

Code: 13A03101

B.Tech I Year (R13) Supplementary Examinations June 2016

**ENGINEERING DRAWING**

(Common to CE and ME)

Time: 3 hours

Max. Marks: 70

(Answer all five units, 05 X 14 = 70 Marks)

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**UNIT – I**

- 1 Construct a conic when the eccentricity is  $\frac{5}{4}$  and the distance between directrix and the focus is 54 mm. Draw tangent and normal to the curve at a point on the lower half of the curve measuring 45 mm from the focus.

**OR**

- 2 Draw involute of a circle with a diameter 50 mm when the string length is equal to the circumference of the circle. Draw normal and tangent to the involute at any point on the curve.

**UNIT – II**

- 3 One end of line AB is 10 mm above HP and other end is 100 mm in front of VP. Its FV is  $45^\circ$  inclined to XY while its HT and VT are 45 mm and 30 mm below the XY respectively. Draw the Projections and find TL and its inclination with HP and VP.

**OR**

- 4 Draw the Top view and front view of a circular lamina if the surface of the lamina is perpendicular to HP and inclined at  $30^\circ$  to VP.

**UNIT – III**

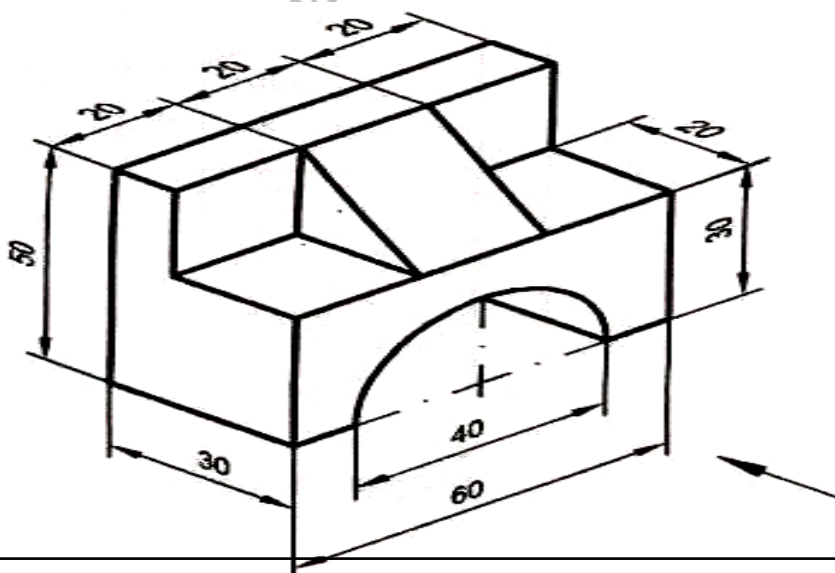
- 5 A right circle cone 40 mm base diameter and 60 mm long axis is resting on HP on one of its point on the base circle such that its axis makes  $45^\circ$  inclination with HP and  $45^\circ$  inclination with VP. Draw its projections.

**OR**

- 6 A cone, 50 mm base diameter and 70 mm axis is standing on its base on HP. It cut by a section plane  $45^\circ$  inclined to HP through base end of end generator. Draw projections, sectional views and true shape of section.

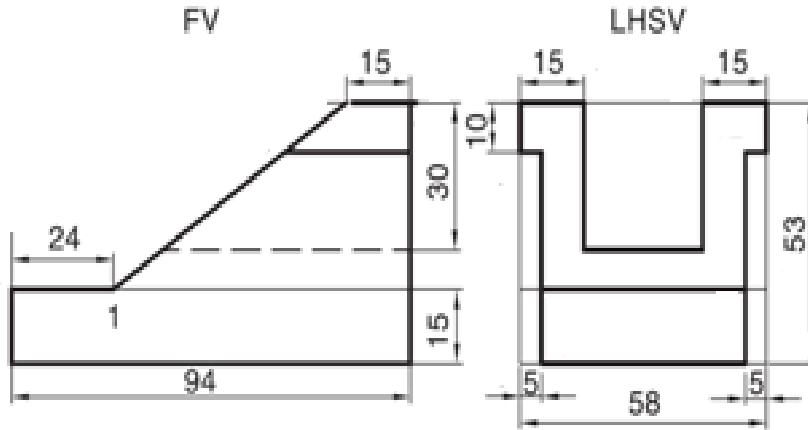
**UNIT – IV**

- 7 Draw the front view, top view and left side view for the following isometric view shown below.



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- 8 Draw the isometric view of a part shown using orthographic views below.



## UNIT – V

- 9 A vertical square prism, base 50 mm side, is completely penetrated by a horizontal square prism, base 35 mm side, so that their axes intersect. The axis of the horizontal prism is parallel to the prism, while the faces of the two prisms are equally inclined to the prism. Draw the projections of the solids, showing lines of intersection. (Assume suitable lengths for the prisms.)
- OR**
- 10 Draw the perspective view of a square pyramid of base 30 mm, side and height of apex 45 mm rests on GP. The nearest edge of the base is parallel to and 20 mm behind the picture plane. The station point is situated at a distance of 70 mm in front of the PP and 40 mm to the right of the axis of the pyramid and 60 mm above the ground.

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