

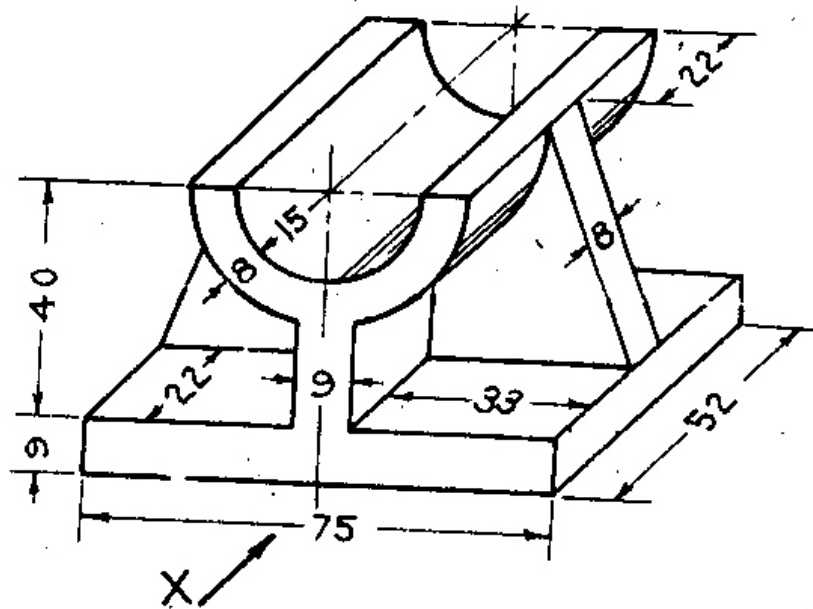
Subject Code : R10205/R10**Set No - 1****I B.Tech II Semester Supplementary Examinations January / February - 2012****ENGINEERING DRAWING****(Common to Bio-Medical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Aeronautical Engineering, Automobile Engineering, & Petroleum Technology)****Time: 3 hours****Max. Marks : 75****Answer any FIVE Questions
All Questions carry equal marks***** * * * ***

1. The major and minor axes of an ellipse are 100 mm long and 60 mm long respectively. Locate the foci and draw the ellipse by arcs of circles method. Draw a tangent and normal to the ellipse at a point on it 25 mm above the major axis. [15M]
2. Draw the projections of 40 mm long straight line in the following positions:
 - (i) Lies in both the H.P and the V.P
 - (ii) Inclined at 45^0 to the H.P and its one end 15 mm above HP and 50 mm in front of the V.P.
 - (iii) Perpendicular to the VP, 25 mm above the HP and one end in VP.
 - (iv) Perpendicular to profile plane
 - (v) Inclined at 30^0 to VP and parallel to profile plane[15M]
3. A line AB, 60 mm long, has its end A in both the H.P and the V.P. It is inclined at 45 degrees to the H.P and 30 degrees to the V.P. Draw the projections of the straight line. [15M]
4. A semi circular plate of 90 mm diameter has its straight edge in the V.P. and inclined at 60 degrees to the H.P. The surface of the plate makes an angle of 45 degrees with the V.P. Draw its projections. [15M]
5. A hexagonal prism, base 40 mm side and axis 90 mm long has an edge of the base parallel to the H.P. and inclined at 30 degrees to the V.P. Its axis makes an angle of 60 degrees with the H.P. Draw its projections. [15M]
6. A square pyramid 60 mm high, side of square base 25 mm rests on one of its base edges on HP and then it is tilted about this edge until the axis makes an angle of 40 degrees with HP. Draw its projections. [15M]

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7. Draw all the three principal views to the figure given below. All dimensions are in mm.



8. A square pyramid of 40 mm side and height 50mm rests centrally on a square block of 60 mm edges and 20 mm thick. Draw the isometric projections of the composite solid with the edges of the two blocks equally inclined to each other. [15M]

[15M]

