Set No. 1

I B.Tech   Supplimentary   Examinations, Aug/Sep   2008
ENGINEERING DRAWING
(Common to Electronics & Communication Engineering, Electronics &
Control Engineering and Bio-Technology)

Time: 3 hours   Max Marks: 80

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

1. Two fixed points A and B are 100mm apart. Trace the complete path of a point P moving (in the same plane as that of A and B) in such a way that, the sum of its distances from A and B is always the same and equal to 125mm . Name the curve. Draw another curve parallel to and 25mm away from this curve   [16]

2. A circle of 30 mm diameter, rolls along a line for one revolution clockwise. Draw the locus of a point on the circle, which is in contact with the line. Also draw a tangent and a normal to the curve, at a point 20mm from the directing line   [16]

3. (a) A point A is 2.5 cm above the H.P. and 3 cm infront of the V.P. Draw its Projections.

   (b) A point A is 2 cm below the H.P. and 4 cm behind the V.P. Draw its Projections.

   (c) Two points A and B are in the H.P. The point A is 30mm in front of the V.P., while B is behind the V.P. The distance between their projectors is 75mm and the line joining their top views makes an angle of 45^0 with xy. Find the distance of the point B form the V.P.   [4+4+8]

4. A line of 100mm long, makes an angle of 35^0 with H.P. and 45^0 with V.P. Its mid point is 20mm above H.P. and 15mm in front of V.P. Draw the projections of the line.

                                                                                                              [16]

5. Draw the projections of a circle of 50mm diameter resting in the H.P. on a point A on the circumference its plane inclined at 45^0 to the H.P. and:

   (a) The top view of the diameter AB making 30^0 angle with the V.P.

   (b) The diameter AB making 30^0 angle with the V.P.   [16]

6. A square pyramid, base 40mm side and axis 90mm long, has a triangular face on the ground and the vertical plane containing the axis makes an angle of 45^0 with the V.P. Draw its projections   [16]

7. Draw the isometric view of a Door-Steps having three steps of 22cm tread and 15cm rise. The steps measure 75cm widthwise.   [16]

8. Convert the bracket shown in the figure 8 pictorial view into orthogonal projections of three views. (All dimensions are in mm).   [16]
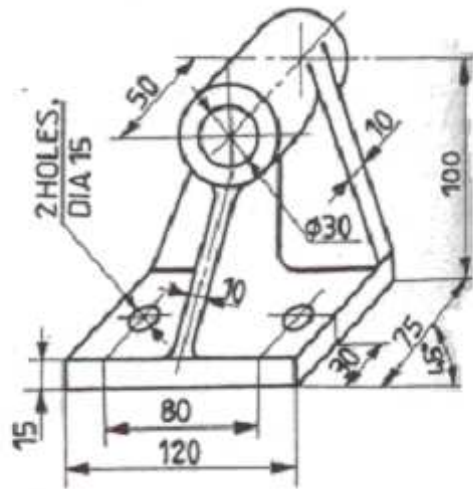
Figure 8

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Code No: R07A10491

Set No. 2

I B.Tech Supplimentary Examinations, Aug/Sep 2008
ENGINEERING DRAWING
(Common to Electronics & Communication Engineering, Electronics &
Control Engineering and Bio-Technology)

Time: 3 hours

Max Marks: 80

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

1. Two fixed points A and B are 100mm apart. Trace the complete path of a point P moving (in the same plane as that of A and B) in such a way that, the sum of its distances from A and B is always the same and equal to 125mm . Name the curve. Draw another curve parallel to and 25mm away from this curve [16]

2. A circle of 35mm diameter rolls on a horizontal line. Draw the curve traced out by a point R on the circumference for one half revolution of the circle. For the remaining half revolution, the circle rolls on the vertical line. The point R vertically above the center of the circle in the starting position. [16]

3. (a) A point P is 15mm above the H.P. and 20mm in front of the V.P. Another point Q is 25mm behind the V.P. and 40mm below the H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90mm. Draw straight lines joining

    i. their top views and
    ii. their front views.

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

   [8+8]

4. (a) A line CD 30 mm long is perpendicular to V.P. and parallel to H.P. Its end C is 5mm in front of V.P. and the line is 10mm above H.P. Draw the projections of the line.

   (b) A line PQ 40mm long is parallel to V.P. and inclined at an angle of 30^0 to H.P. The end P is 15mm above H.P. and 20mm in front of V.P. Draw the projections of the line. [6+10]

5. Draw the projections of a regular hexagon of 25mm side, having one of its sides in the H.P. and inclined at 60^0 to the V.P, and its surface making an angle of 45^0 with the H.P. [16]

6. Draw the projections of a pentagonal prism, base 25mm side and axis 50mm long, resting on one of its rectangular faces on the H.P., with the axis inclined at 45^0 to the V.P. [16]

7. Draw the isometric view of a pentagonal pyramid, with side of base 25mm and axis 60mm long. The pyramid is resting on its base on H.P, with an edge of the base (away from the observer) parallel to V.P. Use the off-set method. [16]

