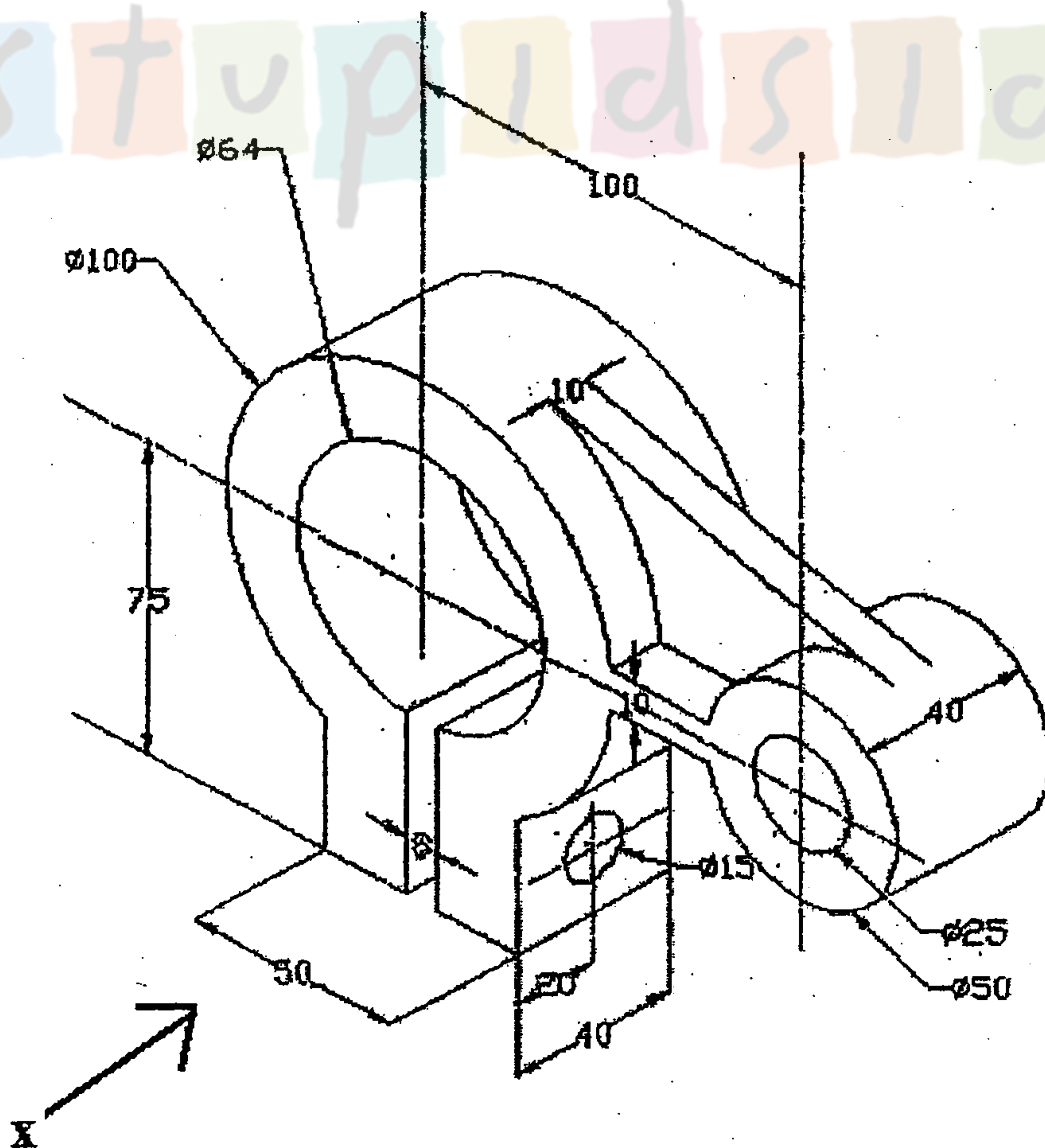


N. B. : (1) Question No. 1 is **compulsory**. Answer any **three** from the remaining **five** questions.

- (2) All dimensions are in **mm**.
- (3) Assume **suitable** data, wherever **required**.
- (4) Use **pencil** only to draw **diagrams**.
- (5) Use only **first angle** of **projection**.
- (6) Retain **all** construction lines.

1. (a) A line AB 100 mm long is tangent at the top of a circular disc of 70 mm. diameter. 6
The point A is at the top of the circumference. The line AB rolls around the circumference of the circular disc in a clockwise direction. Draw the locus of the end 'A', till the end B touches the circle. Name the curve.
- (b) Pictorial view of a block is shown in **figure**. 9
Draw its : (i) F. V. along 'X' and
(ii) RHSV



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2. For the given pictorial view, draw :—

(a) Sectional F. V. (Section B-B)

(b) T. V.

