

Subject Code: R13109/R13

Set No - 1

I B. Tech I Semester Regular Examinations Feb./Mar. - 2014

ENGINEERING DRAWING

(Electrical and Electronics Engineering (EEE))

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
 Answering the question in **Part-A** is Compulsory,
 Three Questions should be answered from **Part-B**

PART-A

1.(a) Draw the isometric view of Fig.1. (All dimensions are in mm)

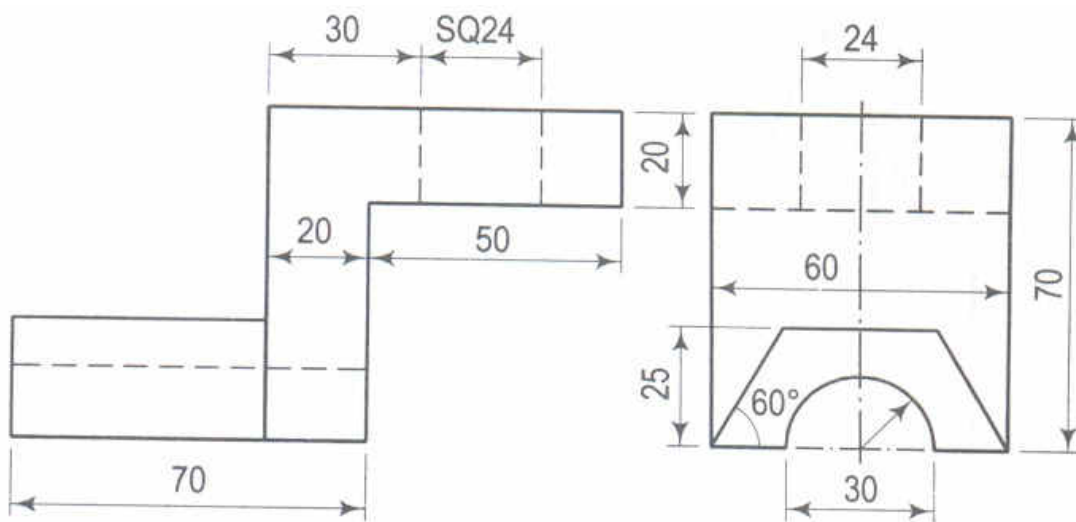


Fig.1

(b) A cone of base 40 mm diameter and 55 mm height rests on its circular rim such that one of its generators is perpendicular to HP and axis parallel to VP. Draw its three views.

[11+11]

PART-B

2.(a) Inscribe an ellipse in a parallelogram having sides 150 mm and 100 mm long and a shortest side is 120° w.r.t horizontal.

(b) Draw an octagon given the length of side 25 mm, using general method?

[8+8]

3.(a) A point 30 mm above 'xy' line is the plane view of two points P and Q. The elevation of P is 45 mm above the HP while that of the point Q is 35 mm below the HP. Draw the projections of the points and state their position with reference to the principal planes and the quadrant in which they lie.

(b) The length of the top view of a line parallel to the VP and inclined at 45° to the HP is 50mm. One end of the line is 12mm above the HP and 25mm in front of the VP. Draw the projections of the line and determine its true length.

[8+8]



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4. A line AB is 75mm long. A is 50mm in front of VP and 15mm above HP. B is 15mm in front of VP and is above HP. Top views of AB is 50mm long. Find the front view length and true inclinations. [16]
5. A regular hexagonal lamina of 25mm side has a central hole of 30mm diameter. Draw the front and top views when the surface of the lamina is inclined at 45° to HP. A side of lamina is inclined at 35° to VP. [16]
6. A hexagonal prism, side of base 25 mm and axis 60 mm long, lies with one of its rectangular faces on HP, such that the axis is inclined at 45° to VP. Draw its top, front and profile views. [16]
7. Draw (i) Front view (ii) Both side views (iii) Top view of Fig.2. (All dimensions are in mm) [16]

