Code No: R07A10291 **Set No. 1**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
ENGINEERING DRAWING
(Common to Electrical & Electronic Engineering, Electronics & Instrumentation Engineering and Electronics & Computer Engineering)
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. A fixed point is 75mm from a fixed straight line. Draw the locus of a point P moving such a way that its distance from the fixed straight line is
   (a) twice its distance from the fixed point
   (b) equal to its distance from the fixed point. Name the curves. [16]

2. Draw a cycloid given the diameter of a rolling circle as d=30mm. Draw a normal and tangent at any point on the curve. [16]

3. (a) The point A is on H.P. and 40mm in front of V.P. Another point B is on V.P. and below H.P. The line joining their front views makes an angle of 45^0 with x y, while the line Joining their top views makes an angle of 30^0. Find the distance of the point B from H.P.
   (b) Draw the projections of the following points in third quadrant when the
      i. Point A lies in the H.P. and 22mm away from the V.P.
      ii. Point B lies in the V.P. and 32mm away from the H.P.
      iii. Point C lies 32mm from the H.P. and 22mm from the V.P. [8+8]

4. (a) The top view of a 75mm long line measures 55mm. The line is in the V.P., its one end being 25mm above the H.P. Draw its projections.
   (b) Draw the projections of a 75mm long line, in the following positions:
      i. Parallel to and 30mm above the H.P and in the V.P.
      ii. Inclined at 30^0 to the H.P and its one end 20mm above the H.P, parallel to and 25mm in front of the V.P. [8+8]

5. A circular plane of 60mm diameter, rests on V.P. on a point A on its circumference. Its plane is inclined at 45^0 to V.P. Draw the projections of the plane when
   (a) The front view of the diameter AB makes 30^0 with H.P. and
   (b) The diameter AB itself makes 30^0 with H.P. [16]

6. A hexagonal pyramid, base 25mm side and axis 55mm long, has one of its slant edges on the ground. A plane containing that edge and the axis is perpendicular to the H.P. and inclined at 45^0 to the V.P. Draw its projections, when the apex is nearer the V.P. than the base. [16]

7. (a) Draw the isometric view of a square prism, with side of base 40mm and length of axis 70mm, when its axis is
   i. vertical and
   ii. horizontal.
   (b) Figure 7b shows the front view of a sphere, resting centrally on the top of a square block. Draw the isometric projection of the arrangement all dimensions are in mm. [8+8]