(c) RHSV.

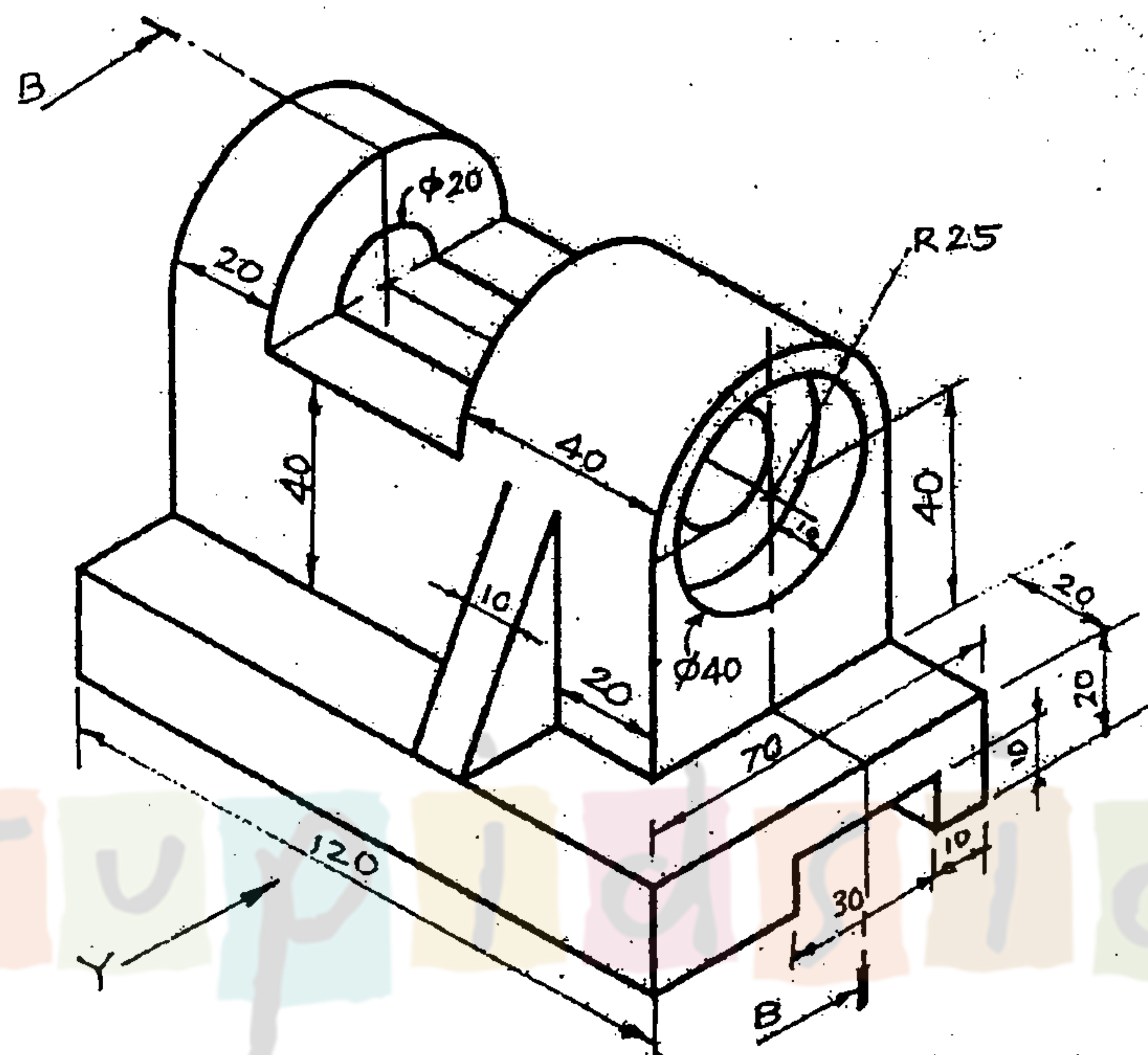
Insert at least 10 major dimensions.

