## I B.Tech II Semester Supplementary Examinations, February 2013 ENGINEERING DRAWING <br> ( Common to Electronics \& Communication Engineering, Bio-Technology and PCE )

Time: 3 hours
Max Marks: 75

## Answer any FIVE Questions All Questions carry equal marks

1. (a) A line 100 mm long in a building plan represents a distance of 4 m . Draw a diagonal scale to read up to 5 m , showing meters, decimeters and centimeters. Mark the lengths 2.74 m and 4.36 m .
(b) Draw a hexagon of side 30 mm with a diagonal inclined at $40^{\circ}$ to the horizontal.
2. (a) A line KL 60 mm long has its end K 30 mm above HP and 20 mm infront of VP. It is perpendicular to HP and parallel to VP. Draw its projections.
(b) A 70 mm long line PQ has its end P 20 mm above HP and 15 mm infront of VP. The line is inclined at $40^{\circ}$ to VP and parallel to HP. Draw its projections.
3. A 60 mm long line CD has its end C 20 mm above HP and 30 mm infront of VP. Draw the projections if the line is inclined at $40^{\circ}$ to HP and $30^{\circ}$ to VP.
4. Draw the projections of a regular hexagonal lamina of 25 mm side, having one of its sides in the HP and inclined at $60^{\circ}$ to the VP and its surface making an angle of $45^{0}$ with the HP.
5. A cube of 50 mm side is resting on the HP with its vertical faces equally inclined to the VP. Draw its projections.
6. A pentagonal pyramid of 30 mm side and height 60 mm rests with its apex on HP such that one of the slant edges is perpendicular to HP and parallel to VP. Draw the projections of the pyramid.
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 the following figure.


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1. (a) Construct a heptagon of side 30 mm with a side vertical.
(b) Construct an ellise of vertical major axis 90 mm and horizontal minor axis 60 mm long.
2. (a) Draw the projections of a line 70 mm long when it is perpendicular to HP and parallel to VP and 15 mm infront of VP.
(b) A line 70 mm long is perpendicular to VP and parallel to HP and 20 mm above it. Draw its projections.

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[7+8]
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3. The top view of a 75 mm long line CD measures 50 mm . The mid point of the line is 50 mm from VP and 75 mm from the HP. The point D is 30 mm from VP. Draw its projections and find its inclinations with the HP and VP.
4. A triangle PQR has sides $\mathrm{PQ}=65 \mathrm{~mm}, \mathrm{QR}=50 \mathrm{~mm}$ and $\mathrm{PR}=40 \mathrm{~mm}$. The side PQ is in the V.P. and inclined at $30^{\circ}$ to the H.P. its surface is inclined at $45^{\circ}$ to the V.P. Draw the top and front views of the triangle.
[15]
5. Draw the projections of Square prism of side 40 mm and 48 mm long resting on HP with one of its longer edges and one face making $30^{\circ}$ to HP. The vertical faces are parallel to VP.
6. A square pyramid, base 40 mm side and axis 65 mm , long has its base in the VP. One of the base edge is inclined at $30^{\circ}$ to the HP and a corner contained by that edge is on the HP. Draw its Projections.
7. Draw orthographic projections to the following isometric view.

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


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1. On a certain map, a distance of 5 km is represented by a length of 15 cm . Construct a diagonal scale to read upto distances 0.01 km , and mark on it a distance of 3.64 km Find the RF of the scale.
2. Draw the projections of 60 mm long straight line in the following positions:
(a) Lies in both the HP and the VP
(b) Inclined at $45^{0}$ to the HP and its one end 20 mm above HP and 60 mm in front of the VP.
(c) Perpendicular to the VP, 30 mm above the HP and one end in VP.
(d) Parallel and 30 mm in front of profile plane
(e) Inclined at $30^{\circ}$ to VP and parallel to profile plane
3. The mid-point of a line 80 mm long is 25 mm above HP 30 mm in front of VP. The line is inclined $30^{\circ}$ to HP and $40^{\circ}$ to the VP. Draw the projections of the line. [15]
4. A square lamina ABCD of side 45 mm rests on the ground on its corner A in such a way that the diagonal AC is inclined at $45^{\circ}$ to the HP and apparently inclined at $30^{\circ}$ to the VP. Draw its projections.
5. A cylindrical block 75 mm diameter and 25 mm thick has hexagonal hole of 25 mm side cut centrally through its flat faces. Draw the top and front views of the block when its flat faces are vertical and inclined at $30^{\circ}$ to VP and the two parallel faces of the hole are parallel to HP.
6. A regular pentagonal pyramid with the sides of its base 30 mm and height 80 mm rests on an edge of the base. The base is tilted until its apex is 50 mm above the level of the edge of the base on which it rests. Draw the projections of the pyramid when the edge, on which it rests, is parallel to the VP and the apex of the pyramid points towards VP.
7. Draw orthographic projections from the following isometric figure.

8. Draw the isometric view for the following orthographic views


## Set No. 4

# I B.Tech II Semester Supplementary Examinations, February 2013 ENGINEERING DRAWING <br> ( Common to Electronics \& Communication Engineering, Bio-Technology and PCE ) 

Time: 3 hours
Max Marks: 75

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

1. A drawing is prepared to such a scale that an actual distance of 4.5 metre is represented by a line of 30 mm long. What is the R.F? Construct a diagonal scale long enough to read upto 10 metre and mark on the scale the distances 4 metre and 7 metre.
2. (a) Draw the projections of a line 70 mm long when it is perpendicular to HP and parallel to VP and 15 mm infront of VP.
(b) A line 70 mm long is perpendicular to VP and parallel to HP and 20 mm above it. Draw its projections.
$[7+8]$
3. A straight line PQ has its end P 15 mm in front of the VP and nearer to it. The mid-point m of the line is 55 mm in front of the VP and 45 mm above the HP. The front and top views measure 95 mm and 110 mm respectively. Draw the projections of the line. Also find its true length and true inclinations with the HP and the VP. [15]
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 square prism, base 40 mm side and height 65 mm , has its axis inclined at $45^{0}$ to the HP and has an edge of its base on the HP. Draw its projections.
[15]
6. A hexagonal pyramid, side of base 25 mm long and height 70 mm , has one of its triangular faces perpendicular to HP and inclined at $45^{\circ}$ to the VP. Draw its projections.
7. Draw the sectional front view looking from the direction of X , and top view, side view from the following isometric view.

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

