Code No: R07A11291 **Set No. 1**

**I B.Tech Supplimentary Examinations, Aug/Sep 2008**
**ENGINEERING DRAWING**
**( Common to Bio-Medical Engineering, Information Technology, Electronics & Telematics and Instrumentation & Control Engineering)**
**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. A fixed point F is 7.5cm from a fixed straight line. Draw the locus of a point P moving in such a way that its distance from the fixed straight line is 2/3 times its distance from F. Plot at least 9 points. Name the curves. Also draw a normal and a tangent to the curve at a point on it 6cm from F. [16]

2. Construct a hypocycloid, rolling circle 50mm diameter and directing circle 175mm diameter. Draw a tangent to it at a point 50mm from the center of the directing circle. [16]

3. Draw the projections of the following points on the same ground line, keeping the Projectors 20mm apart.
   (a) Point C, in the V.P. and 40mm above the H.P.
   (b) Point D, 25mm below the H.P. and 25mm behind the V.P.
   (c) Point E,15mm above the H.P. and 50mm behind the V.P.
   (d) Point F, 40mm below the H.P. and 25mm infront of the V.P. [4×4]

4. (a) A line GH 45mm long is in H.P. and inclined to V.P. The end G is 15mm in front of V.P. the length of the front view is 35mm. Draw the projections of the line. Determine its inclination with V.P.
   (b) A line AB is 30mm long and inclined at $30^0$ to H.P. and parallel to V.P. The end A of the line is 15mm above H.P. and 20mm in front of V.P. Draw the projections of the line. [8+8]

5. Draw the projections of a circle of 60 mm diameter, resting on V.P. on a point on the circumference. The plane is inclined at $45^0$ to V.P. and perpendicular to H.P. The centre of the plane is 40mm above H.P. [16]

6. A pentagonal pyramid, base 25mm side and axis 50mm long has one of its triangular faces in the V.P. and the edge of the base contained by that face makes an angle of $30^0$ with the H.P. Draw its projections. [16]

7. Draw the isometric view of a cone, base 40mm diameter and axis 55mm long
   (a) when its axis is vertical and
   (b) when its axis is horizontal. [16]

8. Draw the front view, top view and left side views of the Gib-Head key. Shown in figure 8. All dimensions are in mm. [16]

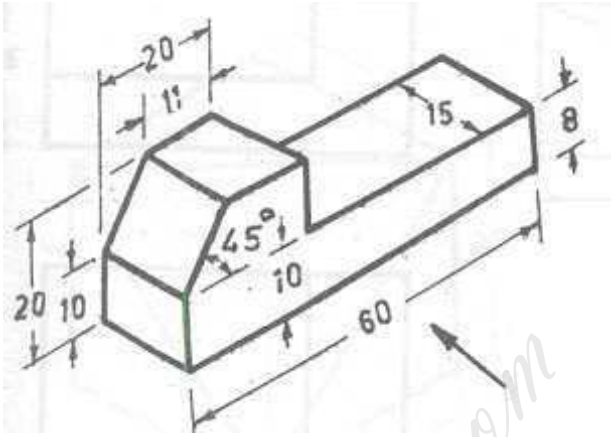


Figure 8

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Code No: R07A11291 **Set No. 2**

**I B.Tech Supplimentary Examinations, Aug/Sep 2008**
**ENGINEERING DRAWING**
**( Common to Bio-Medical Engineering, Information Technology, Electronics & Telematics and Instrumentation & Control Engineering)**
**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. Construct a parabola when the distance between focus and the directrix is 40mm. Draw tangent and normal at any point P on the curve. [16]

2. A circle of 50mm diameter rolls along a straight line without slipping. Draw the curve traced out by a point P on the circumference, for one complete revolution of the circle. Name the curve. Draw a tangent to the curve at a point on it 40mm from the line. [16]

3. Draw the projections of the following points on the same ground line, keeping the Projectors 20mm apart.
   (a) Point C, in the V.P. and 40mm above the H.P.
   (b) Point D, 25mm below the H.P. and 25mm behind the V.P.
   (c) Point E,15mm above the H.P. and 50mm behind the V.P.
   (d) Point F, 40mm below the H.P. and 25mm infront of the V.P. [4×4]

4. (a) A line EF 40mm long is in the V.P. and inclined to H.P. The top view measures 30mm. The end E is 10mm above H.P. Draw the projections of the line. Determine its inclination with H.P.
   (b) A line measuring 80mm long has one of its ends 60mm above H.P. and 20mm in front of V.P. The other end is 15mm above H.P. and in front of V.P. The front view of the line is 60mm long. Draw the top view. [8+8]