6

4

4

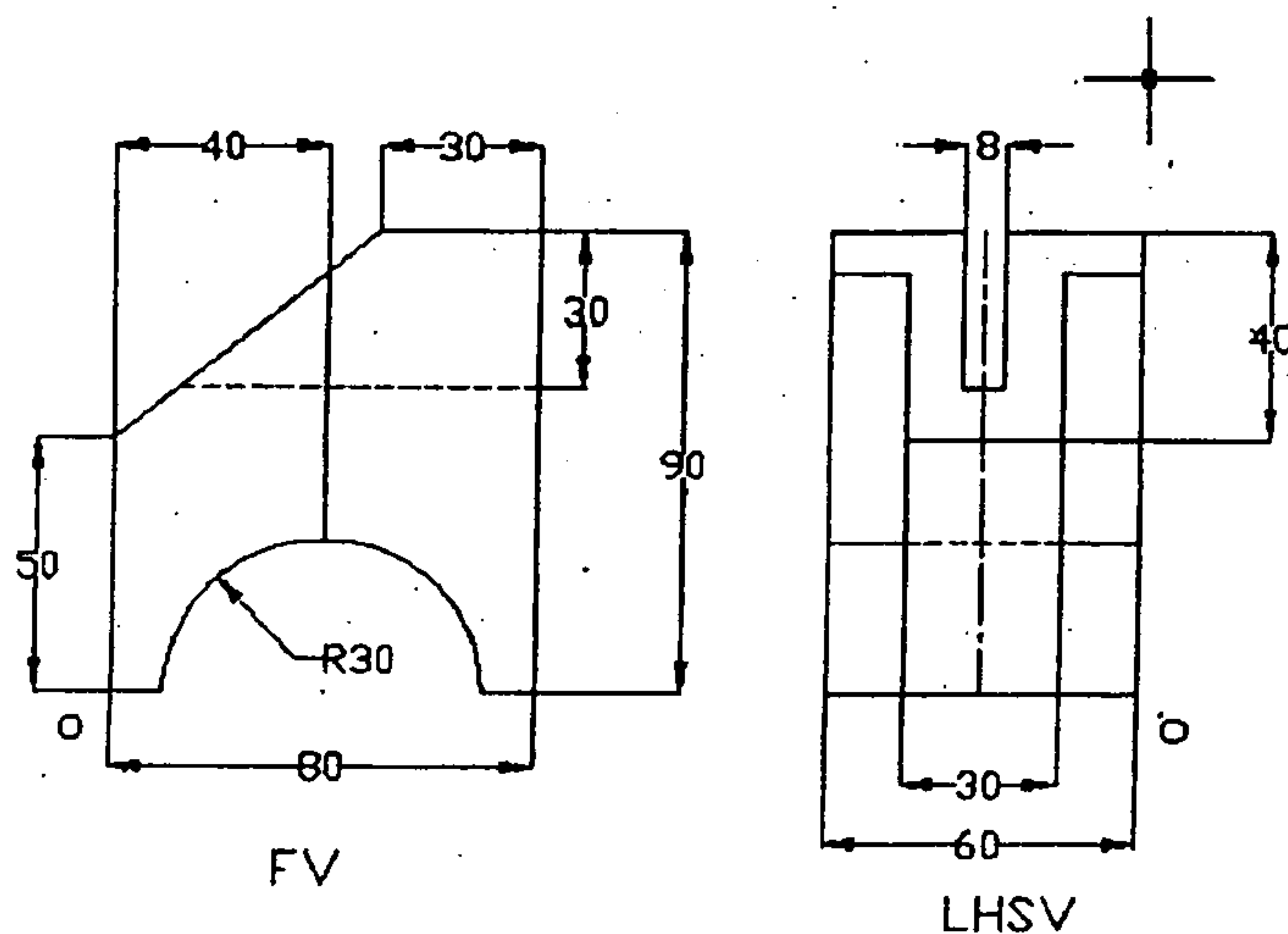
1



3. A pentagonal pyramid, 40 mm edge of the base and axis height 70 mm is resting on one of its corner of base in VP. The edge opposite to the corner is parallel to and 45 mm in front of VP and parallel to HP. Draw the projections when apex is nearer to observer. 15

4. (a) A hexagonal prism with edge of base 30 mm and height 70 mm has its edge of base in the VP and the base surface is inclined at 30° to VP and \perp to HP. Draw its projections. 6