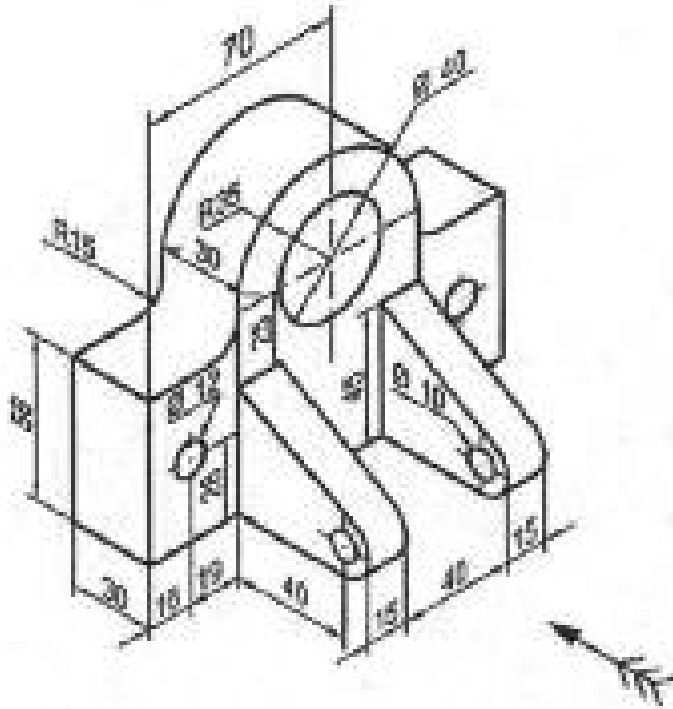8. Draw the front view, top view and left side view of the object shown in figure 8 (All dimensions are in mm). [16]

Figure 8

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$$\boxed{\textbf{Set No. 3}}$$

I B.Tech Supplimentary Examinations, Aug/Sep 2008
ENGINEERING DRAWING
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Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
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⋆ ⋆ ⋆ ⋆ ⋆

1. Construct a hyperbola when the distance between the focus and the directrix is 40mm and the eccentricity is 4/3. Draw a tangent and normal at any point on the hyperbola. [16]

2. A coin of 40mm diameter rolls over horizontal table without slipping. A point on the circumference of the coin is in contact with the table surface in the beginning and after one complete revolution. Draw and name the curve. Draw a tangent and normal at any point on the curve. [16]

3. (a) A point A is 2.5 cm above the H.P. and 3 cm infront of the V.P. Draw its Projections.

   (b) A point A is 2 cm below the H.P. and 4 cm behind the V.P. Draw its Projections.

   (c) Two points A and B are in the H.P. The point A is 30mm in front of the V.P., while B is behind the V.P. The distance between their projectors is 75mm and the line joining their top views makes an angle of 45^0 with xy. Find the distance of the point B form the V.P. [4+4+8]

4. (a) A line PQ, 9cm long, is in the H.P. and makes an angle of 30^0 with the V.P. Its end P is 2.5cm in front of the V.P. Draw its projections.

   (b) The length of the top view of a line parallel to the V.P. and inclined at 45^0 to the H.P. is 5 cm. One end of the line is 1.2cm above the H.P. and 2.5cm in front of the V.P. Draw the projections of the line and determine its true length.

   (c) The front view of a 7.5cm long line measures 5.5cm. The line is parallel to the H.P. and one of its end is in the V.P. and 2.5cm above the H.P. Draw the projections of the line and determine its inclination with V.P. [5+5+6]

5. A circular plate of 60mm diameter, has a hexagonal hole of 20mm side, centrally punched. Draw the projections of the plate, resting on H.P. on a point, with its surface inclined at 30^0 to H.P. Any two parallel sides of the hexagonal hole are perpendicular to V.P. Draw the projections of the plate. [16]

6. (a) Draw the projections of
   i. a cylinder, base 40 mm diameter and axis 50 mm long, and
   ii. a cone, base 40mm diameter and axis 50mm long,
      resting on the H.P. on their respective bases.

(b) A hexagonal prism has one of its rectangular faces parallel to the H.P. Its axis is perpendicular to the V.P. and 3.5 cm above the ground. Draw its projections when the nearer end is 2 cm in front of the V.P. Side of base 2.5cm long, axis 5 cm long.

