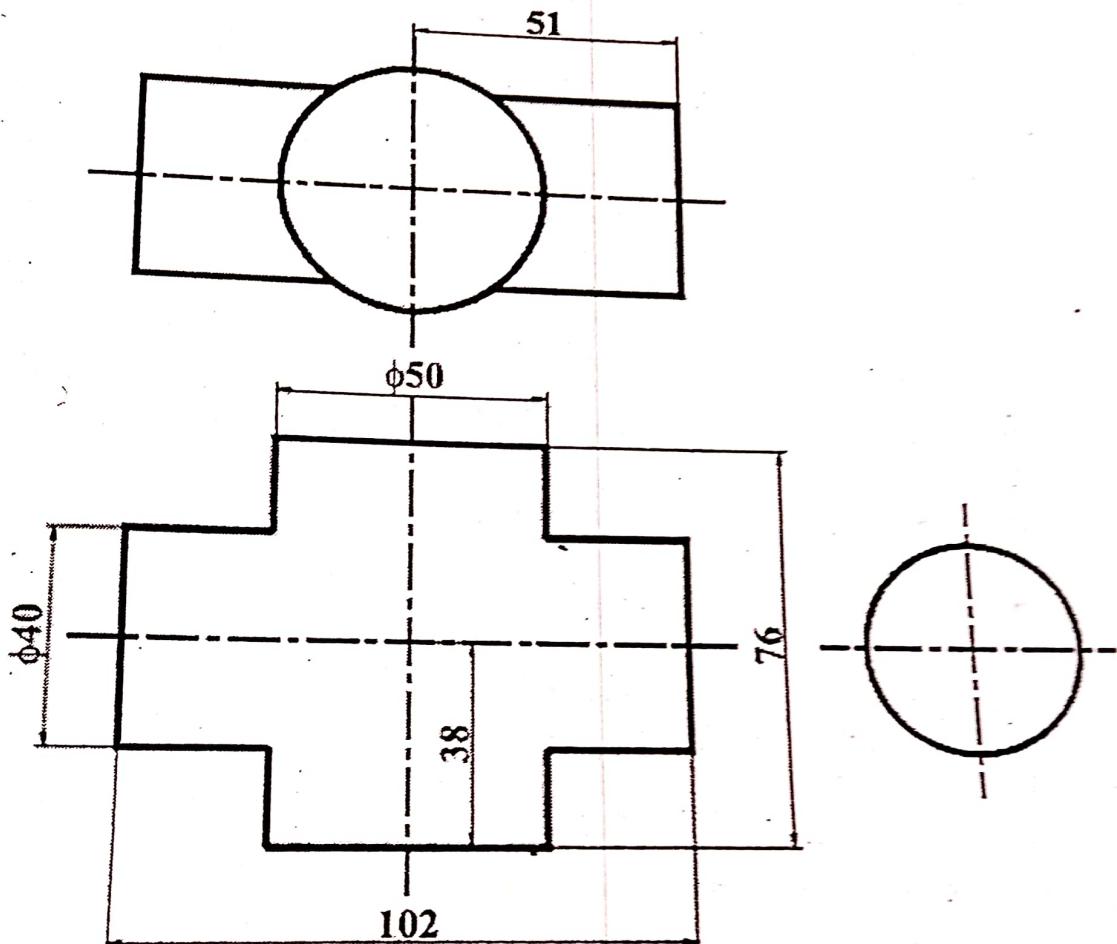
MM

- b) Draw an octagon having side of 30 mm. 6
3. Draw complete orthographic views of the given object. 30

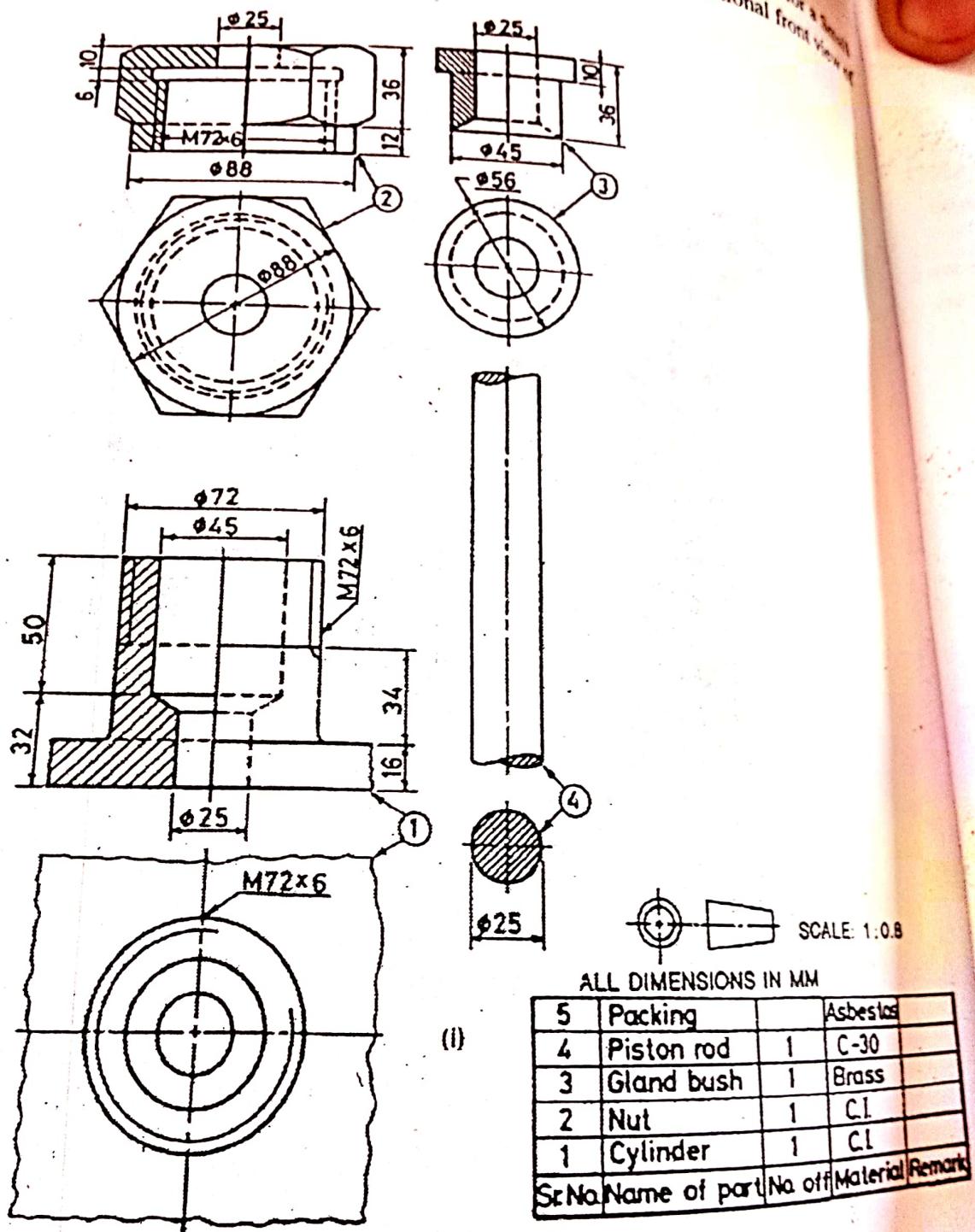


Draw the given views of the figure below with curve of intersection.