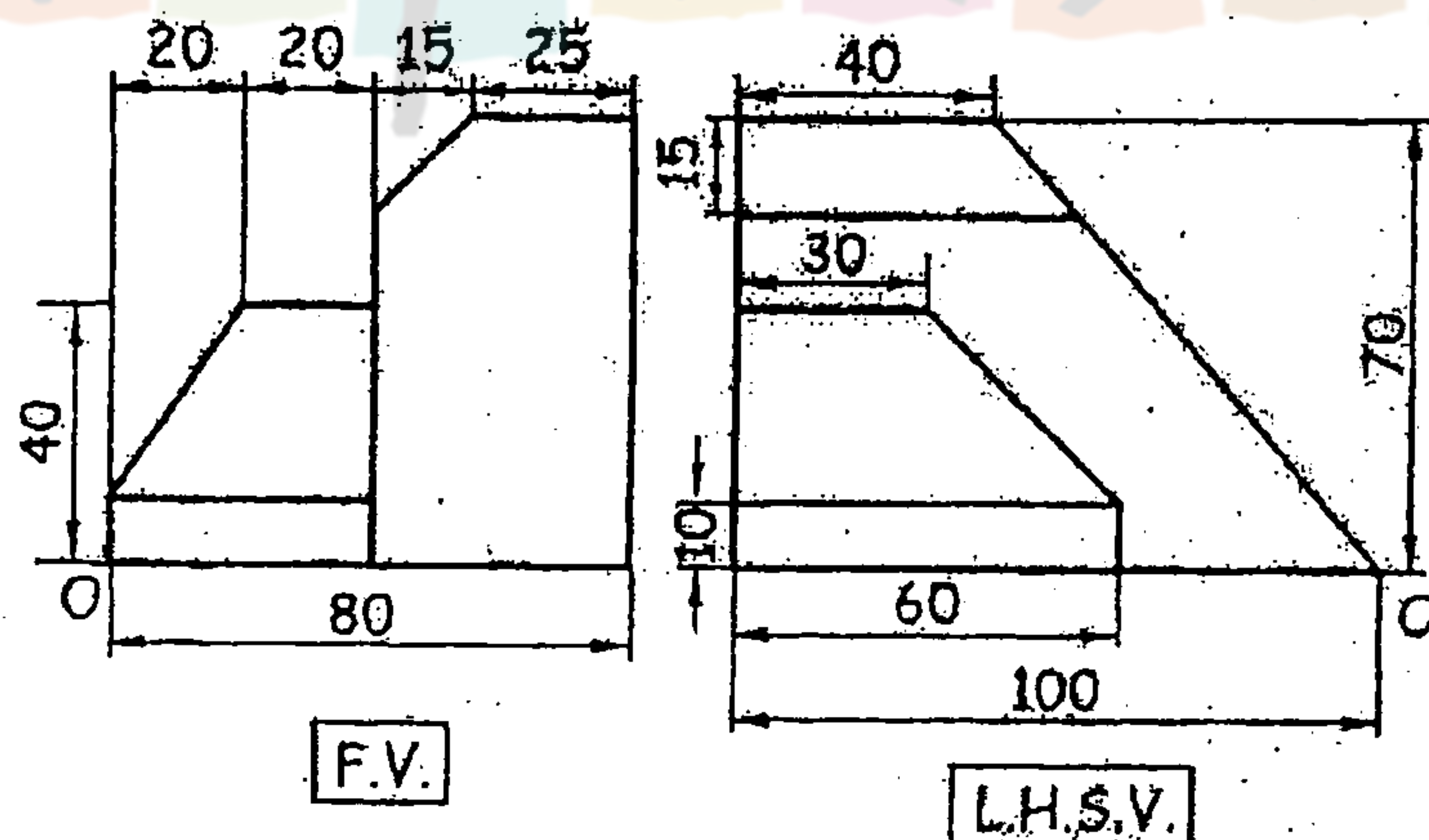
(b) Figure shows F. V. and T. V. of an object. Draw isometric view of the object, using natural scale. 9



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5. A hexagonal pyramid base 25 mm side, axis 55 mm long has its base on HP, with an edge of base parallel to VP. A section plane perpendicular to VP and inclined at 60 degrees to HP bisects the axis of the pyramid. Draw FV, sectional TV, true shape of the section and Development of Lateral Surface of pyramid removing apex. 15
6. (a) Line AB 70 mm long is inclined 30° to HP and 60° to VP. Its end A is 10 mm above HP and 20 mm in front of VP, while its end B is in 3rd Quadrant. Draw projections of line AB. 9
- (b) Draw the isometric view using given F. V. and LHSV. 6



F. E. Sem II (Rev)
ED (CGS).
6/ May '2013.

ws-Con-2013-58

Con. 6946-13.

(REVISED COURSE)

(3 Hours)

GS-5568

[Total Marks : 60]

N.B.: 1. Question NO 1 compulsory. Attempt any three out of remaining question.

2. All dimensions are in mm.

3. Assume suitable dimensions if necessary.

Q.1 (a) A circular plate of diameter 60 mm rolls without slipping along a straight line inclined at 30° to horizontal. Draw locus of point of its contact with the line if it completes one rotation. Name the curve. [06]

(b) Draw i) Front view. [04]

ii) Top View. [04]

iii) Insert all major dimensions. [01]

Refer Fig. No. 1 (Page 3)

Q.2 Draw i) Front view. [04]

ii) Sectional Top View. [05]

iii) R.H.S. View [04]

iv) Insert all major dimensions. [02]

Refer Fig. No. 2 (page 3)

