

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Sem.-1<sup>st</sup> & 2<sup>nd</sup>)

## ENGINEERING DRAWING

Subject Code : BTME-102 (2011 & 2012 Batch)

Paper ID : [A1110]

Time : 3 Hrs.

Max. Marks : 60

### INSTRUCTION TO CANDIDATES :

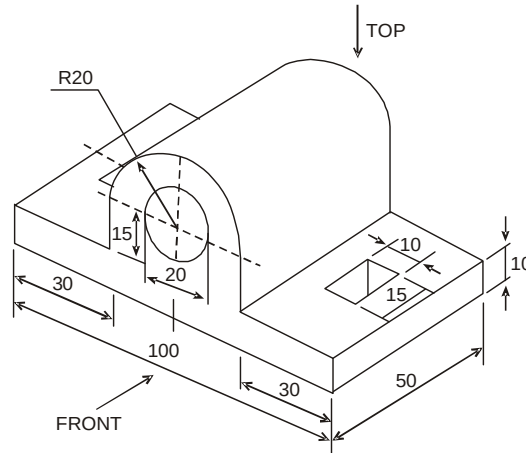
1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B & C have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B & C.

### SECTION-A

1. Answer briefly :
  - (a) Draw the symbol of Ist Angle & IIIrd Angle projection.
  - (b) What do you mean by a Representative Factor (RF) and how it is calculated ?
  - (c) What do you mean by an orthographic projection ? How it is different from isometric projection ?
  - (d) Show the Aligned system of dimensioning with the help of a suitable diagram.
  - (e) What is a Profile plane ? Explain its use and show it with the help of a free hand sketch.
  - (f) Draw the projection of a point lying in HP and 15 mm in front of VP.
  - (g) How do we classify the solids ? Name them.
  - (h) What is the use of auxiliary planes ? Differentiate between AVP & AIP.
  - (i) Draw the frustum of a cone. How it is different from a truncated cone ?
  - (j) What do you mean by intersection of surfaces and its use ?

## SECTION-B

2. Draw the Front view and Top View of the given object in the indicated directions.



3. Draw the projections of the following points :
- Point A 25 mm in front of VP and 30 mm above HP.
  - Point B 30 mm behind VP and 25 mm below HP.
4. The length of the top view of a straight line AB parallel to VP and inclined at  $45^\circ$  to HP measures 60 mm. Its end A is 10 mm above HP and 25 mm in front of VP. Draw the projections and determine the true length of the line AB.
5. Draw the projection of a cube of 25 mm edge when it is resting on one of its corners of base in such a way that the base makes an angle of  $45^\circ$  with the HP and the vertical edges of the cube remains parallel to V.P.

## SECTION-C

- A cylinder of 40 mm dia and 60 mm long is lying in such a way that its axis makes an angle of  $30^\circ$  to VP. It is cut by a horizontal sectional plane perpendicular to VP and at a distance of 10 mm from the axis. Draw its projections showing the sectional plan.
- A vertical cylinder of 50 mm dia and height 70 mm standing on its base is HP is completely penetrated by a horizontal cylinder of 40 mm dia and 70 mm long such that their axes bisect each other at right angles and are parallel to V.P. Draw the curves of penetration in the front view.
- A square pyramid of base edge 25 mm and height of its axis 50 mm in resting in HP in such a manner that its base edge makes an angle of  $45^\circ$  with V.P. Develop the surface of the pyramid.
- Draw the isometric view of the two solids when one of them a cylinder of 30 mm dia and 45 mm long is resting centrally on a cube of 50 mm edge.