**Subject Code: R13209/R13** **Set No - 1**

**I B.Tech II Semester Supplementary Examinations Dec./Jan. – 2015/2016**

# ENGINEERING DRAWING

**(Common to CE & ME)**

**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**

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## PART-A

1. (a) A regular pentagonal lamina of 30mm sides has one edge in HP and inclined at an angle of $30^0$ to VP. Draw its projections when its surface is inclined at $45^0$ to HP.
   (b) Draw the isometric view of Fig.1

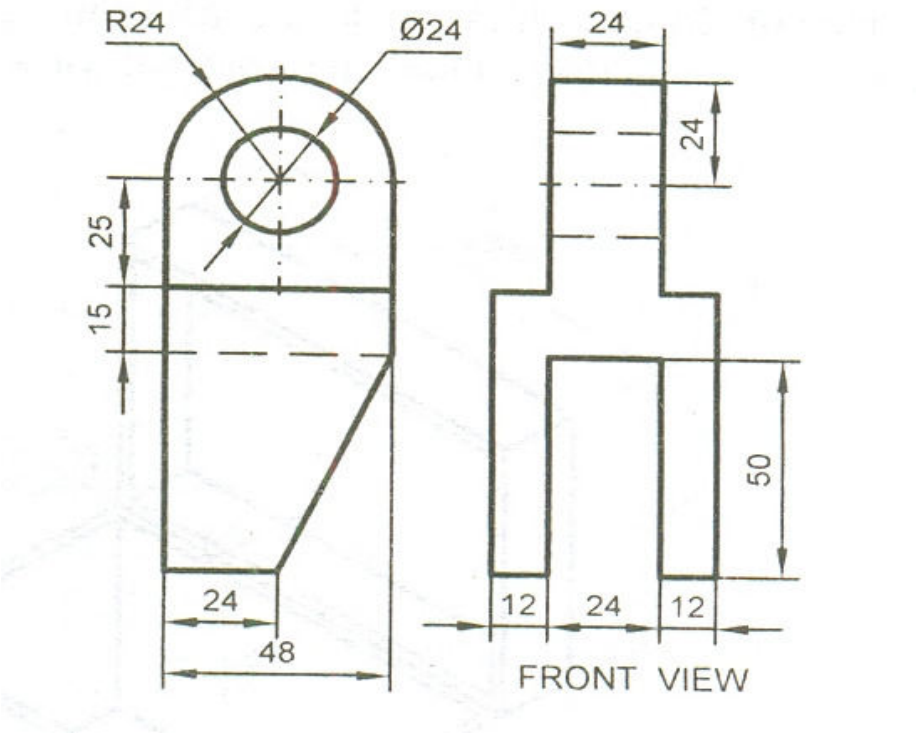


Fig.1

[10+12]

## PART-B

2. (a) Construct a diagonal scale of RF=1/32 showing yards, feet and inches and to measure up to 4 yards.
   (b) A plot of ground is in the shape of a rectangle 110m x 50m. Inscribe an elliptical lawn in it. Take a suitable scale.

[8+8]

3. (a) A 100mm long line is parallel to and 40mm above the HP. Its two ends are 25mm and 50mm in front of the VP respectively. Draw its projections and find its inclinations with the VP.



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3. (b) A point A is situated in the first quadrant. Its shortest distance from the intersection point of HP; VP and auxiliary plane is 60mm and it is equidistant from the principal planes. Draw the projections of the point and determine its distance from the principal planes.

[8+8]

4. The projectors drawn from the HT and the VT of a straight line AB are 80mm apart while those drawn from its ends are 50mm apart. The HT is 35mm in front of the VP; the VT is 55mm above the HP and the end A is 10mm above the HP. Draw the projections of AB and determine its length and inclinations with the reference planes.

[16]

5. A plane figure composed of an equilateral triangle ABC and a semicircle AC as diameter. The length of the side AB is 50mm and is parallel to the VP. The corner B is 20mm behind the VP and 15mm below the HP. The plane of the figure is inclined at $45^0$ to the HP. Draw the projections of the plane figure.

[16]

6. (a) Draw the projections of a cylinder 75mm diameter and 100mm long, lying on the ground with its axis inclined at $30^0$ to the VP and parallel to the ground.

(b) A square pyramid base 40mm side and axis 65mm long, has its base in the VP One edge of the base is inclined at $30^0$ to the HP and a corner contained by that edge is on the HP. Draw its projections.