18



5. The figure below shows detail drawing of a STUFFING BOX for a Steam Engine. Assemble the parts and draw the half sectional front view of the assembly.



**OR**

The detail drawing of a SPLIT BEARING is shown in the figures below. Draw the assembled front view with section. Take any length for the shaft.

	SCALE: 1:0.8
IN MM	
Asbestos	
C-30	
Brass	
C.I.	
C.L.	
No. of Material	Remd

JING BOX for a Small  
sectional front view

POKHARA UNIVERSITY

Level: Bachelor

Semester: Spring

Year : 2016

Programme: BE

Full Marks: 100

Course: Engineering Drawing

Pass Marks: 45

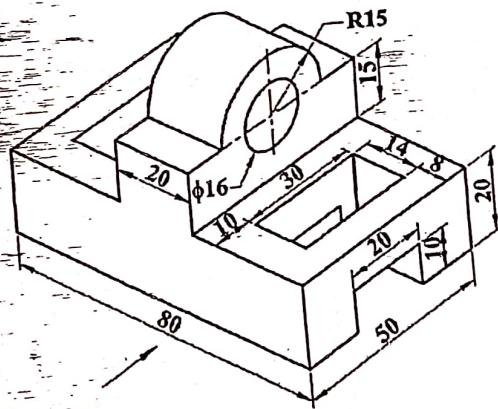
Time : 3 hrs.

Candidates are required to make neat and accurate drawings with dimensions.

The figures in the margin indicate full marks.

Attempt all the questions.

1. Construct a conic when the distance of its focus from its directrix is equal to 50 mm and its eccentricity is  $3/4$ . Measure its major and minor axes. Draw a tangent at any point on the curve. What is the distance between the foci? 14
2. Draw a line 50 mm long and trisect it. 6
3. A line 40 mm long is parallel to V.P and inclined at an angle of  $30^\circ$  to H.P. The end A is 15 mm above H.P and 20 mm in front of V.P. Draw the projections of the line. 8
4. Draw complete and neat orthographic views of the following figure. 30



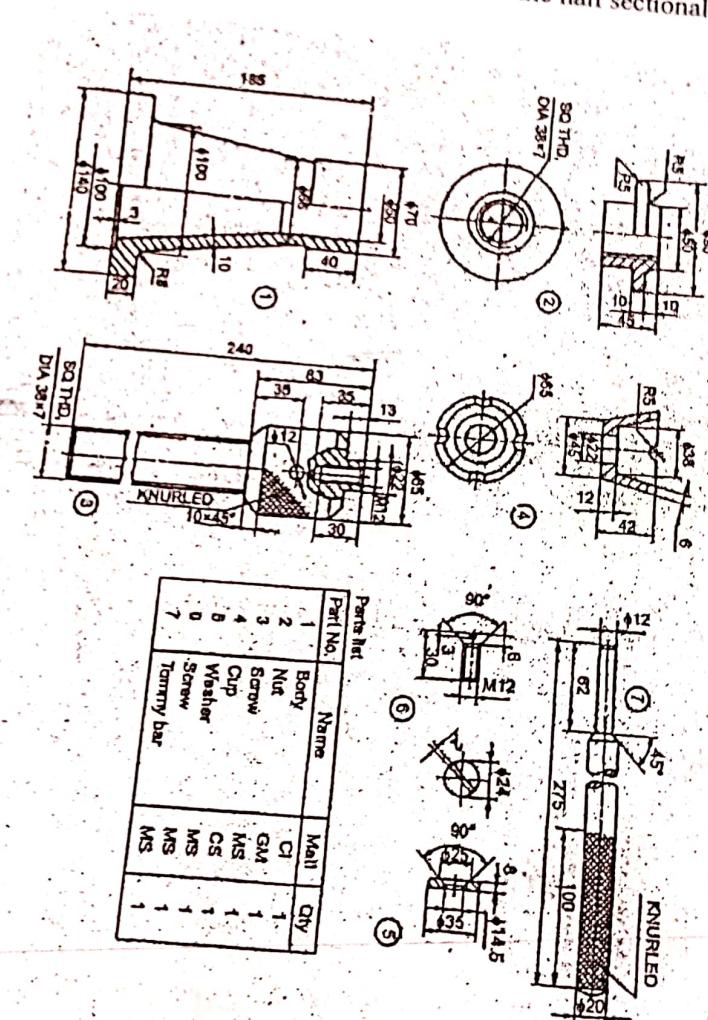
5. A hexagonal pyramid with side of base 30 mm and height 75 mm stands with its base on H.P and an edge of the base parallel to V.P. It is cut by a plane perpendicular to V.P, inclined at  $45^\circ$  to H.P and passing through the 18

mid-point of the axis. Draw the (sectioned) top view and develop the lateral surface of the truncated pyramid.

OR

A vertical cylinder of diameter 120 mm is fully penetrated by a cylinder of diameter 90 mm, their axes intersecting each other. The axis of the penetrating cylinder is inclined at  $30^\circ$  to the H.P and is parallel to the V.P. Draw the top and front views of the cylinders and the curves of intersection.

6. Assemble all the parts of screw Jack and draw the half sectional view from 24



Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

Semester: Fall

Year : 2017  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

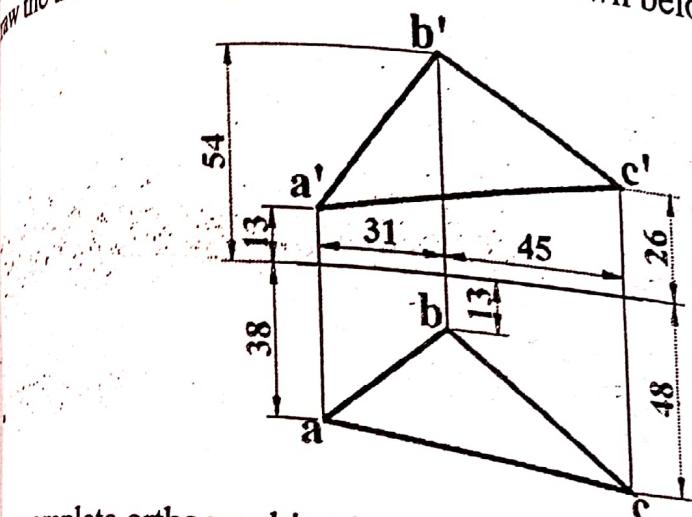
4. Draw the intersection

Candidates are required to draw neat and clear figures with appropriate dimensions.  
The figures in the margin indicate full marks.  
Attempt all the questions.