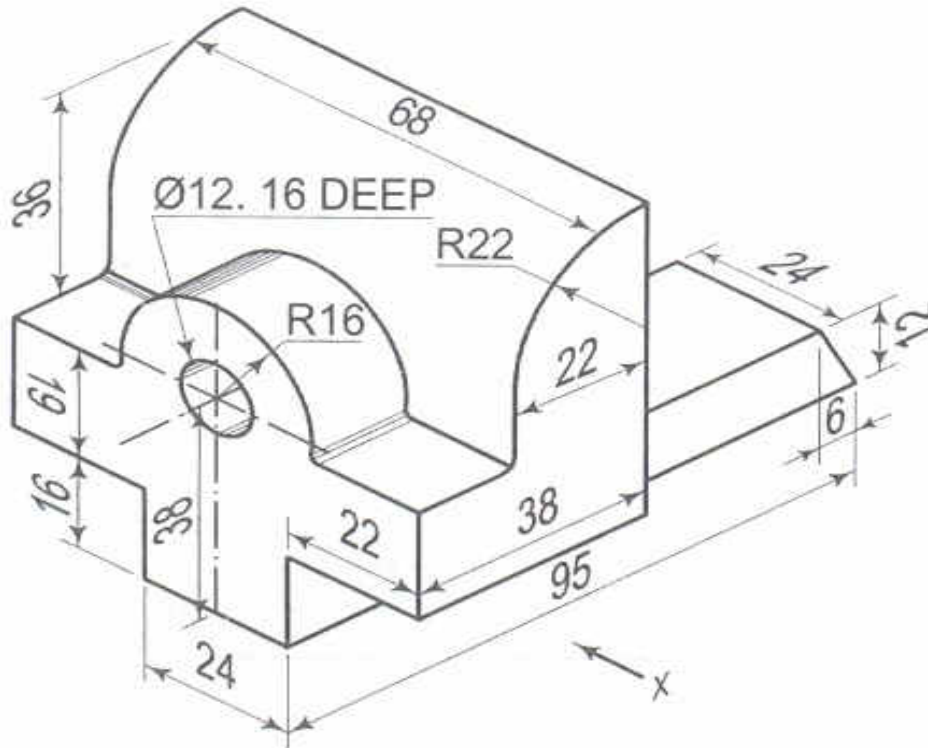


Fig.2



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Set No - 2

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PART-A

- 1.(a) Draw (i) Front view (ii) Side view from the right (iii) Top view of Fig.1. (All dimensions are in mm)

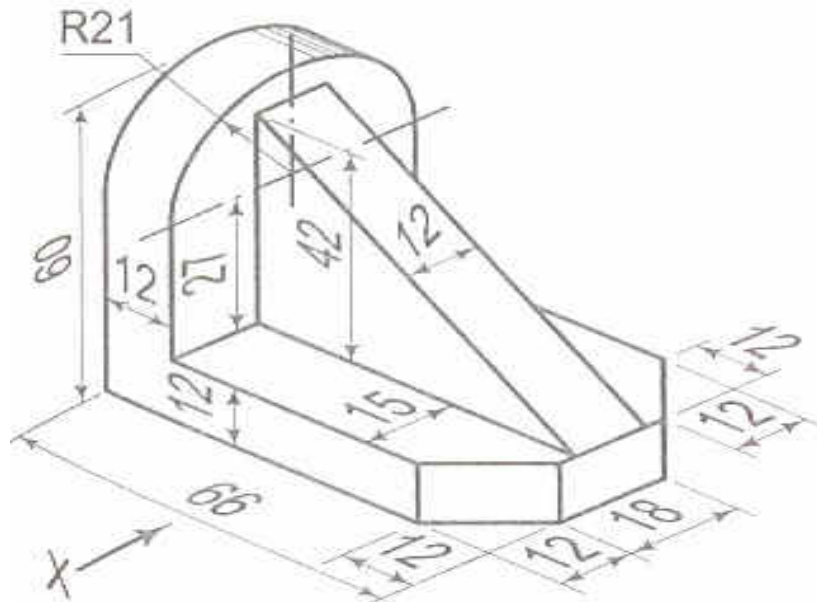


Fig.1.

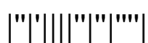
- (b) A cube of 40 mm side is resting on one of its edge on the H.P. with its vertical faces equally inclined to VP. Draw the top, front and right side views.

