Code No: **Z0223/R07**

Set No. 1

I B.Tech Supplementary Examinations, January 2014
ENGINEERING DRAWING
(Common to Computer Science & Engineering,Electronics &
Instrumentation Engineering, Bio-Medical Engineering, Information
Technology,Electronics & Control Engineering and Instrumentation &
Control Engineering)

Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
All Questions carry equal marks
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1. Two points F and F^l are located on a sheet of paper and are 100mm apart. A point P moves on the sheet such that the difference of its distance from F and F^l always remains 50mm. Find the locus of P. Draw a tangent and a normal to the locus at any general point. [16]

2. Construct a cycloid, given the diameter of the generating circle is 40mm. Draw a tangent to the curved at a point on it 30mm from the line. [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. 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. 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) Draw the projections of a cylinder 75 mm diameter and 100 mm long, lying on the ground with its axis inclined at 30^0 to the V.P. and parallel to the ground.

   (b) Draw the projections of a square pyramid having one of its triangular faces in the V.P., and the axis parallel to and 40mm above the H.P. Base 30mm side; axis 75mm long. [8+8]

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

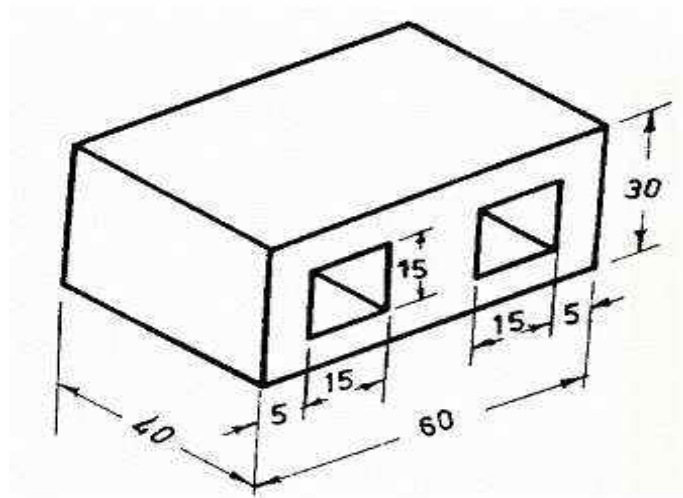|"|'|'||||"|"|'""| 1 of 2

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Set No. 1

Figure 8

(a) Front View.

(b) Top view

(c) Both side views. [16]

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Code No: **Z0223/R07**

$\boxed{\textbf{Set No. 2}}$

I B.Tech Supplementary Examinations, January 2014
ENGINEERING DRAWING
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Instrumentation Engineering, Bio-Medical Engineering, Information
Technology,Electronics & Control Engineering and Instrumentation &
Control Engineering)

Time: 3 hours   **Max Marks: 80**
Answer any FIVE Questions
All Questions carry equal marks
⋆ ⋆ ⋆ ⋆ ⋆

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 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) Draw the projectors of the following points in different quadrants.
    i. Point A, 25mm infront of V.P. and 30mm above H.P.
    ii. Point B, 22mm behind V.P. and 28mm above H.P.
    iii. Point C, 28mm behind V.P. and 30mm below H.P
    iv. Point D, 40mm infront of V.P. and 25mm below H.P

   (b) A point P is 25mm in front of the V.P. and 40 mm above the H.P. Another point Q is 40mm in front of the V.P. and 25mm above the H.P. The distance measured between the projectors is 40mm. Draw the projections and find the distance between P and Q. [8+8]

4. A line AB, 65mm long, has its end A 20mm above the H.P. and 25mm in front of the V.P. The end B is 40mm above the H.P. and 65mm in front of the V.P. Draw the projections of AB and show its inclinations with the H.P. and the V.P. [16]

5. A regular hexagonal plane of 45mm side has a corner on H.P. and its surface is inclined at 45^0 to H.P. Draw the projections, when the diagonal through the corner, Which is on H.P. makes 30^0 with V.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 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 following views of the block shown in figure 8. All dimensions are in mm.

Figure 8

(a) Front View.
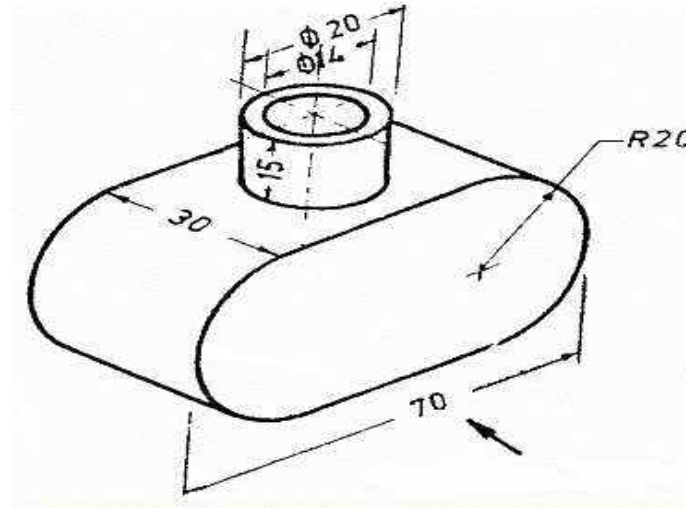
(b) Top view

(c) Both side views.   [16]