5. A regular pentagon of length of 30mm side, has one of its corners on V.P. and its surface is inclined at $60^0$ to V.P. The edge, opposite to the corner on V.P, makes an angle of $45^0$ with H.P. Draw the projection of the plane. [16]

6. (a) Draw the projections of a pentagonal pyramid, base 30 mm edge and axis 50mm long, having its base on the H.P. and an edge of the base parallel to the V.P. Also draw its side view.
   (b) Draw the projections of a hexagonal pyramid, base 30 mm side and axis 60 mm long, having its base on the H.P. and one of the edges of the base inclined at $45^0$ to the V.P.
   (c) A square pyramid, base 40mm side and axis 65mm, long has its base in the V.P. One edge of the base is inclined at $30^0$ to the H.P. and a corner contained by that edge is on the H.P. Draw its Projections. [4+8+4]

7. Draw the isometric view of the ribbed angle plate, shown in figure 7. All dimensions are in mm. [16]

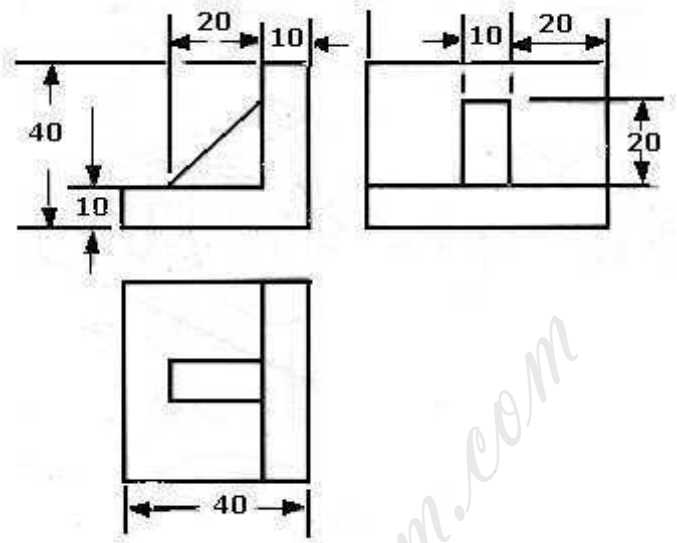


Figure 7

8. Draw the elevation, plan and left and right side views of the bracket shown in the figure 8. (All dimensions are in mm). [16]

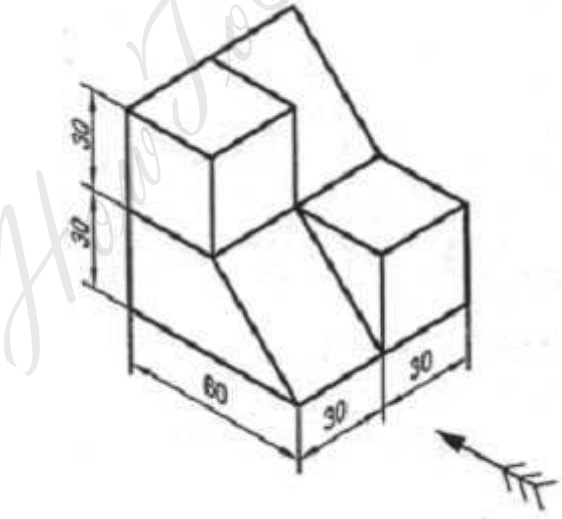


Figure 8

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Code No: R07A11291 **Set No. 3**

**I B.Tech Supplimentary Examinations, Aug/Sep 2008**
**ENGINEERING DRAWING**
**( Common to Bio-Medical Engineering, Information Technology, Electronics & Telematics and Instrumentation & Control Engineering)**
**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. (a) Two points A and B are 100mm apart. A point C is 75mm from A and 60mm from B. Draw an ellipse passing through A, B and C.
   (b) A point P is 30mm and 50mm respectively from two straight lines which are at right angles to each other. Draw a rectangular hyperbola from P within 10mm distance from each line. [8+8]

2. Draw a hypo cycloid of a circle of 30mm diameter which rolls inside another circle of 160mm diameter, for one revolution counter clock wise. Draw a tangent and a normal to it at a point 60mm from the center of the directing circle. [16]

3. Draw the projections of the following points on the same ground line, keeping the Projectors 20mm apart.
   (a) Point C, in the V.P. and 40mm above the H.P.
   (b) Point D, 25mm below the H.P. and 25mm behind the V.P.
   (c) Point E,15mm above the H.P. and 50mm behind the V.P.
   (d) Point F, 40mm below the H.P. and 25mm infront of the V.P. [4×4]