[11+11]

PART-B

- 2.(a) On a map the distance between two points is 14 cm. The real distance between them is 20 km. Draw a diagonal scale for this map to read kilometers and hectameters, and to measure up to 25 km. show a distance of 17.6 km on this scale.
- (b) A boy throws a cricket ball from the top of a building 4m high. The ball crosses the top of a palm tree 9m high and falls on the ground. Distance between the building and the tree is 3m. Plot the path of the projectile.

[8+8]



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Set No - 2

- 3.(a) A point P is 20 mm below HP and lies in the third quadrant. Its shortest distance from xy is 40 mm. Draw its projections. [8+8]
- (b) The top view of a 75mm long line measures 55 mm. The line is in the VP, its one end being 25 mm above the HP. Draw its projections. [16]
4. A line AB 100 mm long has its front view inclined at an angle of 45° to the reference line separating the views. The end A is in the VP and 25 mm above HP. The length of the front view is 60 mm. Draw the top view of the line and find the true inclinations of the line with HP and VP. [16]
5. Draw a rhombus of diagonals 100 mm and 60 mm long, with the longer diagonal horizontal. The figure is the top view of a square of 100 mm long diagonals, with a corner on the ground. Draw its front view and determine the angle which its surface makes with the ground. [16]
6. Draw the three views of a square pyramid of 30 mm side of base and axis 55 mm. It is resting on HP on one of its base corners with a base side containing the corner making 30° with HP. The axis is inclined at 30° to VP and is parallel to HP. The vertex is away from VP. [16]
7. Draw the isometric view of Fig.2. (All dimensions are in mm) [16]

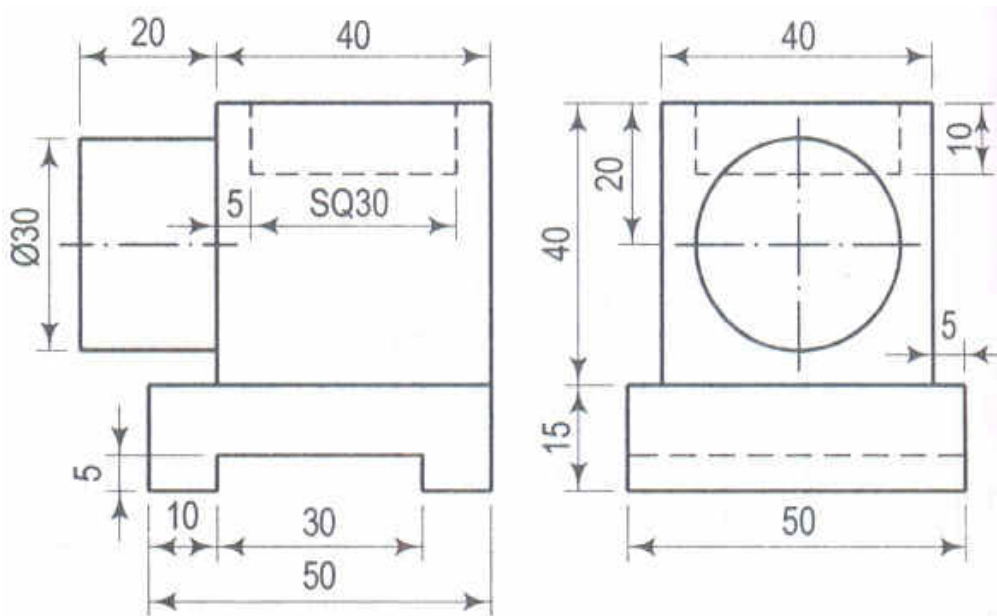


Fig.2



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Set No - 3

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PART-A

1.(a) Draw the isometric view of Fig.1: (All dimensions are in mm)