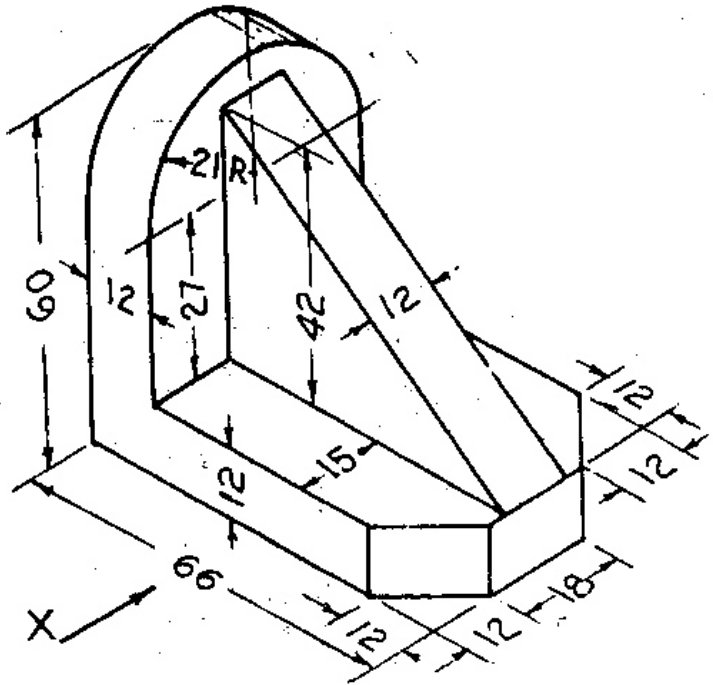
Subject Code : R10205/R10**Set No - 2****I B.Tech II Semester Supplementary Examinations January / February - 2012****ENGINEERING DRAWING****(Common to Bio-Medical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Aeronautical Engineering, Automobile Engineering, & Petroleum Technology)****Time: 3 hours****Max. Marks : 75****Answer any FIVE Questions
All Questions carry equal marks***** * * * ***

1. A distance of 3 cm measured on a map corresponds to an actual distance of 450 meters. Construct a backward vernier scale long enough to measure 3000 meters correct up to a decameter. Mark on the scale the following distances: (i) 1.54 km (ii) 390 meters. [15M]
- 2.(a) The length of the top view of a line parallel to the V.P. and inclined at 60 degrees to the H.P. is 40 mm. one end of the line is 12 mm above the H.P. and 25 mm in front of the V.P. Draw the projections of the line and determine its true length.
(b) A point P is 25 mm in front of the VP and 40 mm above the HP. Another point Q is 40 mm in front of the VP and 25 mm above HP. The distance measured between the projectors is 40 mm. Draw the projections and find the distance between P and Q. [7M + 8M]
3. A line PQ 75 mm long has its end P in the VP and end Q in the HP. The line is inclined at 30° to HP and 60° to VP. Draw its projections and traces. [15M]
4. A pentagonal lamina having edge 40 mm is placed such that the perpendicular bisector of one of the edges is inclined at 30° to HP and 45° VP. Draw the top view and front views of the lamina. [15M]
5. A cylindrical slab of 60 mm diameter has a 30 mm square hole axially cut in it. The cylindrical slab stands on HP with its axis making 60 degrees to HP. One of the faces of the square hole is equally inclined to VP. Draw the projections of the solid, if thickness is 20 mm. [15M]
6. A hexagonal pyramid has an altitude of 60 mm and side of base 30 mm. The pyramid rests with one of its sides of the base on HP such that the triangular face containing that side is perpendicular to HP. Draw the top and front views. [15M]

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7. Draw all the three principal views to the figure given below. All dimensions are in mm.



8. A cone, diameter of base 45mm and height 50mm is mounted centrally on the top of a square slab of thickness 10mm and side 65 mm. Draw the isometric projection of the combined solid. [15M]

[15M]