4. (a) A 100mm long line is parallel to and 40mm above the H.P. Its two ends are 25mm and 50mm in front of the V.P. respectively. Draw its projections and find its inclination with the V.P.
   (b) A line AB, 50mm long, has its end A in both the H.P. and the V.P. It is inclined at $30^0$ to the H.P and at $45^0$ to the V.P. Draw its projections. [8+8]

5. A square ABCD of 50mm side has its corner A in the H.P, its diagonal AC inclined at $30^0$ to the H.P. and the diagonal BD inclined at $45^0$ to the V.P. and parallel to the H.P. Draw its projections. [16]

6. A hexagonal pyramid, side of the base 25mm long and height 70mm, has one of its triangular faces perpendicular to the H.P. and inclined at $45^0$ to the V.P. The base-side of this triangular face is parallel to the H.P. Draw its projections. [16]

7. Draw the isometric view of the block, two views of which are shown in figure 7. (All dimensions are in mm). [16]

Code No: R07A11291 **Set No. 3**

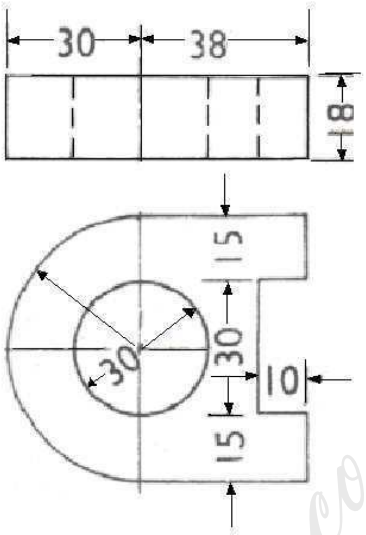


Figure 7

8. Draw the elevation, plan and right side view of the part shown in figure 8 (All dimensions are in mm). [16]

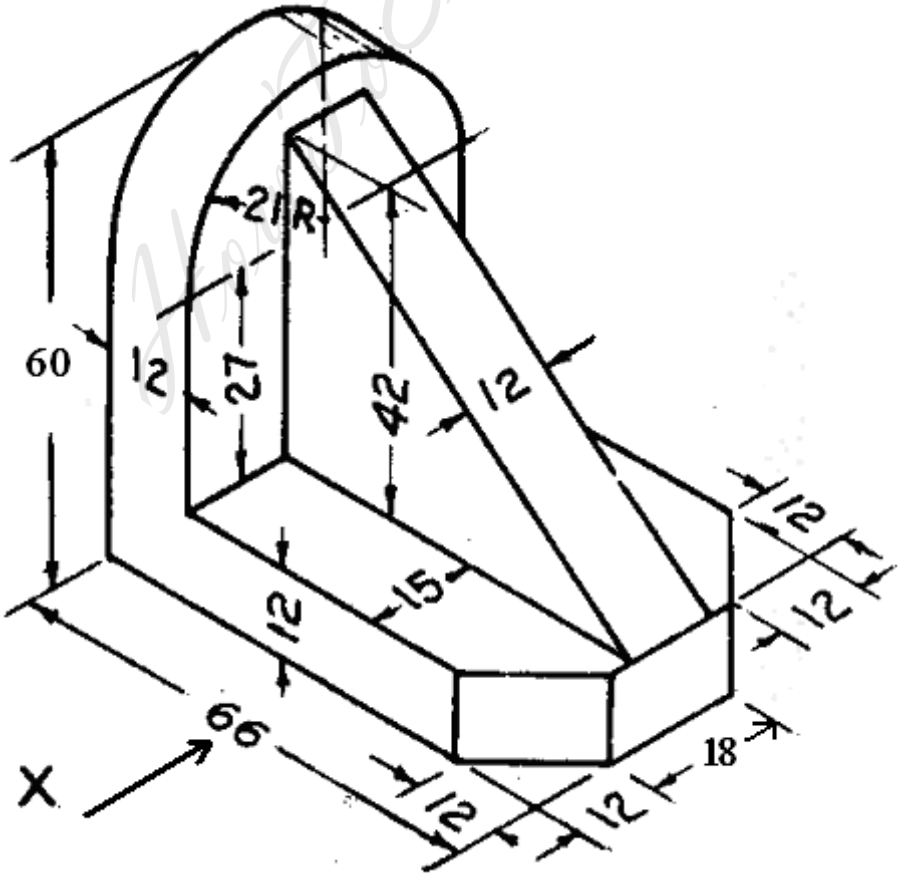


Figure 8

Code No: R07A11291 **Set No. 3**

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Code No: R07A11291 **Set No. 4**

**I B.Tech Supplimentary Examinations, Aug/Sep 2008**
**ENGINEERING DRAWING**
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**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