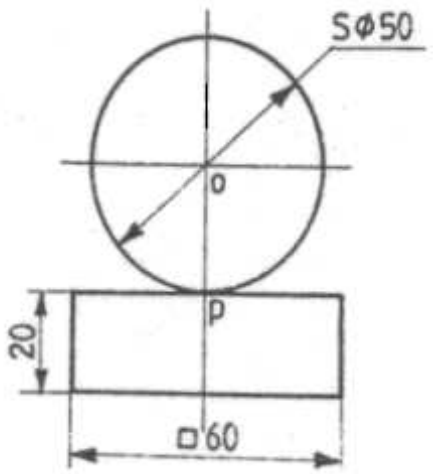

Figure 7b

8. Draw the front view, top view and left side views of V- block as shown in figure 8. All dimensions are in mm [16]

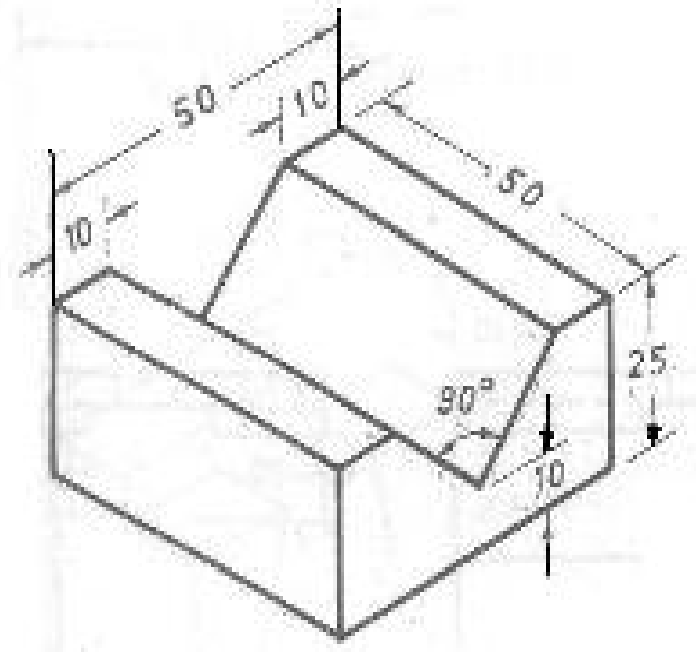

Figure 8

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Code No: R07A10291 **Set No. 2**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
ENGINEERING DRAWING
(Common to Electrical & Electronic Engineering, Electronics & Instrumentation Engineering and Electronics & Computer Engineering)
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. The vertex of a hyperbola is 65mm from its focus. Draw the curve if the eccentricity is 3/2. Draw a normal and a tangent at a point on the curve, 75 mm from the directrix. [16]

2. A circle of 455mm diameter rolls along a straight line without slipping. Draw the curve traced out by a point P on the circumference for 1.5 revolution of the circle. Name the curve. Draw a tangent and normal at a point on it 35mm from the line. [16]

3. (a) A point A is 20mm above H.P. and in the first quadrant. Its shortest distance from the reference line XY is 40mm. Draw the projections of the point and determine its distance from V.P.
   (b) A point at 25mm above the reference line x y is the front view of two points A and B. The top view of A is 40mm behind V.P. and the top view of B is 50mm in front of V.P. Draw the projections of the points and state their positions relative to the planes of projection and the quadrants in which they lie.[8+8]

4. The mid point of a straight line AB is 60mm above H.P. and 50mm in front of V.P. The line measures 80mm long and inclined at 30^0 to H.P. and 45^0 to V.P. Draw its projections. [16]

5. (a) A regular pentagon of 25mm side has one side on the ground. Its plane is inclined at 45^0 to the H.P. and perpendicular to the V.P. Draw its projections.
   (b) Draw the projections of a circle of 5cm diameter, having its plane vertical and inclined at 30^0 to the V.P. Its centre is 3cm above the H.P. and 2cm in front of the V.P. [8+8]

6. (a) Draw the projections of a triangular prism, base 40 mm side and axis 50 mm long, resting on one of its bases on the H.P. with a vertical face perpendicular to the V.P.
   (b) A cube of 50mm long edges is resting on the H.P. with its Vertical faces equally inclined to the V.P. Draw its projections.
   (c) A triangular prism, base 40 mm side and height 65 mm is resting on the H.P. on one of its rectangular faces with the axis parallel to the V.P. Draw its projections. [4+8+4]

7. (a) Draw the isometric view of a square prism, with side of base 40mm and length of axis 70mm, when its axis is

i. vertical and

ii. horizontal.

(b) Figure 7b shows the front view of a sphere, resting centrally on the top of a square block. Draw the isometric projection of the arrangement all dimensions are in mm. [8+8]

