

**Engineering Drawing  
(ME-102, Dec-2007)**

**Note:** Section A is compulsory. Attempt any five questions from Section B & C taking at least two questions from each Section.

**Section-A**

1. a). Where and why a cutting plane is drawn in a drawing?
- b) What do you mean by single stroke letters?
- c) Define refractive fraction (R.F).
- d) Draw a symbol of first angle projections.
- e) Why the projections of an object are not drawn in 2<sup>nd</sup> and 4<sup>th</sup> quadrants?
- f) What is the trace of a straight line?
- g) Define plane.
- h) How many minimum dimensions solid planes have?
- i) What do you understand by V.T and H.T of section plane?
- j) What is the principle of development of surfaces?

**Section-B**

2. Draw a free hand sketch of a stool which you have seen in your drawing room?
3. A vertical cylinder of 50mm diameter and height 70mm standing on its base on H.P is completely penetrated by a horizontal cylinder of 35mm diameter and 70mm long such that their axes bisect each other at right angles and are parallel to V.P. Draw the curves of interpenetration in front view?
4. A straight line AB 50mm long makes an angle of 30° to the H.P. The end A is 12mm above the HP and 15mm in front of the VP. Draw the top view and front view of the line AB.
5. Write in double stroke vertical and inclined style, the following statements using ratio 7:4.

**Section-C**

6. A square lamina ABCD of 25mm side has its H.T parallel to and 15mm below xy line. It has no V.T. Draw its projections when all the sides are equally inclined to the HP.
7. (a) A cube of 40mm edges is resting on its one of its faces on HP with a vertical face inclined to 30° to V.P. It is cut by a section plane parallel to the VP and passes 15mm away from the axis. Draw its top view and sectional front view.  
(b) A cube of 40mm sides rests centrally on a square block of 60mm edges and 20mm thick. Draw the isometric projections of the two objects with the edges on the two blocks mutually parallel to each other.
8. A pentagon prism of 25mm base edges and 50mm long, resting on its base with an edge of base at 45° to the VP. The prism is cut by a section plane V.T. inclined at 30° to the HP and passes through a point 25mm from the base along its axis. Develop its lateral surface of the truncated prism.
9. Draw the three views of a cube 30mm side when it is resting on its base on HP with one of the base edges making an angle of 45° to the VP.