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Code No: **Z0223/R07**

Set No. 3

I B.Tech Supplementary Examinations, January 2014
ENGINEERING DRAWING
(Common to Computer Science & Engineering,Electronics &
Instrumentation Engineering, Bio-Medical Engineering, Information
Technology,Electronics & Control Engineering and Instrumentation &
Control Engineering)

Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
All Questions carry equal marks
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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 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. 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 line CD 80mm long is inclined at an angle of 30^0 to H.P. and 45^0 to V.P. The point C is 20mm above H.P. and 30mm in front of V.P. Draw the projections of the straight line. [16]

5. A circle of 40mm diameter, is resting on H.P. on a point, with its surface inclined at 30^0 to H.P. Draw the projections of the circle when

   (a) The top view of a diameter, through the resting point, makes an angle of 45^0 with xy.

   (b) The diameter passing through the resting point makes an angle of 45^0 with the V.P. [16]

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.

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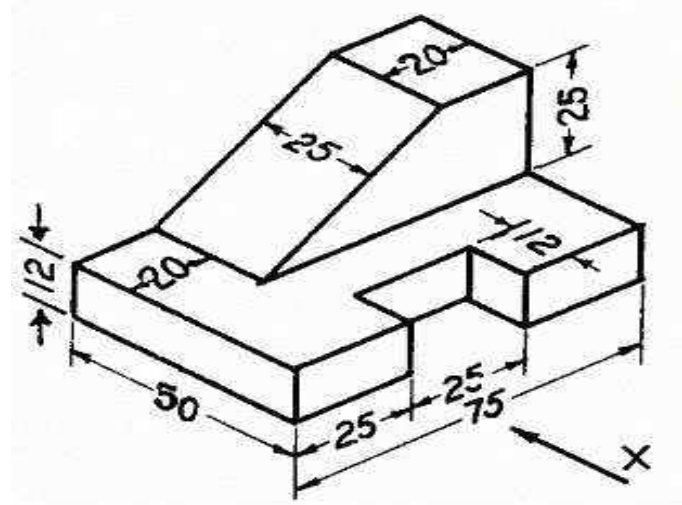

Figure 8

(a) Front View.
(b) Top view
(c) Both side views.   [16]

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Code No: **Z0223/R07**

Set No. 4

I B.Tech Supplementary Examinations, January 2014
ENGINEERING DRAWING
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Technology,Electronics & Control Engineering and Instrumentation &
Control Engineering)

Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
All Questions carry equal marks
⋆ ⋆ ⋆ ⋆ ⋆

1. (a) A fountain jet discharges water from ground level at an inclination of 50^0 to the ground. The jet travels a horizontal distance of 9cm from the point of discharge and falls on the ground. Trace the path of the jet.

    (b) The distance between two fixed points is 90mm. A point P moves such that the difference of its distance from the two fixed points is always equal to 60mm. Draw the loci of P.   [8+8]

2. Draw an epicyclodial of rolling circle 40mm (2r), which rolls outside another circle of 150mm diameter (2R) for one revolution. 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. The top view of a 75mm long line CD measure 50mm. C is 50mm in front of the V.P. and 15mm below the H.P. D is 15mm in front of the V.P. and is above the H.P. Draw the front view of CD and find its inclinations with the H.P. and the V.P.   [16]

5. A regular hexagon of 40mm side has a corner in the H.P. Its surface is inclined at 45^0 to the H.P. and the top view of the diagonal through the corner which is in the H.P. makes an angle of 60^0 with the V.P. Draw its projections.   [16]

6. A hexagonal prism, base 30mm side and axis 75mm long, has an edge of the base parallel to the H.P. and inclined at 45^0 to the V.P. Its axis makes an angle of 60^0 with the H.P. Draw its projections.   [16]

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]

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Set No. 4

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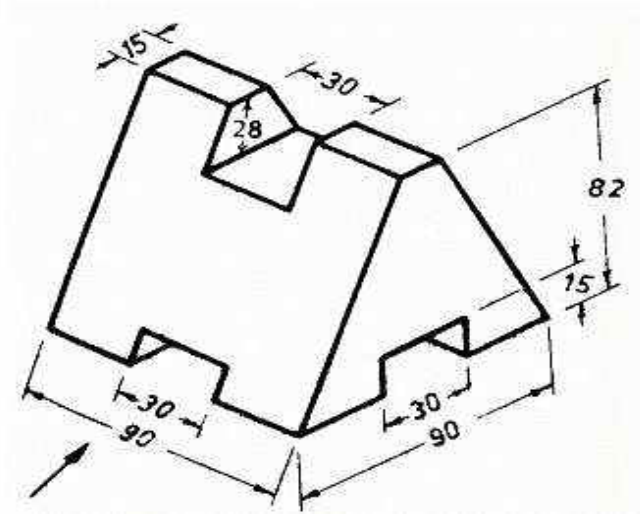

Figure 8

(a) Front View.

(b) Top view

(c) Both side views. [16]

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