Q.3 A pentagonal pyramid side of base 30 mm and axis 60 mm long stands on an edge of base on H.P. The edge makes an angle of 45° with the V.P. Draw its projections if the apex is 40 mm above H.P. and nearer to the observer. [15]

[TURN OVER

Q. 4 (a) A cylindrical block of base diameter 80 mm and height 50 mm is resting on one of the base point on H.P. with axis inclined at 60° to H.P. Draw its projections. [06]

(b) Draw isometric projection using natural scale. Refer Fig. No. 3 [09]

Q. 5 A right circular vertical cone, base diameter 50 mm and axis 60 mm long is cut by an AIP and bisecting the axis. Draw Front View, Sectional Top View and True Shape of the Section if True Shape of the Section is an ellipse with major axis is 40 mm. What is the inclination of the cutting plane with H.P.? Also draw Development of Lateral Surface of remaining portion of the solid. [15]

Q. 6 (a) Top view and front view of a line AB, 70 mm long measures 55mm and 60 mm respectively. Draw its projections if end A is 15 mm above H.P. and 20 mm in front of V.P. Determine its inclinations with H.P. and V.P. [09]

(b) Draw isometric projection using natural scale [06]

Refer Fig. No.4

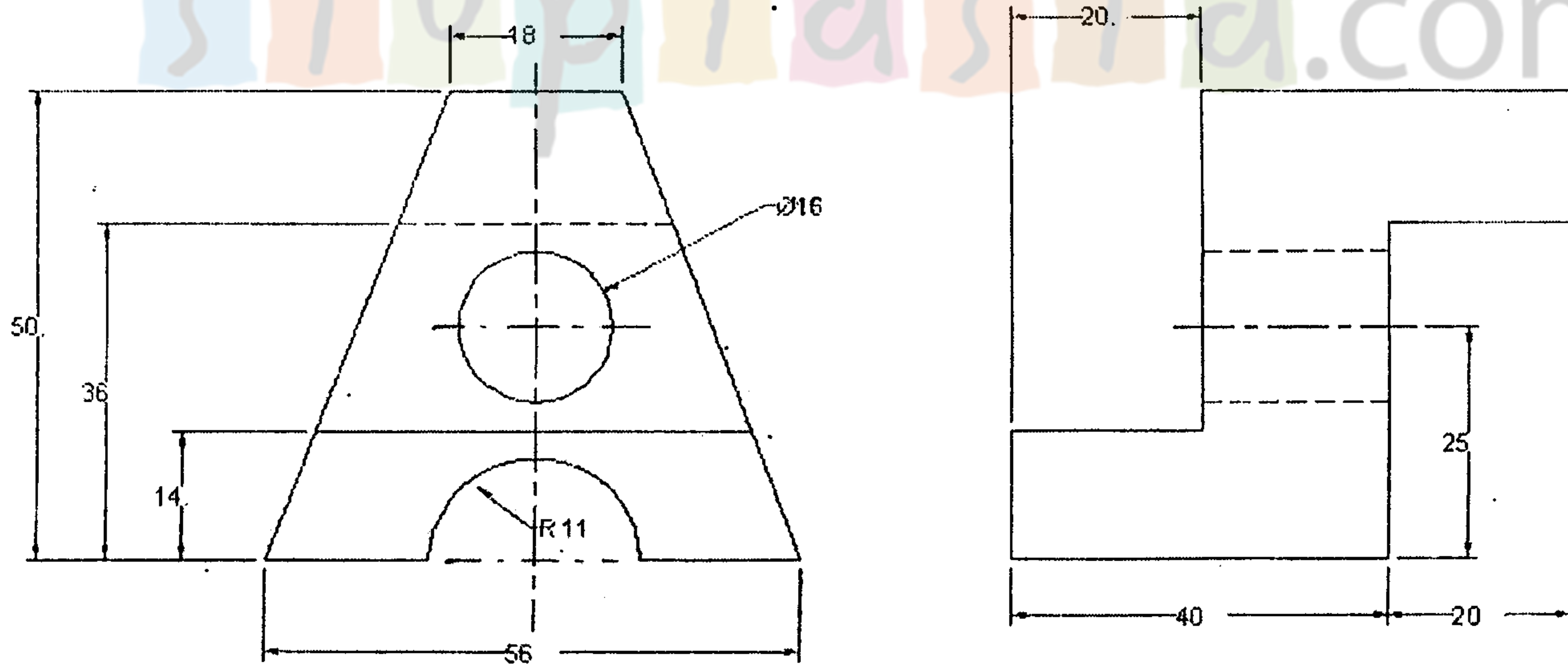


Figure 3(Q4, b)

