## I B.Tech II Semester Supplementary Examinations, February 2013 ENGINEERING DRAWING ( Common to CSE,EIE and EComE )

Time: 3 hours
Max Marks: 75

## Answer any FIVE Questions <br> All Questions carry equal marks

1. Construct a vernier scale to read distance correct to decameter on a map in which the actual distances are reduced in the ratio of 1:20000. The scale should be long enough to measure up to 4 km . Mark on the scale a length of 2.46 km and 3.28 km.
2. (a) Draw the projections of a line 60 mm long while it is perpendicular to HP and parallel to VP and 20 mm in front of VP. The end nearer to HP is 15 mm above it.
(b) Draw the projections of a 70 mm long straight line, inclined at 40 to VP with its one end 25 mm in front of it. The line is parallel to and 25 mm above the HP.
3. A 80 mm long line CD has its end C 30 mm above HP and 30 mm infront of VP. Draw the projections if the line is inclined at $30^{\circ}$ to HP and $30^{\circ}$ to VP.
4. (a) A pentagonal plate of 35 mm side is perpendicular to VP and parallel to HP one of its edges is perpendicular to VP. Draw its projections.
(b) A regular pentagon of 35 mm side has one side on the ground its plane is inclined to HP $45^{\circ}$ ? and perpendicular to VP. Draw its projections. $\quad[7+8]$
5. A triangular prism, side of base 40 mm and height 60 mm long rests with its base on the HP. Such that one of its rectangular faces near to VP is parallel and 8 mm in front of it. Draw its projections.
6. Draw the projections of a pentagonal pyramid side of base 30 mm and altitude 60 mm when it is resting on its base on the HP with an edge of base inclined at an angle of $30^{\circ}$ to the VP.
7. Draw Orthographic projections of the figure shown below.

8. Draw the isometric view for the following orthographic views.


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1. An ellipse has the major axis and the minor axis in the ratio of $3: 2$. Draw the ellipse when the major axis is 120 mm .
2. (a) Draw the front view and top view of a line LM 60 mm long, inclined to HP. at $45^{0}$ towards right and parallel to VP. The end L is 20 mm from HP. and 15 mm from VP.
(b) Draw the projections of a line 70 mm long when it is parallel to both HP and VP. The line is 20 mm from both HP and VP
[7+8]
3. The front view of a line PQ 155 mm measures 135 mm and its top view measures 115 mm . The mid-point of the line PQ is 65 mm from both the planes. Draw the projection of the line PQ .
4. The front view of a rectangular lamina of sides $60 \mathrm{~mm} \times 40 \mathrm{~mm}$ is a square of 40 mm side. Draw the top and front views. Determine the inclination of the surface of the lamina with HP and VP.
5. A hexagonal prism of base 30 mm side and axis 70 mm is resting with one of its sides of the base in VP and the axis is inclined at $30^{\circ}$ to VP. Draw its projections. [15]
6. Draw the projections of a square pyramid, base 35 mm and height 60 mm when it stands on one of its base edge on HP with its axis inclined at $45^{\circ}$ to the HP and parallel to VP.
7. Draw the front, top, and side views of the isometric view given in figure.

8. Draw the isometric view for the following orthographic projections.


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1. The distance between two fixed points is 60 mm . A point P moves such that the sum of its distance from two fixed points is always a constant and is equal to 80 mm . Draw the locus of P and determine the axes lengths.
2. (a) Draw the projections of the points $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}$ keeping the distance between the projectors as 30 mm . Point A is 30 mm in front of VP and in HP. B is 20 mm in front of VP and 30 mm above HP. C is 40 mm below HP and 20 mm behind VP. D is in both HP and VP.
(b) Draw the projections of a 70 mm long line AB when it is perpendicular to the HP and end A in HP. Draw the projections of the line when it is in first quadrant and third quadrant. The line is 40 mm from VP. [7+8]
3. A line PQ is inclined to HP at $30^{\circ}$ and $45^{\circ}$ to VP and measures 70 mm . Point P is 20 mm above HP and 15 mm infront of VP. Draw its projections.
4. (a) A square lamina of side 40 mm is parallel to the HP with one of its sides inclined at $30^{\circ}$ to the VP. The lamina is 20 mm above the HP. Draw its top and front views.
(b) A hexagonal plate of side 40 mm rests on the HP on one of its sides perpendicular to the VP. Draw its projections when its surface is inclined at $50^{\circ}$ to the HP.
$[7+8]$
5. A hexagonal prism side of base 30 mm and height 70 mm rests on one of its longer edges on HP such that the rectangular faces containing the longer edge on which the prism is resting equally inclined to HP and the axis perpendicular to profile plane. Draw the projections of the solid.
6. A square pyramid, base 40 mm side and axis 90 mm long, has a triangular face on the ground and the vertical plane containing the axis makes an angle of 45 with VP. Draw its projections
7. Draw the front, top and side views of the object whose isometric view is shown in the Figure.

8. Draw the isometric view of a V-block as shown in figure.


## Set No. 4

# I B.Tech II Semester Supplementary Examinations, February 2013 ENGINEERING DRAWING ( Common to CSE,EIE and EComE ) 

Time: 3 hours
Max Marks: 75

## Answer any FIVE Questions <br> All Questions carry equal marks

1. (a) Draw a diagonal scale of $\mathrm{RF}=1 / 4$ and long enough to measure 40 cm . Show a distance of 32.5 cm on it.
(b) Construct a Octagon inscribed in a circle of 80 mm diameter.
2. (a) The front view of a 70 mm long line PQ measures 50 mm . The line is parallel to the HP and 30 mm above the HP with one of its ends in the VP. Draw the projections of the line and determine its inclination with the VP.
(b) Draw the projections of a 75 mm long line PQ . Its end $P$ is 20 mm above HP and 15 mm in front of the VP. The line is parallel to VP and inclined to HP at $30^{\circ}$.
3. One end A of a line $\mathrm{AB}, 65 \mathrm{~mm}$ long is 40 mm in front of the VP and 25 mm above the HP The line is inclined at $40^{\circ}$ to the HP and $30^{\circ}$ to the VP. Draw the projections of AB. @15]
4. A circular disc of 38 mm diameter resting in the HP on its rim and inclined at $55^{\circ}$ to the HP Draw its projections when diameter is inclined to VP at $30^{\circ}$.
5. A hexagonal prism base 40 mm side, height 50 m has a hole of 40 mm diameter drilled centrally through its ends. Draw the projections when it is resting on one of its corners on HP and with axis inclined at $60^{\circ}$ to HP and two of its faces parallel to VP.
6. Draw the projections of hexagonal pyramid of base 40 mm side and 75 mm high, having the base on the VP and one of its edge of the base inclined at $45^{\circ}$ to HP. [15]
7. Draw the front view looking from the direction of X , and top view, side view from the following figure.

8. Draw the isometric view of a cast iron block whose front and top views are as shown in figure.