Draw one turn of a helix of pitch 60 mm on a cylinder of diameter 40 mm.

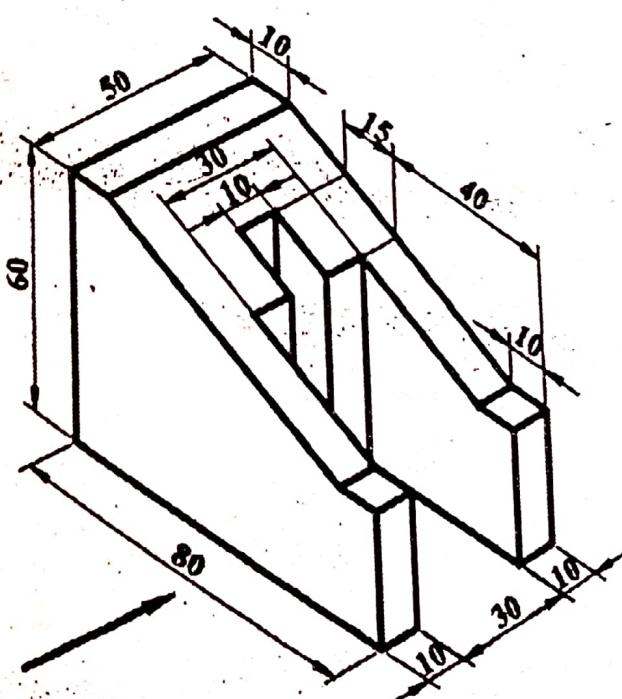
14

14

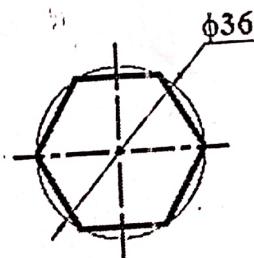
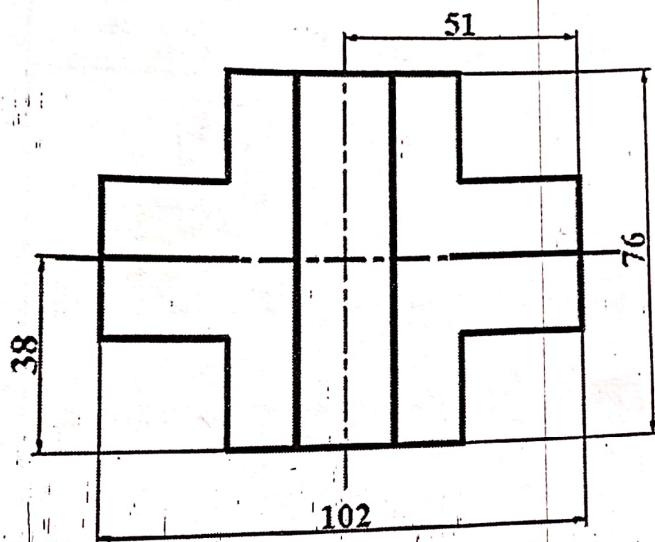
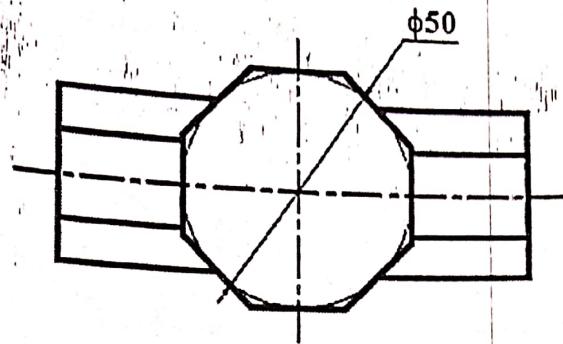


Draw complete orthographic views of the given object.

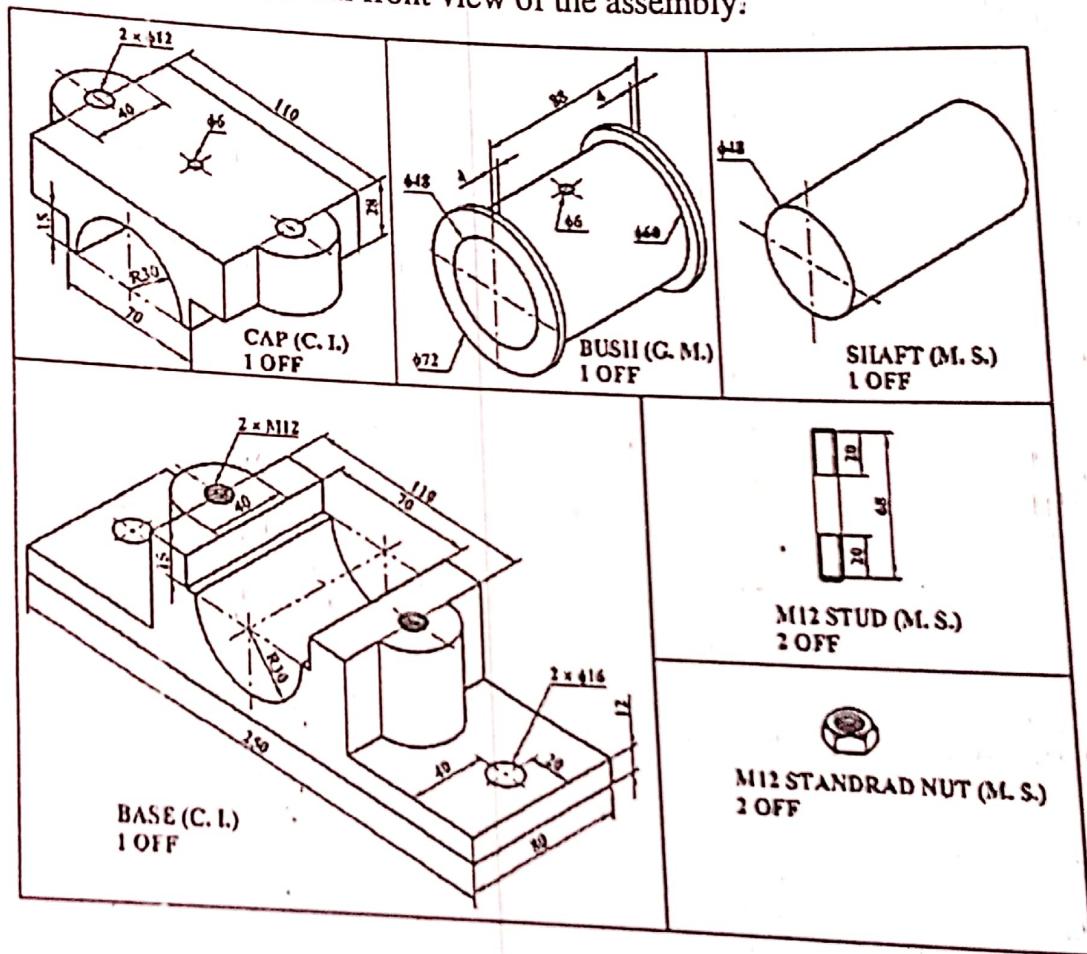
30



4. Draw the complete orthographic drawing showing the curves of intersection of solid for the figure shown below. 18



5. The figure below shows the detail drawing of the parts. Assemble the parts and draw the half sectional front view of the assembly. 24