⋆ ⋆ ⋆ ⋆ ⋆

1. (a) Two points A and B are 100mm apart. A point C is 75mm from A and 60mm from B. Draw an ellipse passing through A, B and C.
   (b) The foci of an ellipse are 85mm apart and the minor axis is 60mm long. Determine the length of the major axis and draw the ellipse by oblong method. [8+8]

2. A circle of 40mm diameter rolls an a straight line without slipping . In the initial position the diameter PQ of the circle is parallel to the line on which it rolls. Draw the locus of the points P and Q for one complete revolution of the circle. [16]

3. (a) Point A is 20mm above H.P. and 30mm infront of V.P. Draw its front view and top view.
   (b) A point M is 35mm above H.P. and 45 mm in front of V.P. Draw its projections.
   (c) Draw the projections of a point A lying on H.P. and 30mm infront of V.P. [4+8+4]

4. Draw the projections of a 70mm long straight line, in the following positions:
   (a) Parallel to and 40mm in front of the V.P and in the H.P.
   (b) Perpendicular to the H.P, 20mm in front of the V.P and its one end 15mm above the H.P.
   (c) Perpendicular to the H.P, in the V.P. and its one end in the H.P.
   (d) Inclined at $45^0$ to the V.P, in the H.P. and its one end in the V.P. [4×4]

5. A regular pentagon of length of 30mm side, has one of its corners on V.P. and its surface is inclined at $60^0$ to V.P. The edge, opposite to the corner on V.P, makes an angle of $45^0$ with H.P. Draw the projection of the plane. [16]

6. (a) Draw the projections of a pentagonal pyramid, base 30 mm edge and axis 50mm long, having its base on the H.P. and an edge of the base parallel to the V.P. Also draw its side view.
   (b) Draw the projections of a hexagonal pyramid, base 30 mm side and axis 60 mm long, having its base on the H.P. and one of the edges of the base inclined at $45^0$ to the V.P.
   (c) A square pyramid, base 40mm side and axis 65mm, long has its base in the V.P. One edge of the base is inclined at $30^0$ to the H.P. and a corner contained by that edge is on the H.P. Draw its Projections. [4+8+4]

7. Draw the isometric view of the block, two views of which are shown in figure 7. (All dimensions are in mm). [16]

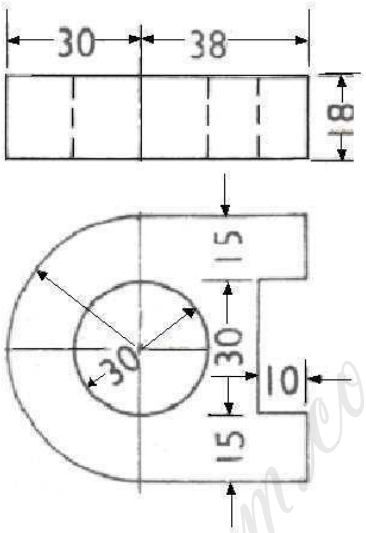


Figure 7

8. Draw the front view, top view and left side view of the object shown in figure 8. (All dimensions are in mm). [16]

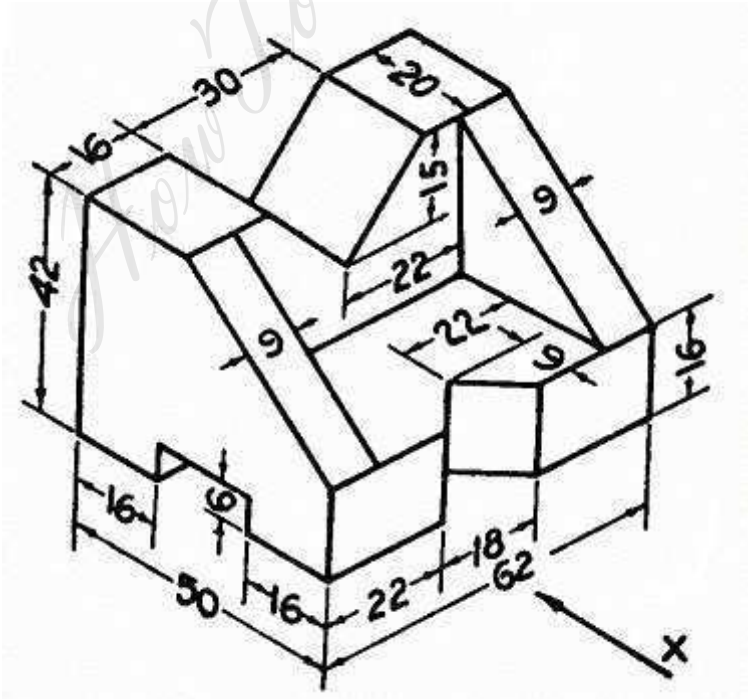


Figure 8

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