[10+6]

7. Draw Fig.2 (i) Front view (ii) Top view (iii) Right side view

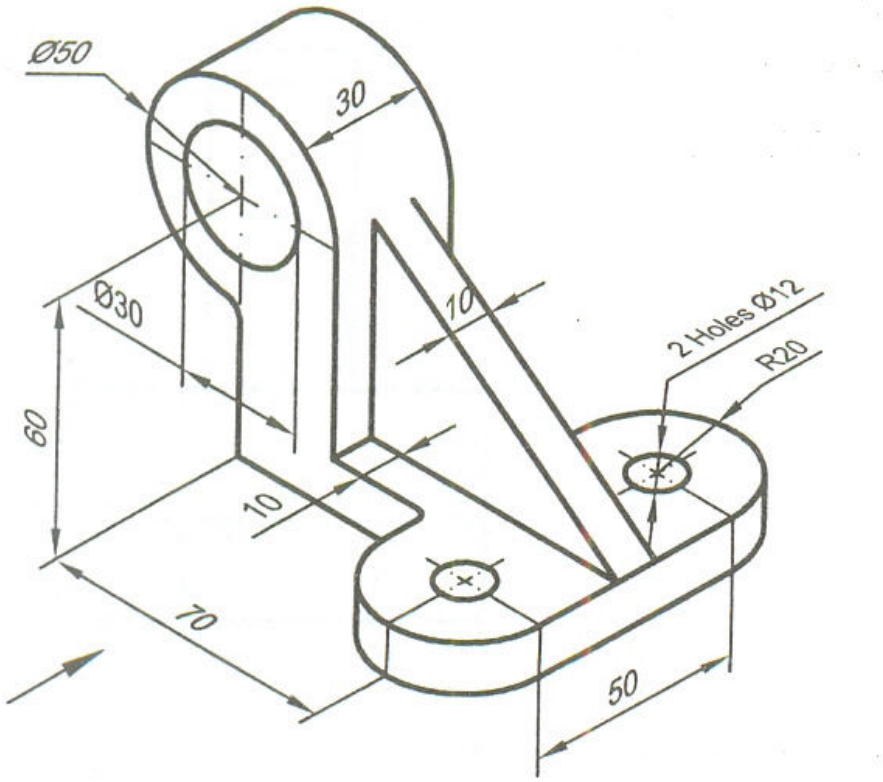


Fig.2

[16]

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# ENGINEERING DRAWING

**(Common to CSE, PCE, IT, Chem E, Aero E, Auto E, Min E, Pet E, & Metal E)**

**Time: 3 hours** **Max. Marks: 70**

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Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

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## PART-A

1. (a) A thin rectangular plate of sides 60mm x 30mm has its shorter side in VP and inclined at $30^0$ to HP. Project its top view, if its front view is a square of 30mm long sides.
   (b) Draw Fig.1 (i) Front view (ii) Top view (iii) Right side view