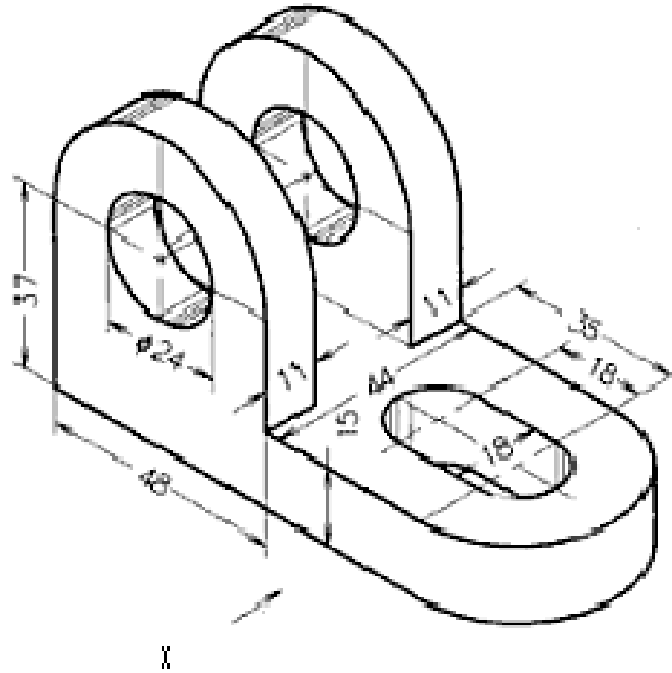
Subject Code : R10205/R10**Set No - 3****I B.Tech II Semester Supplementary Examinations January / February - 2012****ENGINEERING DRAWING****(Common to Bio-Medical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Aeronautical Engineering, Automobile Engineering, & Petroleum Technology)****Time: 3 hours****Max. Marks : 75****Answer any FIVE Questions
All Questions carry equal marks***** * * * ***

1. On a map, 120 cm x 100 cm represents an area of 3000 m². Draw a diagonal scale showing meters, decimeters, and centimeters and to measure up to 4 meters. Show a length of 2.73m. [15M]
- 2.(a) A point 20 mm below XY line is the top view of three points, P, Q and R. P is 25 mm below HP. The point Q is 35 mm above HP and the point R is in HP. Draw the projections of three points and state their positions with the reference planes and the quadrants in which they lie.
(b) A straight line AB 60 mm long has its end A in both HP and VP. The straight line is inclined at 30⁰ to VP and parallel to HP. Draw its projections. [8M + 7M]
3. A line AB 70 mm long has its end A 10 mm above H.P and 15 mm in front of V.P. Its front view and top view measures 50 mm and 60 mm respectively. Draw the projections of the line, determine its inclinations with H.P and V.P and also locate its traces. [15M]
4. A regular hexagonal lamina of side 25 mm is lying in such way that the one of its sides touches both the reference planes. If the lamina makes 60⁰ with the VP, draw the projections of the lamina. [15M]
5. A pentagonal prism with side of base 30 mm and length of the axis 65 mm rests on one of its rectangular faces on HP. The axis of the prism is perpendicular to profile plane. Draw the projections. [15M]
6. Draw the projections of a cone, base 60 mm diameter and axis 90 mm long, resting on the H.P. such that on one of its generators parallel to the V.P and perpendicular to HP. [15M]

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7. Draw all the three principal views to the figure given below. All dimensions are in mm.



8. A hexagonal prism of side of base 30 mm and 70 mm long has a square hole of sides 20 mm at the centre. The axes of the square hole and hexagonal prism coincide, and one of the faces of the square hole is parallel to a face of the hexagon. Draw the isometric projection of the prism with the hole. [15M]

[15M]

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I B.Tech II Semester Supplementary Examinations January / February - 2012

ENGINEERING DRAWING

(Common to Bio-Medical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Aeronautical Engineering, Automobile Engineering, & Petroleum Technology)

Time: 3 hours

Max. Marks : 75

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

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1. Construct a vernier scale of R.F= $1/25$ and long enough to measure up to 4 m. Show 3.14 m, 2.34 m and 0.28m lengths on the scale. [15M]
- 2.(a) Draw the projections of a point lying 25 mm above HP and in first quadrant if its shortest distance from the line of intersection of planes is 40 mm. Also find the distance of the point from VP.
(b) A straight line AB 60 mm long has its end A in both HP and VP. The straight line is inclined at 30° to HP and parallel to VP. Draw its projections. [8M + 7M]
3. The front view of a line AB measuring 125 mm long is 75 mm and its top view is 100 mm long. Its end B is 30 mm from both the planes. Draw the projections and find its inclinations and with the reference planes. [15M]
4. A circular lamina of 80 mm diameter having the end A of the diameter AB in the H.P., the end B in the V.P. The surface of the lamina is inclined at 60 degrees to H.P. and 30 degrees to VP. Draw the projections of the lamina. [15M]
5. A hexagonal prism of base 20 mm side and axis 50 mm long is placed with one of its base edges on VP such that the axis is inclined at 30 degrees to VP. Draw its projections. [15M]
6. Draw the projections of a pentagonal pyramid having side of base 30 mm and length of axis 80 mm when it is resting on HP with a triangular face in VP. [15M]

