

**R09**

**Code No: 09A10291**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD**

**B. Tech I Year Examinations, May/June-2013**

**ENGINEERING DRAWING**

**(Common to EEE, ECOMPE, EIE, ETM, ICE)**

**Time: 3 hours**

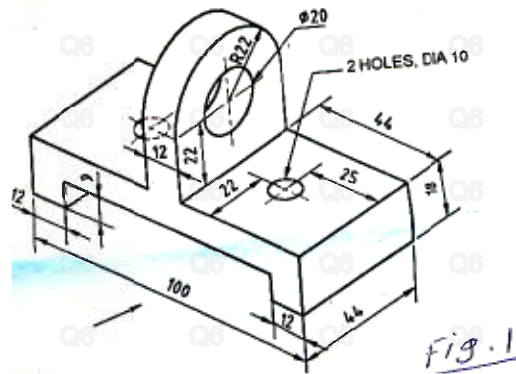
**Max. Marks: 75**

**Answer any five questions**

**All questions carry equal marks**

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1. An inelastic string is wound around the circumference of a circular disc of 40 mm diameter. Draw the curve traced out by the end of the string, when it is completely wound around the disc for one revolution keeping the string always in contact with the disc. Name the curve.
2. A line AB 80 mm long, is inclined at 40 degrees to H.P. Its one end is 10mm above H.P and 8 mm. in front of V.P. Its front view measures 60mm. Draw the projections of the line AB and determine its inclination with V.P.
3. A pentagonal prism is resting on one of its corners of the base on H.P. The longer edge containing the corner is inclined at  $45^{\circ}$  to the H.P. The top view of the axis makes an angle of  $30^{\circ}$  to V.P. Draw the projections of the solid when the edge of the solid is 30mm and height is 70 mm.
4. A pentagonal pyramid of 30mm side and height 70 mm is resting on its base on H.P such that one of the base edges is parallel to V.P. It is cut by a section plane perpendicular to V.P and inclined at 60 degrees to H.P and passes through a point 20mm below the apex. Draw the development of the lateral surface of the bottom part of the pyramid.
5. A vertical cylinder of 60 mm diameter height 100mm is penetrated by a horizontal cylinder of 35 mm. dia and 100mm. length, whose axes is parallel to V.P, such that their axes are separated by 5mm. Draw the curves of intersection. The axis of the horizontal cylinder is nearer to the observer
6. Draw the isometric projection of a cone of 3cm diameter, height 4cms placed centrally on the top face of truncated square pyramid of top face side 4 cm and bottom face side 5 cm with the height of 5 cm.
7. Draw three views for the component shown in Fig.1



All dimensions are in mm

8. A rectangular block of 20mm×30mm×60mm is resting on the ground on one of its largest faces. One of its vertical edges is in the picture plane and the longer edge is inclined at an angle  $30^{\circ}$  to the picture plane. The station point is 30 mm in front of picture plane and 50 mm above the ground plane and passing through centre of block. Draw the perspective view of the block.

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