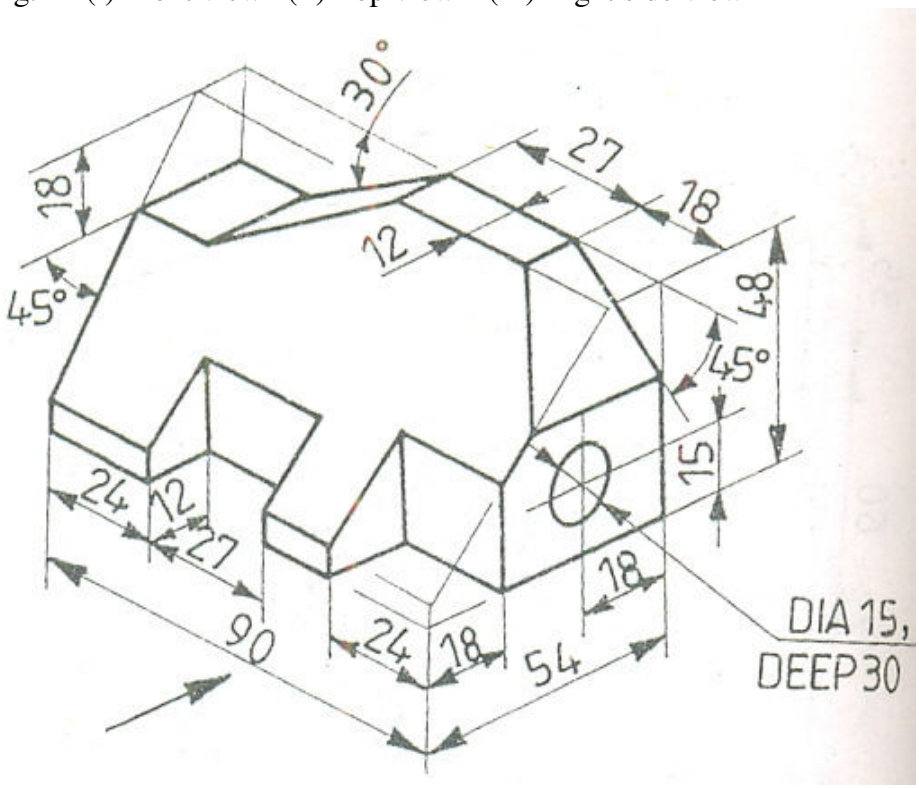


Fig.1

[10+12]

## PART-B

2. (a) Draw a scale of full size, showing 1/100 inch and measure up to 5 inches.
   (b) Construct a regular pentagon of side 30mm.

[10+6]

3. (a) A point P is 20mm below HP and lies in the third quadrant. Its shortest distance from xy is 40mm. Draw its projections.

3. (b) The top view of a 75mm long line measures 55mm. The line is in the VP; its one end being 25mm above the HP. Draw its projections.

[8+8]

4. (a) The front view of a line AB measures 70mm and makes an angle of $45^0$ with xy. A is in the HP and the VT of the line is 15mm below the HP. The line is inclined at $30^0$ to the VP. Draw the projections of AB, and find its true length, inclination with the HP and its HT.

   (b) The projections on the XY line of the horizontal and vertical traces of a straight line AB in the first quadrant are 120mm apart. The VT is 100mm above XY and HT 50mm in front of XY. The points A and B are 30mm and 80mm above the HP respectively. Draw the projections.

[10+6]

5. (a) Draw the projections of a pentagonal sheet of 26mm side, having its surface inclined at $30^0$ to VP. Its one side is parallel to VP and inclined at $45^0$ to HP.

   (b) An equilateral triangle of 5cm side has its VT parallel to and 2.5cm above xy. It has no HT. draw its projections when one of its sides is inclined at $45^0$ to the VP.

[10+6]

6. Draw the projections of a cone, base 75mm diameter and axis 100mm long, lying on the ground on one of its generators with the axis parallel to the VP.

[16]

7. Draw the isometric view of Fig.2

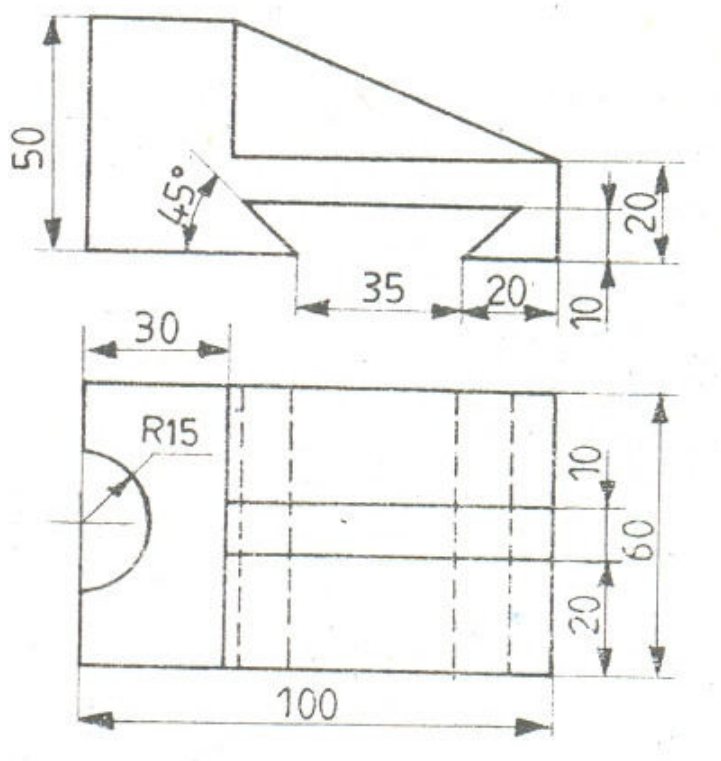


Fig.2

[16]