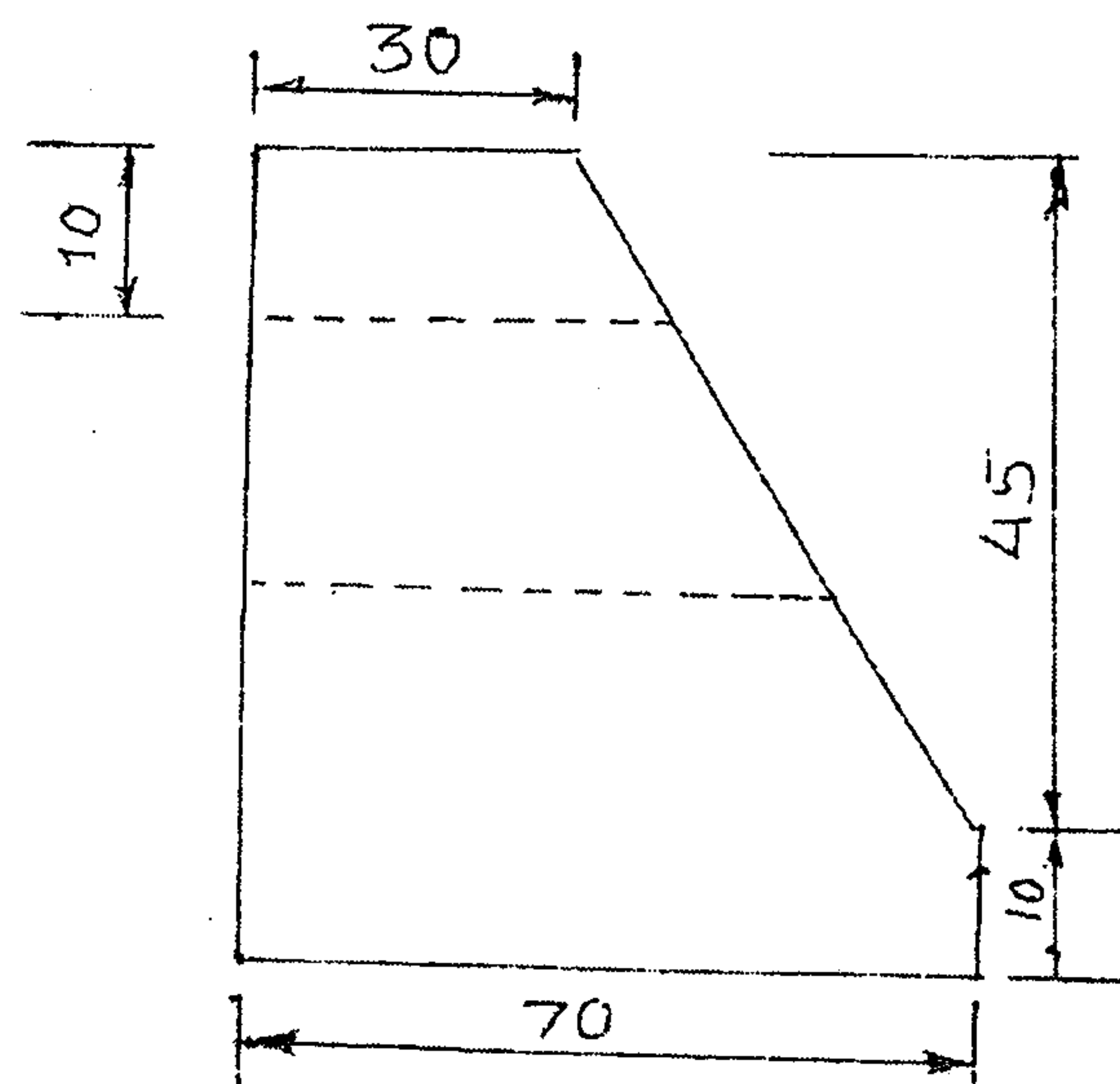
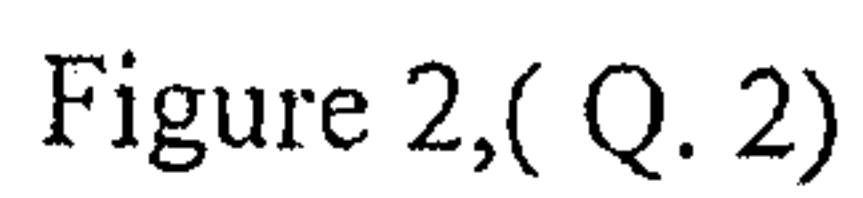
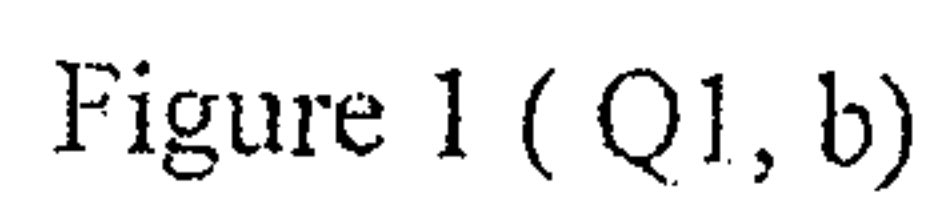


