

Code No: Z1221

R07

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B.Tech I Year Examinations, December-2014/January-2015

ENGINEERING DRAWING

(Common to BME, IT, ETM)

Time: 3 hours

Max. Marks: 80

Answer any five questions  
All questions carry equal marks

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1. The foci of an ellipse are 90 mm apart and the minor axis is 65 mm long. Determine the length of the major axis and draw half the ellipse with concentric-circles method and the other half by oblong method. Draw a curve parallel to the ellipse and 25 mm away from it.
2. A ball thrown up in the air reaches a maximum height of 45 mm and travels a horizontal distance of 75 mm. Trace the path of the ball, assuming it to be parabolic.
3. A line measuring 60 mm long has its one end 50 mm above H.P. and 15 mm in front of V.P. The other end is 20 mm above H.P. The front view of the line is 50 mm long. Draw the top view and find its inclinations with both H.P. and V.P.
- 4.a) Two points A and B are in H.P. The point A is 30 mm in front of the V.P., while B is behind the V.P. The distance between their projections is 75 mm and the line joining their top views makes an angle of  $45^\circ$  with xy. Find the distance of the point B from the V.P.  
b) The top view of 75 mm long AB measures 65 mm, while the length of its front view is 50 mm. Its one end A is in the H.P. and 12 mm in front of the V.P. Draw the projections of AB and determine its inclinations with the H.P. and the V.P.
5. A square ABCD of 50 mm side has its corner A in the H.P., its diagonal AC inclined at 30 degrees to the H.P. and the diagonal BD inclined at 45 degrees to the V.P. and parallel to the H.P. Draw its projections.
6. Draw the projections of a cone, base 45 mm diameter and axis 50 mm long, when it is resting on the ground on a point on its base circle with the axis making an angle of  $30^\circ$  with the H.P. and its top view making  $45^\circ$  with the V.P.
7. A Hexagonal prism having the side of base 26 mm and the height of 60 mm is resting on one of the corner of the base and its axis is inclined at  $30^\circ$  to the HP. Draw its projections and also prepare the isometric view of the prism in the above stated condition.

8. Draw the front, top and left hand side view of the figure. All dimensions are in mm.