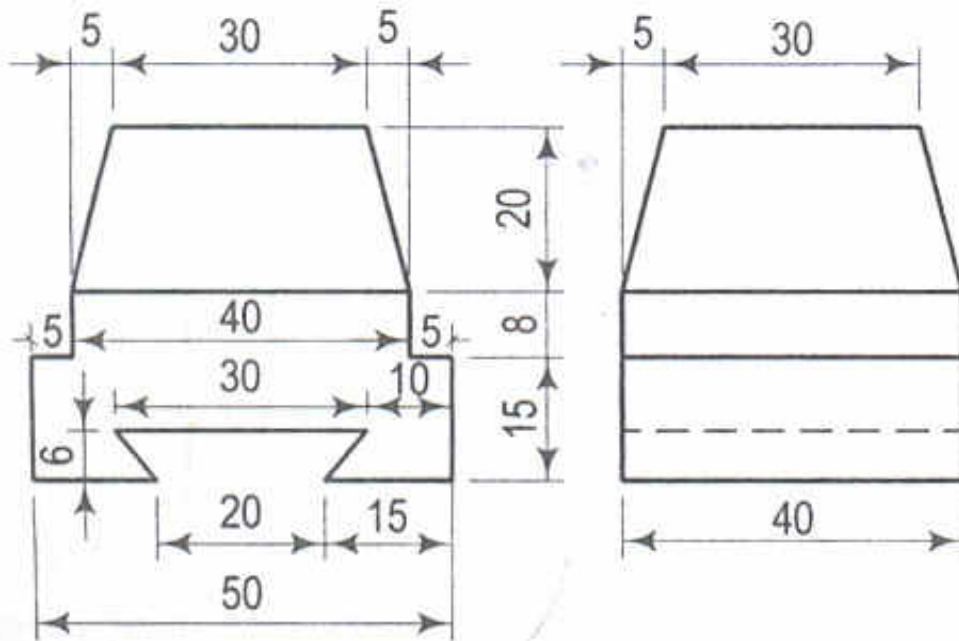


Fig.1

(b) The top view of a line CD has a length of 80 mm and makes 30° with the horizontal. The end C is in the VP and 52 mm above the HP. The end D is in the HP. Draw the projections of the line. Find true length and true inclinations with the HP and the VP. Mark its traces on the two planes.

[11+11]

PART-B

2.(a) A car is running at a speed of 50 km/hour. Construct a diagonal scale to show 1 km by 3 cm and to measure upto 6 km. Mark also on the scale the distance covered by the car in 5 min 28 seconds.

(b) Construct a pentagon inscribed in a circle of diameter 80 mm?

[8+8]



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Set No - 3

- 3.(a) Two points A and B are in the HP. The point A is 30 mm in front of the VP while B is behind the VP. The distance between their projectors is 75 mm and the line joining their top views makes an angle of 45° with xy. Find the distance of the point B from the VP.
- (b) A 100 mm long line is parallel to and 40mm above the HP. Its two ends are 25 mm and 50 mm in front of the VP respectively. Draw the projections and find its inclination with the VP. [8+8]
4. A line CD measuring 80mm is inclined at an angle of 30° to the HP and 45° to the VP. The point C is 20 mm above the HP and 30 mm in front of the VP. Draw the projections of the straight line. [16]
5. A hexagonal plate of negligible thickness is of 25 mm side, lying in such a way that one of its corners touches the both the reference planes the plane makes an angle of 60° with the HP and 30° with the VP. Draw the three views. [16]
6. A pentagonal prism, side of base 25 mm and axis 50 mm long rests with one of its edges on the HP such that the base containing that edge makes an angle of 30° to the HP and its axis is parallel to the VP. Draw its top, front and profile views. [16]
7. Draw (i) Front view (ii) Both side views (iii) Top view of Fig.2. (All dimensions are in mm) [16]