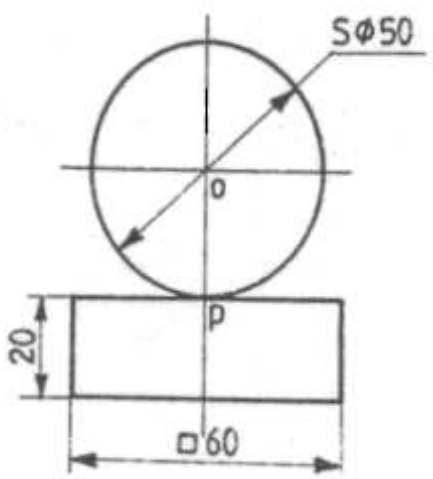

Figure 7b

8. Draw the following views of the block shown in figure 8. All dimensions are in mm.

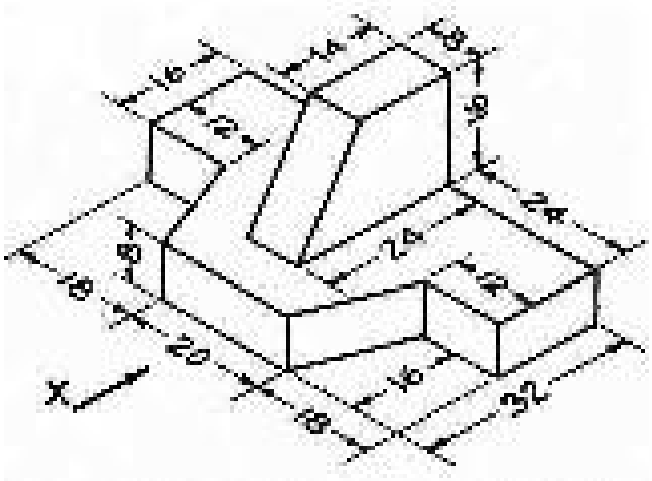

Figure 8

(a) Front View.

(b) Top view

(c) Both side views. [16]

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Code No: R07A10291 **Set No. 3**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
ENGINEERING DRAWING
(Common to Electrical & Electronic Engineering, Electronics & Instrumentation Engineering and Electronics & Computer Engineering)
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. The vertex of a hyperbola is 65mm from its focus. Draw the curve if the eccentricity is 3/2. Draw a normal and a tangent at a point on the curve, 75 mm from the directrix. [16]

2. A circle of 50mm diameter rolls on the circumference of another circle of 175mm diameter and outside it. Trace the locus of a point on the circumference of the rolling circle for one complete revolution. Name the curve. Draw a tangent and a normal to the curve at a point 125mm from the center of the directing circle. [16]

3. (a) Draw the projections of the following points on the same ground line, keeping the Projectors 25mm apart.
   i. A, in the H.P. and 20 mm behind the V.P.
   ii. B, 40mm above the H.P. and 25mm in front of the V.P.
   (b) State the quadrants with the help of drawing, in which the following points are situated
   i. A point P; its top view is 40mm above xy; the front view 20 mm below the top view.
   ii. A point Q; its projections coincide with each other 40mm below x y.[8+8]

4. (a) A line PQ 75mm long has its end P in the V.P and the end Q in the H.P. The line is inclined at 30^0 to the H.P. and at 60^0 to the V.P. Draw its projections.
   (b) Draw the projections of a 65mm long straight line, in the following positions :
   i. Parallel to both the H.P and the V.P and 25mm from each.
   ii. Perpendicular to the H.P in the V.P and its one end in the H.P. [8+8]

5. An equilateral triangular plane ABC of side 40mm, has its plane parallel to V.P. and 20mm away from it. Draw the projections of the plane when one of its sides is:
   (a) Perpendicular to H.P.
   (b) Parallel to H.P. and
   (c) Inclined to H.P. at an angle of 45^0 [5+5+6]

6. A regular pentagonal pyramid with the sides of its base 30mm and height 80mm rests on an edge of the base. The base is tilted until its apex is 50mm above the level of the edge of the base on which it rests. Draw the projection of the pyramid

when the edge on which it rests, is parallel to the V.P. and the apex of the pyramid points towards V.P. [16]

7. Draw the isometric view of a hexagonal prism, with side of base 25mm and axis 60mm long, The prism is resting on its base on H.P. with an edge of the base parallel to V.P. Use the box method [16]

8. Draw the following views of the block shown in figure 8. All dimensions are in mm.

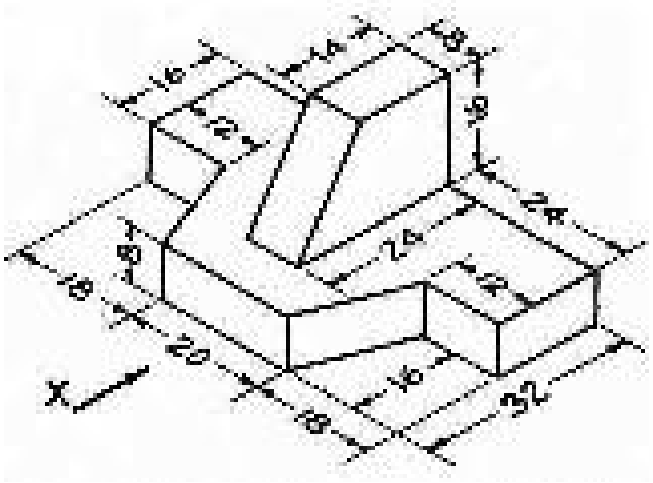

Figure 8

(a) Front View.