# POKHARA UNIVERSITY

Semester: Fall

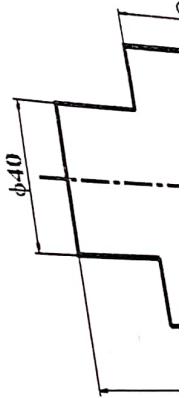
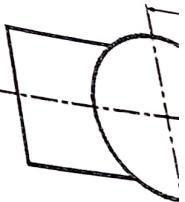
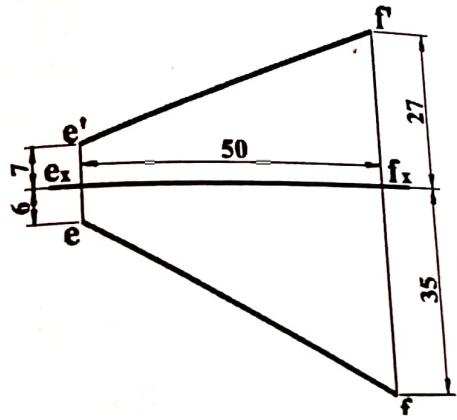
Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

Candidates are required to draw neat and clear figures with appropriate dimensions.  
The figures in the margin indicate full marks.  
Attempt all the questions.

Year : 2017  
Full Marks: 100  
Pass Marks: 45  
Time : 3 hrs.

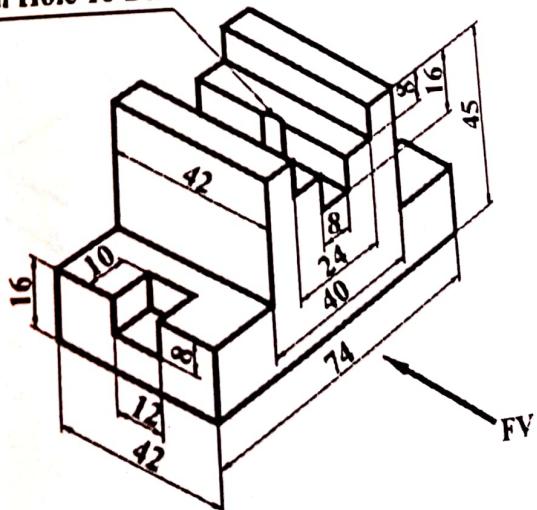
4. Draw the complete orthographic intersection of solid for the figure st

Show indirect common tangent to two circles of diameter 40 mm and 60 mm with centre to centre distance of 120 mm. 14  
produce the given views of the lines and determine the true length. 14



Draw complete orthographic views of the given object. 30

Through Hole 10 Dia.



2017  
100  
45  
3hrs.