(c) A cube of 40mm side rests with one of its square faces on the H.P. such that one of its vertical faces is perpendicular to V.P. Draw its projections. The nearest edge parallel to V.P. is 5mm in front of it.　　　　　　　　[8+4+4]

7. Draw the isometric view of a cylinder of base 50 mm diameter and 70mm height when it rests with its base on H.P.(use four-centre method).　　　　　[16]

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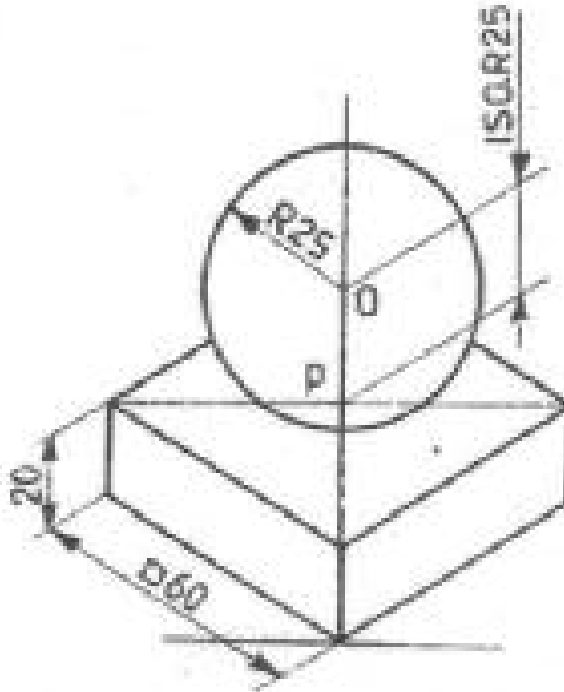

Figure 8

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Code No: R07A10491

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
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⋆ ⋆ ⋆ ⋆ ⋆

1. Two straight lines OA and OB make an angle of 75^0 between them. P is a point 40mm from OA and 50mm from OB. Draw a hyperbola through P, with OA and OB as asympotes, marking at least ten points.   [16]

2. A circle of 30 mm diameter, rolls along a line for one revolution clockwise. Draw the locus of a point on the circle, which is in contact with the line. Also draw a tangent and a normal to the curve, at a point 20mm from the directing line   [16]

3. (a) A point A is 2.5 cm above the H.P. and 3 cm infront of the V.P. Draw its Projections.

   (b) A point A is 2 cm below the H.P. and 4 cm behind the V.P. Draw its Projections.

   (c) Two points A and B are in the H.P. The point A is 30mm in front of the V.P., while B is behind the V.P. The distance between their projectors is 75mm and the line joining their top views makes an angle of 45^0 with xy. Find the distance of the point B form the V.P.   [4+4+8]

4. The top view of a 75mm long line AB measures 65mm, while the length of its front view is 50mm. Its one end A is in the H.P. and 12mm in front of the V.P. Draw the projections of AB and determine its inclinations with the H.P. and the V.P.   [16]

5. Draw the projections of a regular hexagon of 25mm side, having one of its sides in the H.P. and inclined at 60^0 to the V.P, and its surface making an angle of 45^0 with the H.P.   [16]

6. (a) A hexagonal pyramid, base 25mm side and axis 50mm long, has an edge of its base or the ground. Its axis is inclined at 30^0 to the ground and parallel to the V.P. Draw its projections.

   (b) Draw the projections of a cone, base 75mm diameter and axis 100mm long, lying on the H.P. on one of its generators with the axis parallel to the V.P.
                                                                           [8+8]

7. Draw the isometric projection of a cone of base 40 mm diameters and height 58mm when it rests with its base on H.P.   [16]

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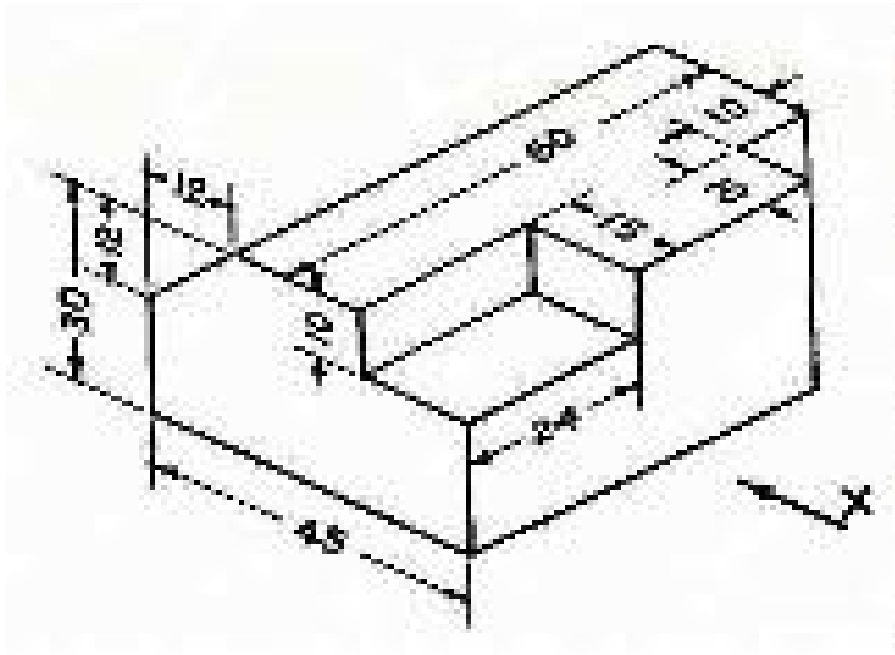
Figure 8

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