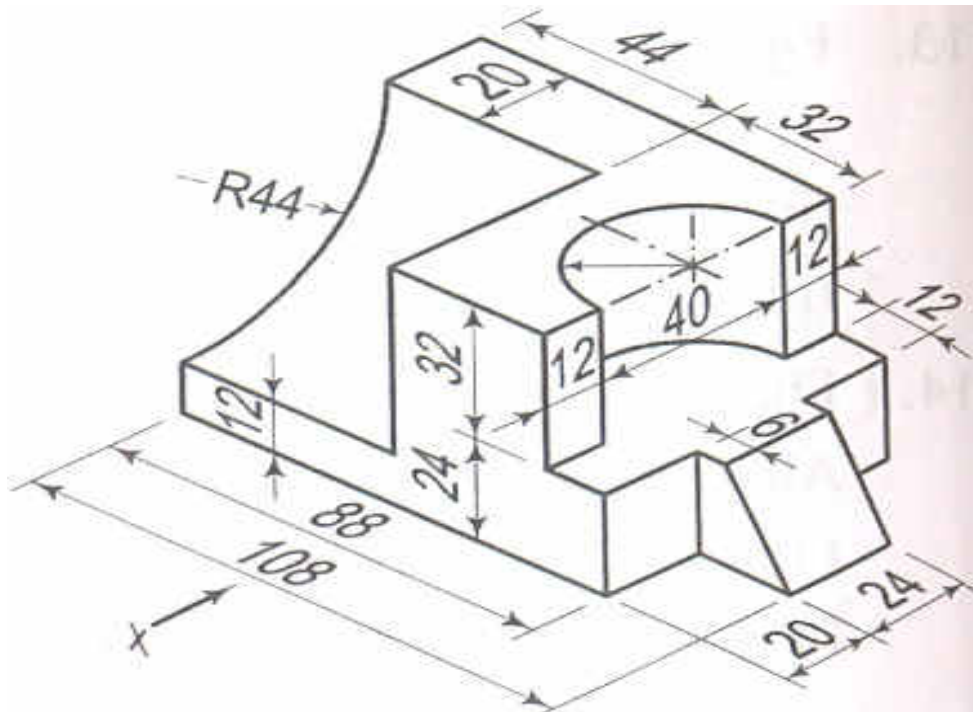
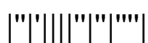


Fig.2



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Set No - 4

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Question Paper Consists of **Part-A** and **Part-B**
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 Three Questions should be answered from **Part-B**

PART-A

1.(a) Draw all the three views of Fig.1: (All dimensions are in mm)

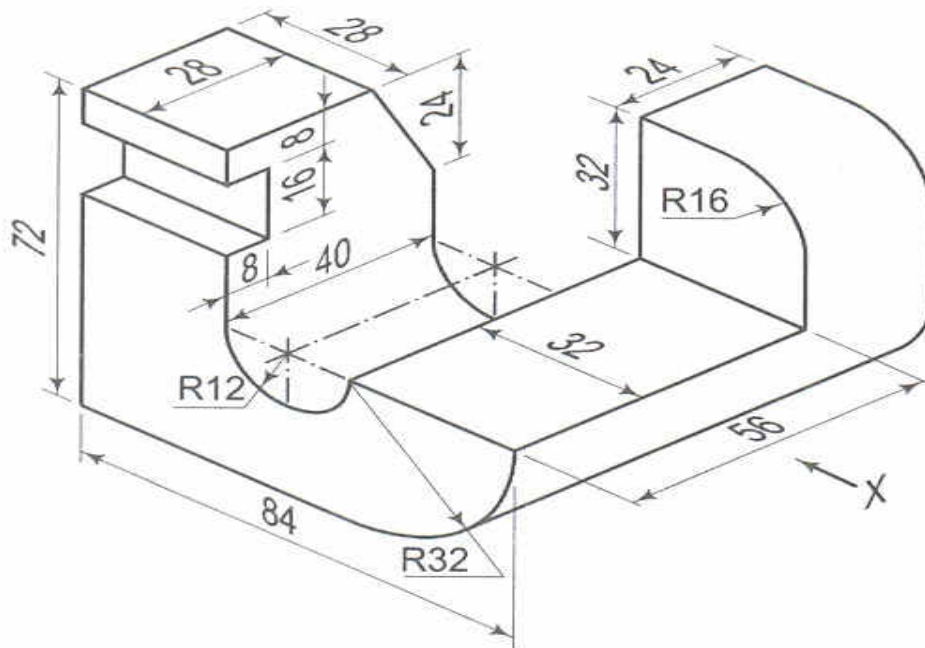


Fig.1

(b) A straight line AB 100 mm long is inclined at 45° to the HP and 30° to the VP. It's one end A is 25 mm above the HP and 40mm in front of the VP. Draw the projections of the straight line and it's traces. Measure the distance of the H.T and the V.T of the line from XY reference line?