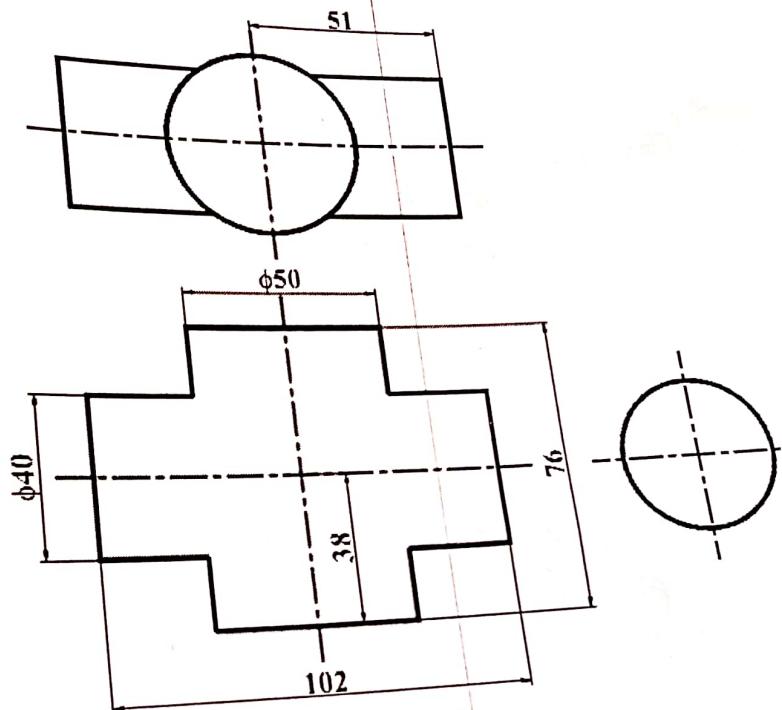
with

nd 60 14

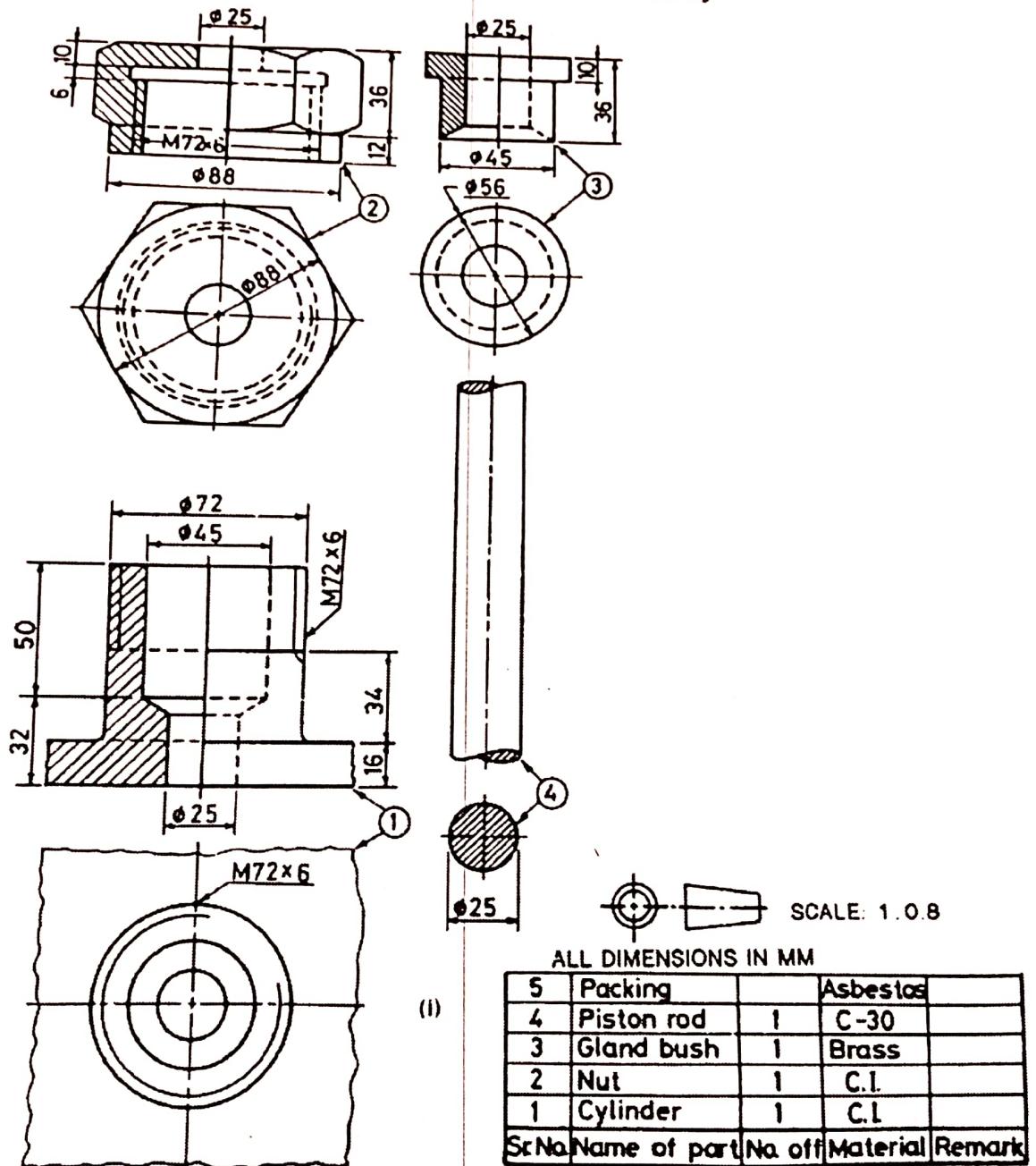
14

30

4. Draw the complete orthographic drawing showing the curves of 18 intersection of solid for the figure shown below.



5. The figure below shows the detail drawing of the parts. Assemble the parts and draw the half sectional front view of the assembly. 24



POKHARA UNIVERSITY

Semester: Fall

Level: Bachelor  
Programme: BE  
Course: Engineering Drawing

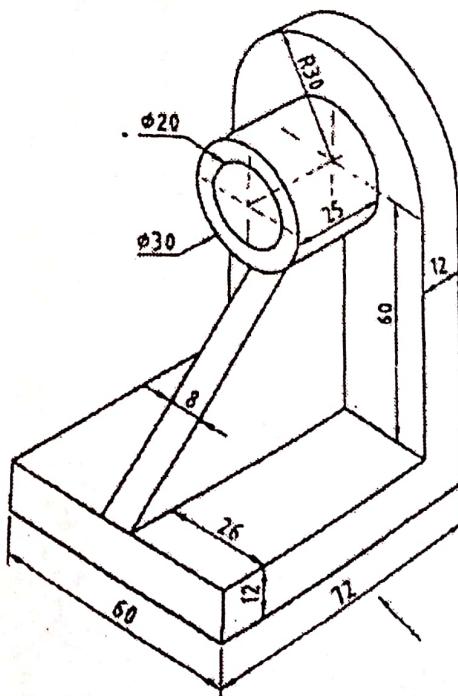
Year : 2018  
Full Marks: 100  
Pass Marks: 45  
Time : 3 hrs.

Candidates are required to make neat drawings with accurate dimensions.  
The figures in the margin indicate full marks.  
Assume suitable data if necessary.  
Attempt all the questions.

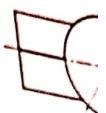
Draw a hypocycloid having a generating circle of diameter 50 mm and a directing circle of radius 10 mm. Also draw a normal and a tangent at point M on the curve. 14

A line AB, 90 mm long, is inclined at  $30^\circ$  to the H.P. Its end A is 12 mm above the H.P. and 20 mm in front of the V.P. Its front view measures 6 mm. Draw the top view of AB and determine its inclination with the V.P. 14

Draw complete and neat orthographic views of the following figure. 30

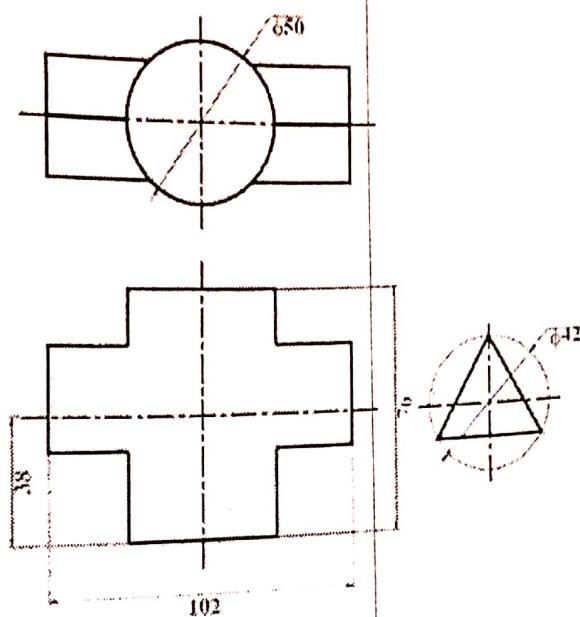


4 Draw the given views of intersection.



5 The figure below shows parts and draw the ha

4 Draw the given views of assigned form and complete the 18 intersection.



5 The figure below shows the detail drawing of the parts. Assemble the 24 parts and draw the half sectional front view of the assembly.