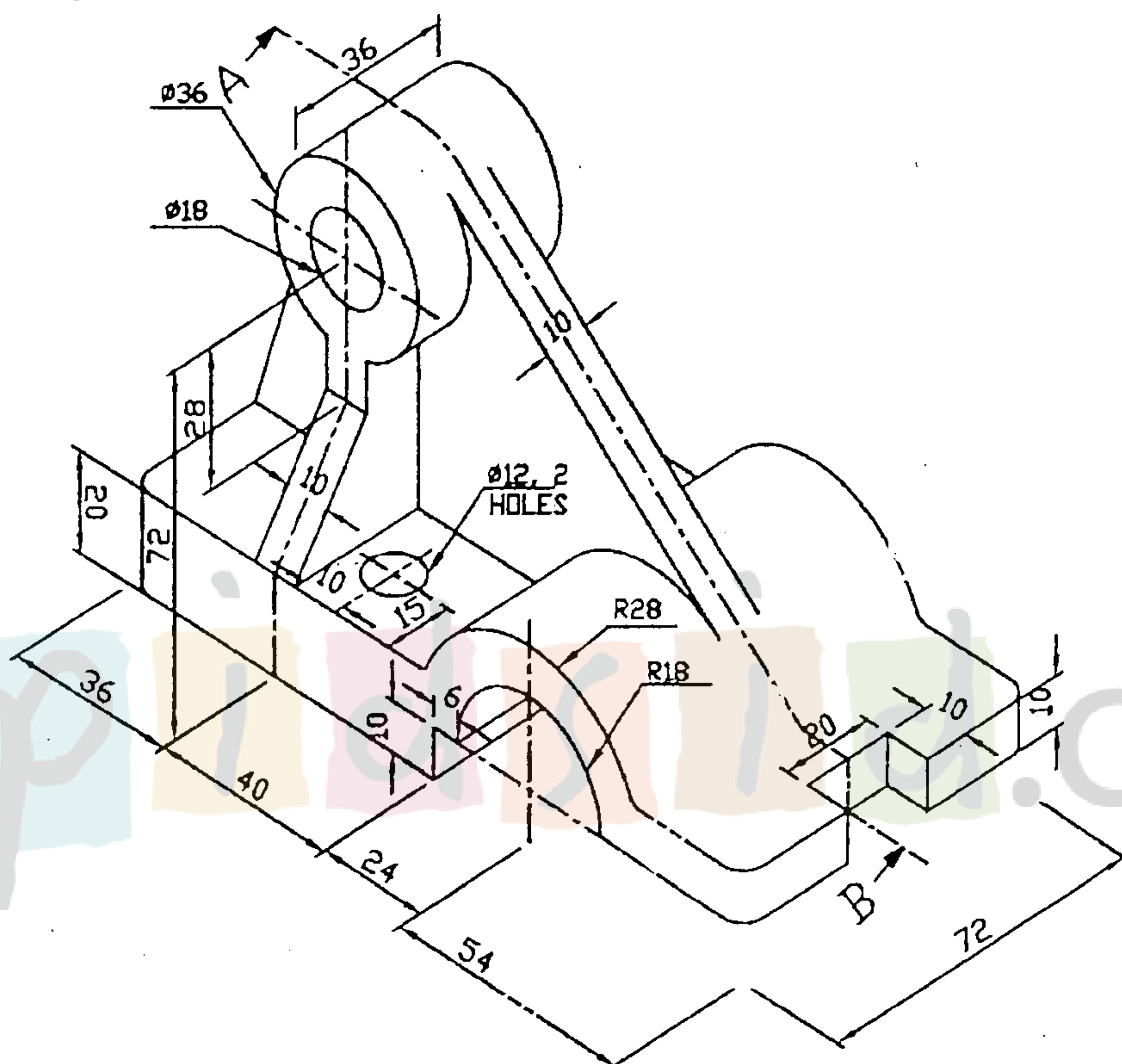
Figure No. 4, (Q6, b)