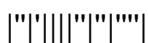
[11+11]

PART-B

2.(a) Draw a Vernier scale of R.F=5 to read $1/5$ cm and $1/25$ cm and to measure up to 5 cm. Mark on the scale distances of 2.12 cm.

(b) The major axis of an ellipse is 150 mm long and the minor axis is 100 mm long. Find the foci and draw the ellipse by "arcs of circles method". Draw a tangent to the ellipse at a point on it 25 mm above the major axis.

[8+8]



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Set No - 4

- 3.(a) A point P in the first quadrant. Its shortest distance from the intersection point of HP and VP and Auxiliary vertical plane, perpendicular to the HP and the VP is 70 mm and it is equidistant from principal planes. Draw the projections of the point and determine its distance from the HP and the VP.
- (b) The front view of a line, inclined at 30° to the VP is 65mm long. Draw the projections of the line, when it is parallel to and 40 mm above the HP, its one end being 30mm in front of the VP.
- [8+8]
4. A line PQ 75 mm long has its end P in both the HP and the VP. It is inclined at an angle of 30° to the HP and 45° to the VP. Draw the projections?
- [16]
5. A thin circular plate of 50 mm diameter lies on the HP such that its surfaces is inclined at 45° to the HP. The diameter through the point on which the plate lies on the HP appears to be inclined at 45° to the VP in the top view. Draw its projections.
- [16]
6. A cylinder of base diameter 40 mm and axis 55 mm long rests on the H.P on a point on the circumference of the base with its axis inclined at 45° to the H.P and parallel to the VP. Draw its projections.
- [16]
7. Draw the isometric view of Fig.2: (All dimensions are in mm)
- [16]

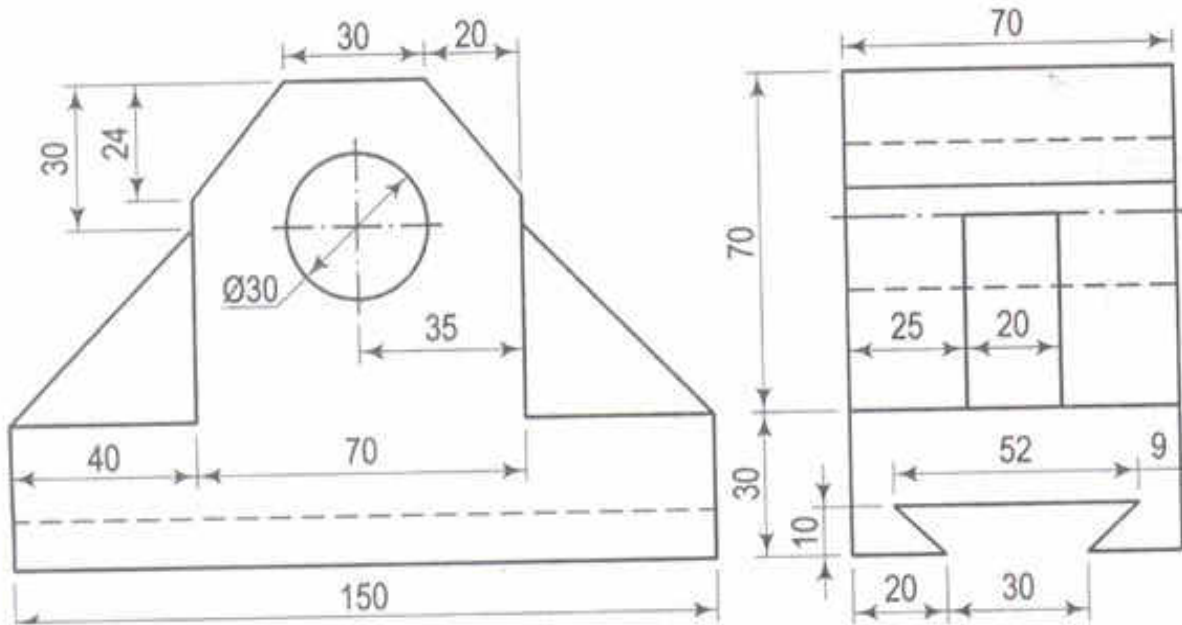


Fig.2