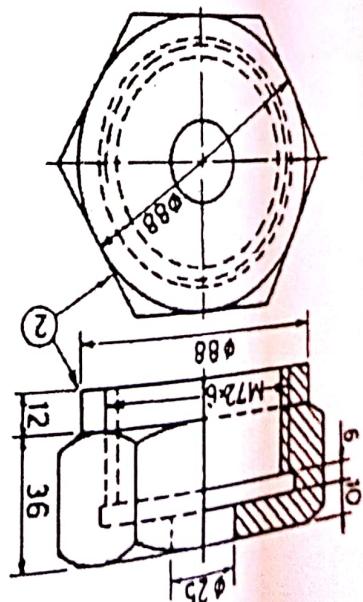
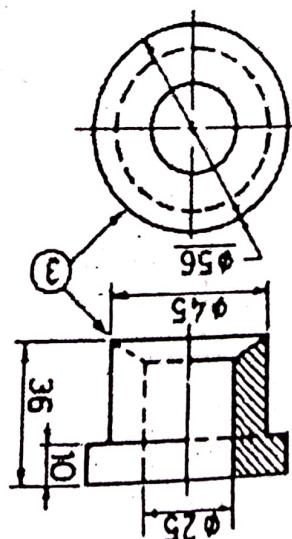
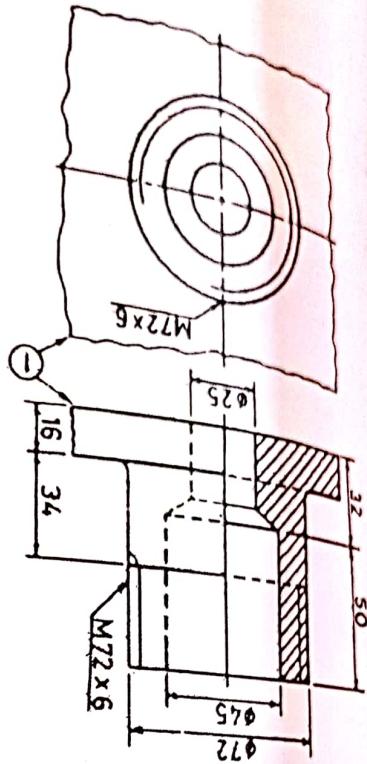
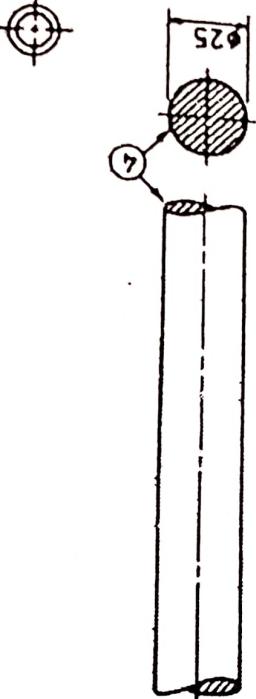
Candidates are required to draw appropriate dimensions for the figures in the main question. Assume suitable data where necessary. Attempt all the questions.

Draw a cycloid, giving its generating circle. Also draw a tangent to it at point A. Distance between the centers of the two circles is 40 mm. End A is 40 mm behind the VP. Draw the complete cycloid (figure 1).

SC No	Name of part	No of	Material	Remarks
1	Cylinder	1	C.I.	
2	Nut	1	Brass	
3	Gland bush	1	C-30	
4	Piston rod	1	C-30	
5	Packing	Asbestos		

ALL DIMENSIONS IN MM

SCALE: 1:10.8



Candidates are required to draw accurate drawings in 3 hrs.  
Appropriate dimensions.  
The figures in the margin indicate full marks.  
Assume suitable data if necessary. All dimensions are in mm.  
Attempt all the questions.

Draw a cycloid, given the diameter of a generating circle as 50 mm. 14  
 Also draw a tangent and normal at any given point T on the curve.  
 Distance between the end projectors of a straight line AB is 40 mm.  
 End A is 40 mm behind VP and 20 mm below HP and end B is 6 mm  
 behind the VP. The line is inclined at  $30^\circ$  to the VP. Draw its  
 projections. Also obtain its TL and its inclination ( $\Theta$ ).  
 Draw the complete orthographic views (3 views) of the given object 30  
 (figure 1).

