

Roll No. ....

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech. (Sem.-1, 2)**

**ENGG. DRAWING**

**Subject Code : BTME-102 (2011 Batch)**

**Paper ID : [A1110]**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY.
2. Attempt any FIVE questions from SECTION - B & C.
3. Selecting at least TWO questions from SECTION - B & C each.

**SECTION-A**

**(2 marks each)**

1. (a) Differentiate between Ist angle and IIIrd angle projections.  
(b) Write the word(s) “ DRAWING IN THIRD ANGLE ” in Gothic lettering (free hand only).  
(c) What is a profile plane and its use?  
(d) Show the aligned system of dimensioning.  
(e) What is the difference between reducing and increasing scale?  
(f) How the object is imagined to be placed in third angle projection?  
(g) What do you mean by trace of a line? Show it when the line is parallel to VP and inclined to HP.  
(h) What are the solids of revolution? Name them?  
(i) Draw the frustum of a cone.  
(j) What do you mean by Development? Explain its use?

**SECTION-B**

**(8 marks each)**

2. Draw the projections of the following points. Mention their quadrant.  
Point A : 25 mm in front of VP and 20 mm above HP.  
Point B : 30 mm behind VP and 25 mm below HP.

3. A straight line AB 60 mm long makes an angle of  $30^\circ$  to HP and  $45^\circ$  to VP. The end A is 15 mm in front of VP and 20 mm above HP. Draw its projections.
4. Draw the projections of a square lamina of 25 mm side with one of its sides kept perpendicular to VP and the plane *i.e.* lamina makes an angle of  $30^\circ$  to HP.
5. A hexagonal prism base edge 20 mm and height 50 mm is resting on an edge of its base on HP in such a way that the base makes an angle of  $45^\circ$  with the HP. Draw its projections.

### SECTION-C

(8 marks each)

6. A square pyramid base edge 25 mm and height 50 mm is resting on its base in HP in such a way that one of its base edges makes an angle of  $30^\circ$  with the VP. It is cut by a sectional plane parallel to HP and passing at a distance of 25 mm from the base along the axis. Draw the front view and sectional top view.
7. A cube of 40 mm side rest centrally on a square block of 60 mm edges and 25 mm thick. Draw the isometric view of the block and the cube with the edges of the two kept parallel to each other.
8. A right cylinder of 30 mm dia and 50 mm height of axis, is cut by a sectional plane inclined at  $30^\circ$  to HP and passes 20 mm from base along the axis. Draw the development of the truncated cylinder.
9. Draw the elevation and plan of the block shown below.