Time : Three Hours

- i) Sectional front view(section AB)
- ii) Top view
- iii) Right hand side view

Insert 10 major dimensions

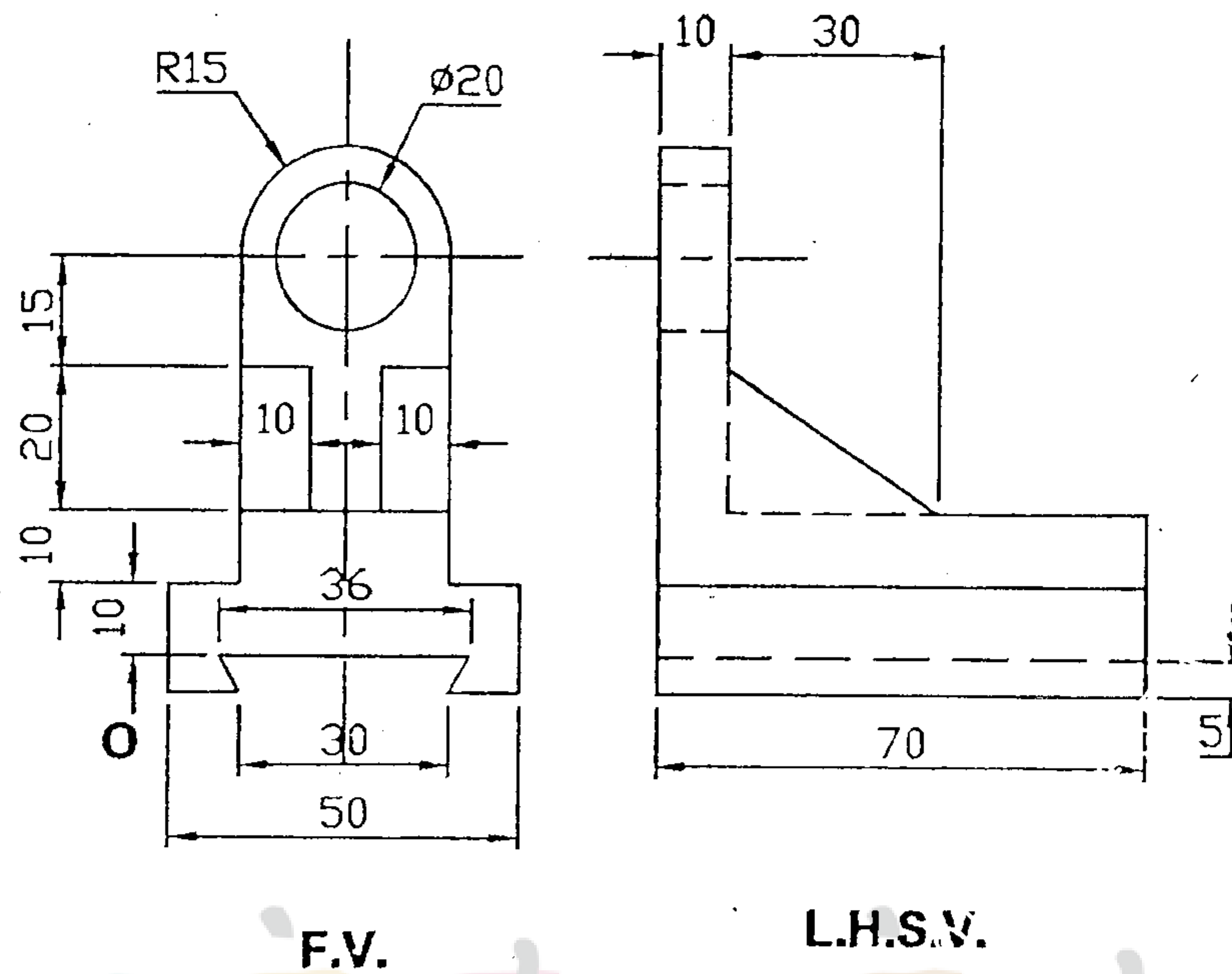
[5]
[4]
[4]
[2]



Q4 A hexagonal pyramid of side of base 40mm and axis length of 70mm is resting on its base on HP with two base edges perpendicular to VP. It is cut by an auxiliary inclined plane 60° to HP and passing through a point on the axis 40mm above the base. Draw the front view, sectional top view and the true shape of the section. Also draw the development of the lateral surface of the cut pyramid after removing the portion containing the apex. [15]

Q5 a) A pentagonal prism of 40mm edge of base and 70 mm length of axis is [6]
having an edge of base in the HP and the rectangular face containing that
edge is inclined 30° to HP and perpendicular to VP. Draw the projections.

- b) The orthographic projections of an object is given in the figure below. Draw the isometric view. [9]



- Q6 a) The top view and the front view of a line AB are 70mm and 80 mm respectively. Its end A is 15mm above HP and 20mm in front of VP. The end B is in third quadrant. Draw the projections if the line is 100mm long. Also find its inclination with the principal planes. [8]
- b) Draw the isometric view of the given views [7]