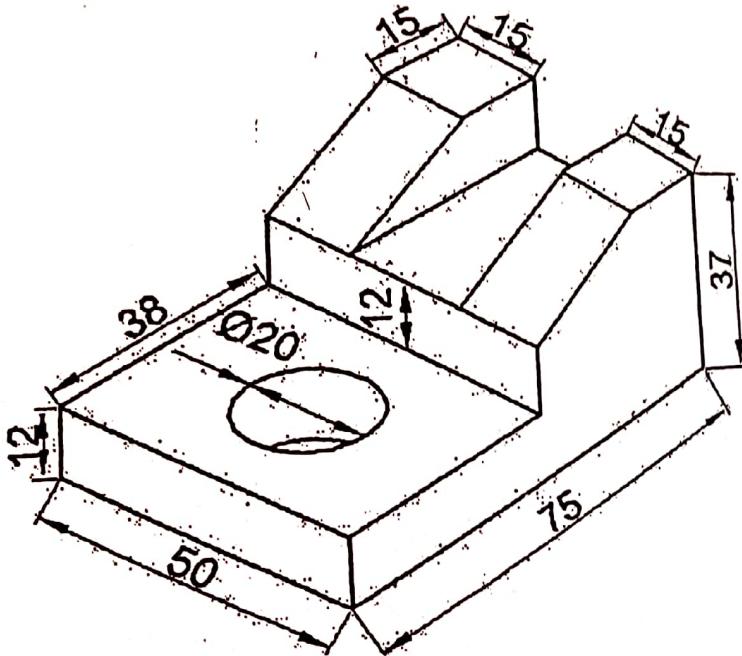


Figure 1

4. Represent the given views of the object and draw curve of immersion 12  
(Figure 2).

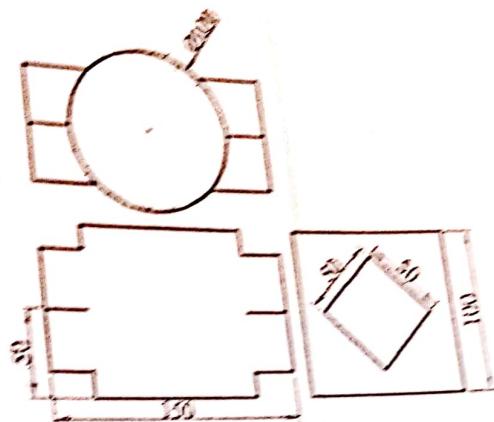
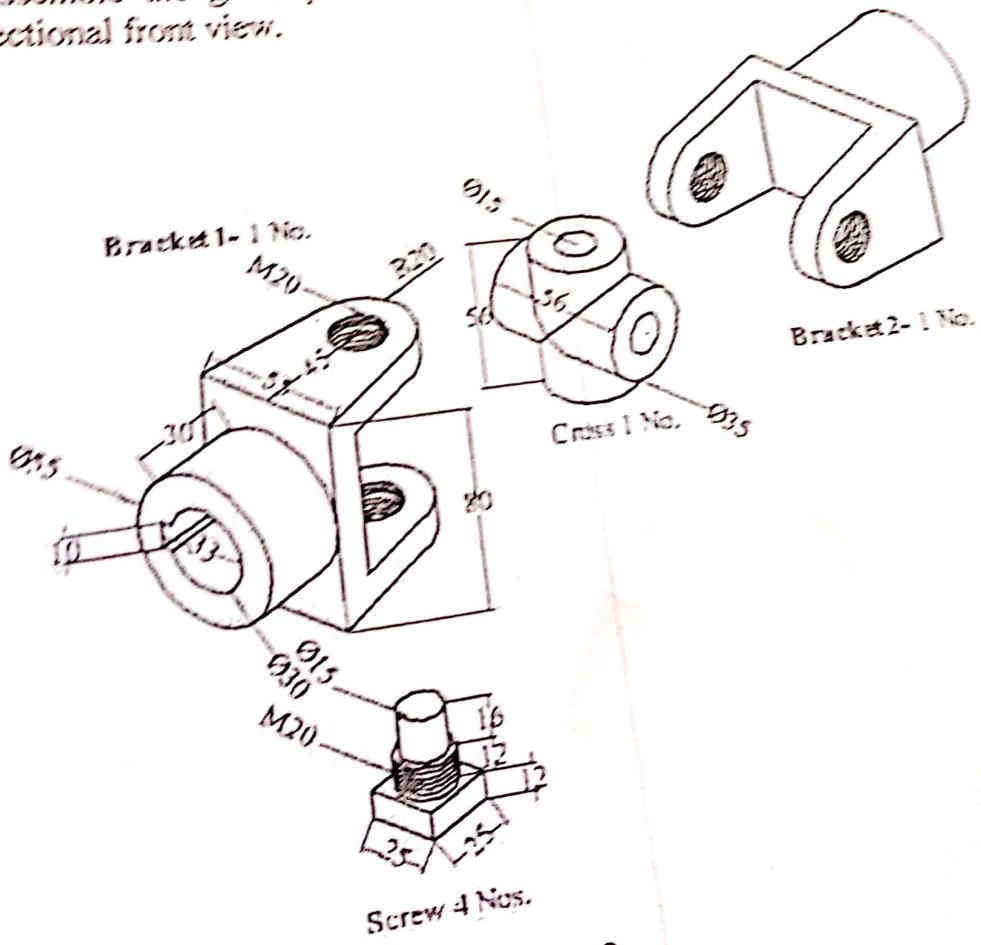


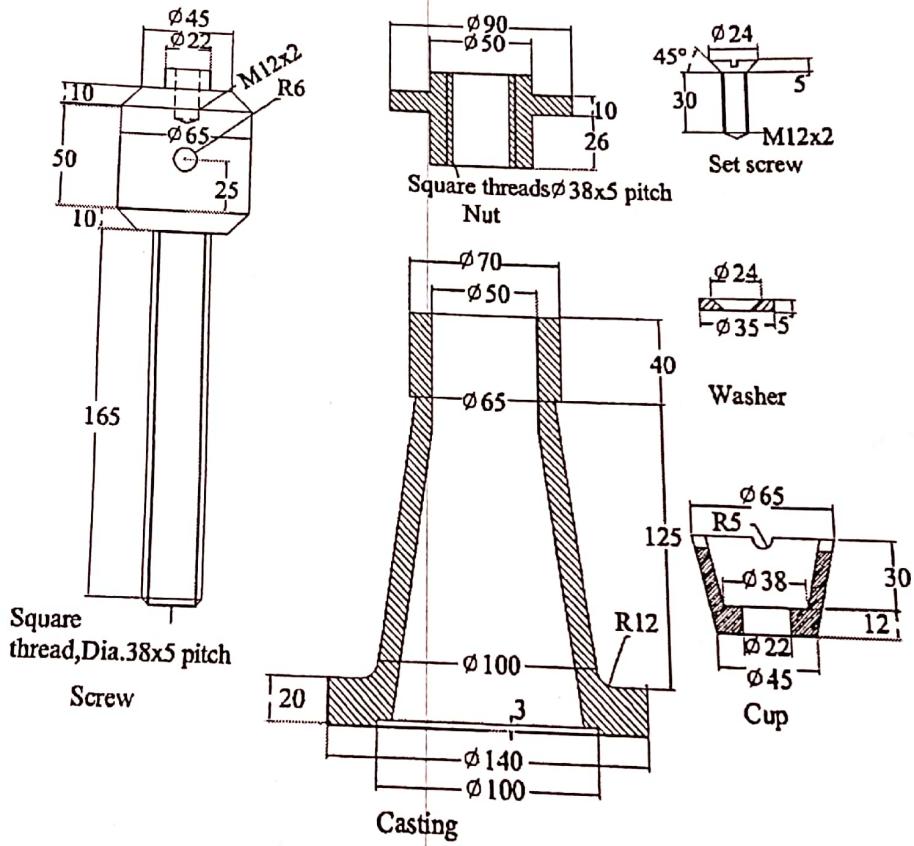
Figure 2

5. Assemble the given parts of Universal Coupling and draw its full sectional front view. 24



OR

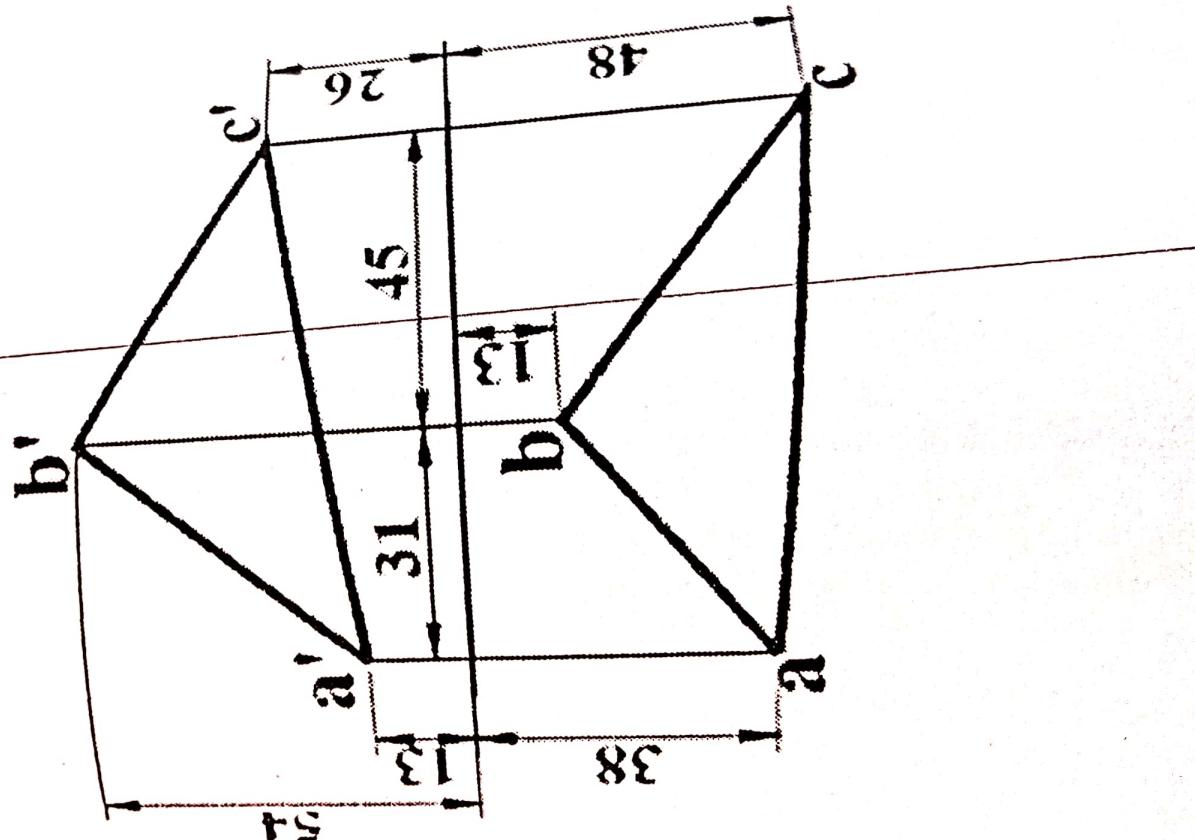
Assemble the given parts of Screw Jack and draw its full sectional front view.



