# I B.Tech Examinations,December 2010 ENGINEERING GRAPHICS <br> Common to CE, MECT, MEP, AE, AME, MMT, EEE 

Time: 3 hours

1. Draw the elevation, plan and side view of the picture shown in the figure1. All the dimensions in the figure are in mm .


Figure 1
2. A cylinder of diameter of base 60 mm altitude 80 mm stands on its base. It is cut into two halves by a plane perpendicular to the VP and inclined at $30^{\circ}$ to HP. Draw the development of the lower half.
3. A cylinder of 50 mm diameter and height 60 mm rests with its base on the ground plane such that the axis is 30 mm behind the PP. A cone of base 50 mm diameter and axis is 25 mm long is placed centrally on the top of the cylinder. The station point is 25 mm in front of the $\mathrm{PP}, 100 \mathrm{~mm}$ above the GP and lies in a central plane, which is 65 mm to the right of the axes of the solids. Draw the perspective view of the arrangement
4. Draw the isometric view of a cone 40 mm diameter and axis 55 mm long when its axis is horizontal. Draw isometric scale.
5. A circle of 60 mm diameter rolls on a horizontal line for a half revolution and then on a vertical line for another half revolution. Draw the curve traced out by a point P on the circumference of the circle.
6. The distance between Delhi and Saharanpur is 180 Km . The passenger train covers this distance in 6 hours. Construct a plain scale to measure time up to a single minute. The R.F of the scale is $1: 2,00,000$. Indicate the distance covered by the train in 36 minutes.
7. Draw the projections of a circle of 50 mm diameter resting in the H.P. on a point A on the circumference, its plane inclined at 45 degrees to the H.P. and the diameter AB making 30 degrees angle with the V.P.
8. A pentagonal pyramid, base 25 mm side and axis 50 mm long has one of triangular faces in the V.P. and the edge of the base contained by that face makes an angle of 30 degrees with the H.P. Draw its projections.


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## Answer any FIVE Questions

All Questions carry equal marks

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