(b) Top view

(c) Both side views. [16]

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Code No: R07A10291 **Set No. 4**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
ENGINEERING DRAWING
(Common to Electrical & Electronic Engineering, Electronics & Instrumentation Engineering and Electronics & Computer Engineering)
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. A fixed point is 75mm from a fixed straight line. Draw the locus of a point P moving such a way that its distance from the fixed straight line is
   (a) twice its distance from the fixed point
   (b) equal to its distance from the fixed point. Name the curves. [16]

2. Draw an epicycloids, given the radii of generating and directing circle as r=20mm and R=72mm respectively. Also draw a normal and a tangent at any point on the curve. [16]

3. (a) A point A is 20mm above H.P. and in the first quadrant. Its shortest distance from the reference line XY is 40mm. Draw the projections of the point and determine its distance from V.P.
   (b) A point at 25mm above the reference line x y is the front view of two points A and B. The top view of A is 40mm behind V.P. and the top view of B is 50mm in front of V.P. Draw the projections of the points and state their positions relative to the planes of projection and the quadrants in which they lie.[8+8]

4. (a) A line AB 25mm long is perpendicular to V.P. and parallel to H.P. Its end A is 10mm in front of V.P. and the line is 20mm above H.P. Draw the projections of the line.
   (b) A line MN 50mm long is parallel to V.P. and inclined at 30^0 to H.P. The end M is 20mm above H.P. and 10mm in front of V.P. Draw the projections of the line. [8+8]

5. (a) A regular pentagon of 25mm side has one side on the ground. Its plane is inclined at 45^0 to the H.P. and perpendicular to the V.P. Draw its projections.
   (b) Draw the projections of a circle of 5cm diameter, having its plane vertical and inclined at 30^0 to the V.P. Its centre is 3cm above the H.P. and 2cm in front of the V.P. [8+8]

6. (a) Draw the projections of a hexagonal prism of base 25mm and axis 60mm long, when it is resting on one of its corners of the base on H.P. The axis of the solid is inclined at 45^0 to H.P.
   (b) Draw the projections of a pentagonal prism of base 25mm side and axis 50mm long, when it is resting on one of its rectangular faces on H.P., the axis of the solid is inclined at 45^0 to V.P. [8+8]

7. Draw the isometric drawing of a cone of base diameter 30mm and axis 45mm long. [16]

8. Draw the front view, top view and left side views of V- block as shown in figure 8. All dimensions are in mm [16]

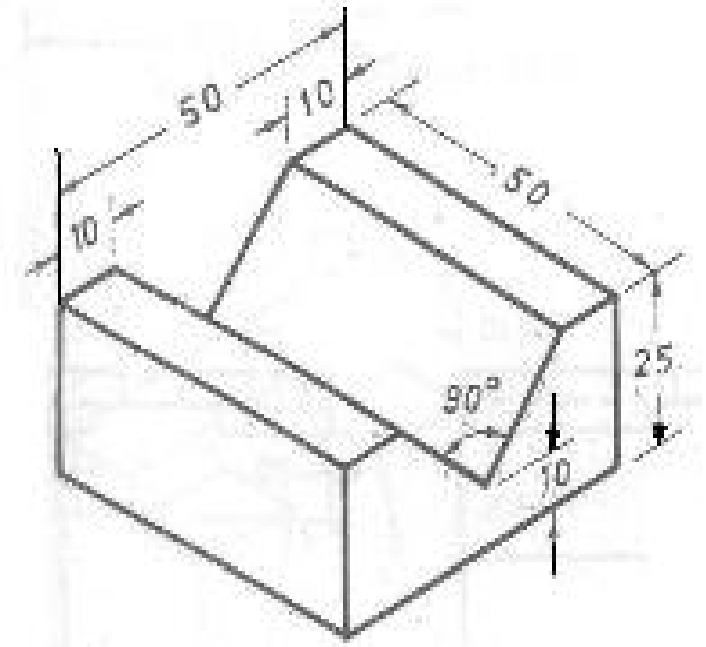

Figure 8

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