Year  
Full Marks: 20  
Pass Marks: 10  
Time: 45  
1. Draw the true shape of the curve formed by the rolling of a circle of radius  $r=20$  mm over a straight horizontal line. All dimensions are required to give their answers in their own words or figures in the margin indicate full marks.

hypocycloid, given the radii of rolling and directing circles as  $r=20$  mm, respectively. Also draw a normal and a tangent at any point on the curve.

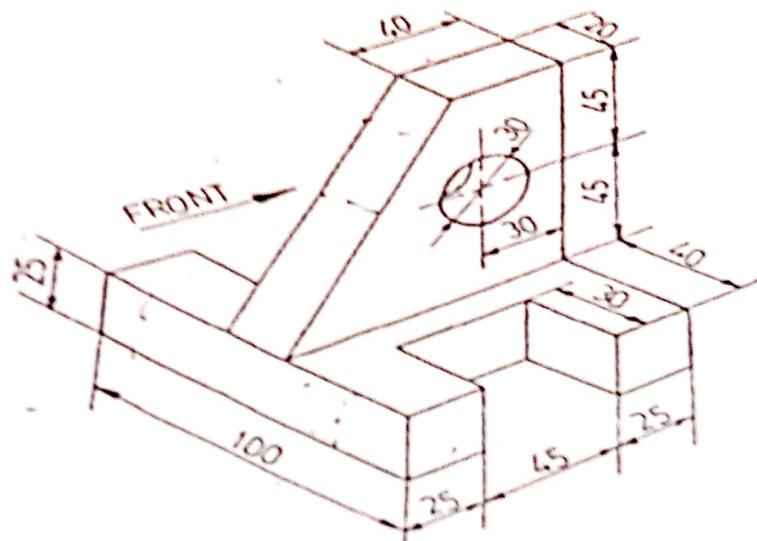
14  
duce the given view of the plane and determine the true shape of the



3. Draw the complete orthographic views of the given object.  
(Assume suitable data if necessary) 30

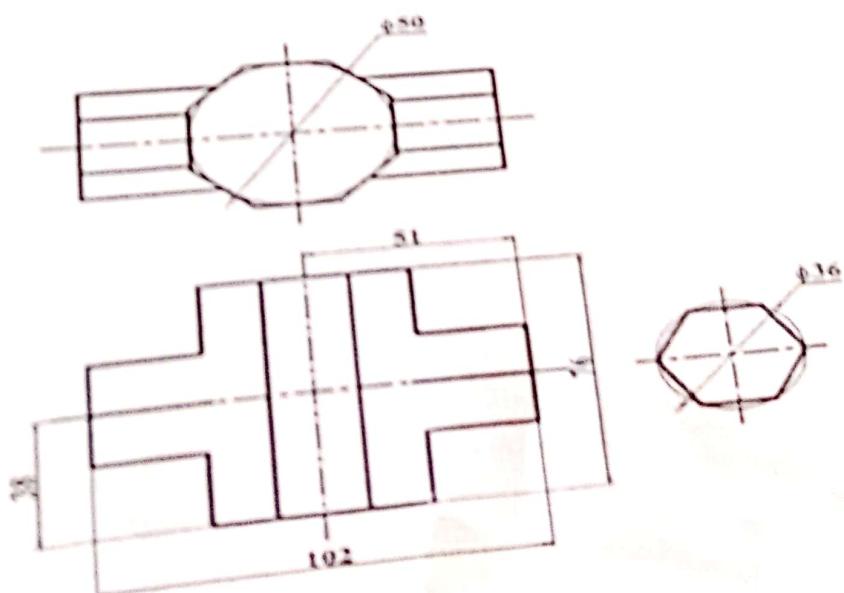
14

14

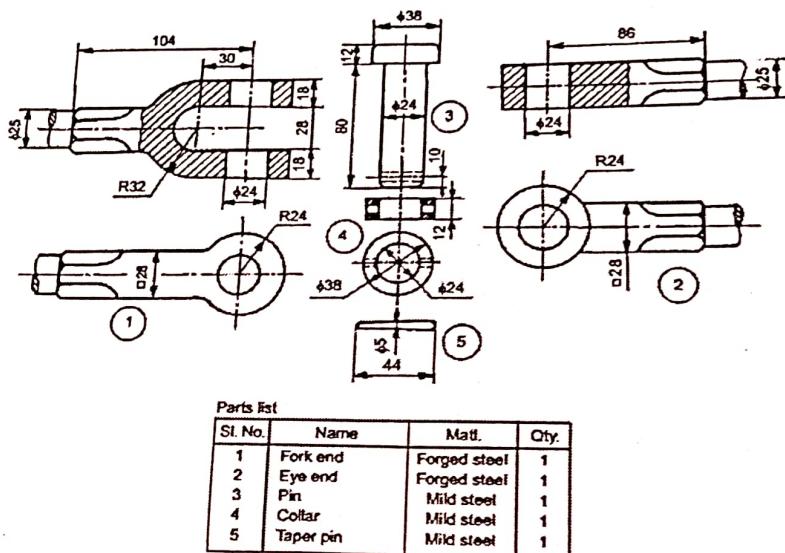


18

4. Draw the given views of the figure below with the curves of intersection. 18



5. Assemble the parts of a knuckle joint shown in figure and draw the sectional view from the front.



**OR**

Assemble the given parts of Universal Coupling and draw full sectional front view.

