

Roll No.																			
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.E. (FULL TIME) DEGREE END SEMESTER EXAMINATIONS, DEC 2013
FIRST SEMESTER - (REGULATIONS 2012)
GE 8152 ENGINEERING GRAPHICS

49

Time: 3 Hours

Max. Marks: 100

- Note: i) Drawings should be neat and legible
ii) Standards should be followed for dimensioning and printing

ANSWER ALL QUESTIONS (5x 20 = 100 Marks)

- 1.a) An inelastic string of 150mm length has its one end attached to the bottom most point of the circumference of a circular disc of 40mm diameter. Draw the curve traced by the other end of the string when it is completely wound around the disc keeping the string always tight. Name the curve obtained. Draw the tangent and normal to the curve at a point 100mm from the centre of the disc.

OR

- 1.b) Draw the following views of the component shown in Fig.1b.
- i) Front view (8 marks)
 - ii) Top view and (6 marks)
 - iii) Right side view (6 marks)

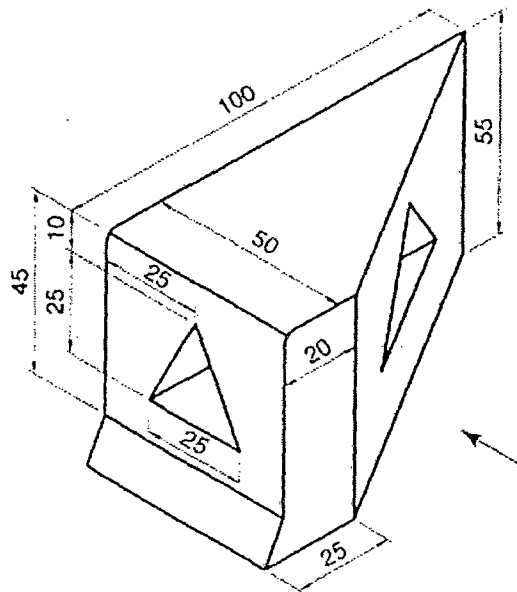


Fig.1b

- 2.a) The end A of a line AB is 10mm in front of the VP and 20mm above HP. The line is inclined at 30° to the HP and the front view is 45° with XY. The top view is 60mm long. Draw the projections of the line and find its true length and inclination with VP. Locate the traces too.

OR

- 2.b) A hexagonal lamina of side 30mm is resting on the HP such that one of the corners touches both the HP and VP. Draw the projections when its surface makes 30° with the HP and 60° with the VP.

- 3.a) A cone of 30mm diameter and height 70mm rests on the ground on one of its base circle points such that the apex is 20mm from the VP. The nearest point of the base is 50mm from the VP and the base is perpendicular to the HP. Draw the projections.

OR

- 3.b) A cylinder with a base diameter of 50mm and axis 65mm has a generator in the VP and is inclined at 45° to the HP such that the lowest point of the base is at a distance of 25mm from HP. Draw its projections.

- 4.a) A cone of base diameter 40 mm and height 50 mm rests vertically on its base on the ground. It is cut by a plane perpendicular to the V.P. and inclined at 45° to the H.P. The cutting plane bisects the axis of the cone. Draw the front view, sectional top view and the true shape of the section.

OR

- 4.b) A pentagonal prism of base side 25mm and height 70mm stands on one of its ends on the HP with a rectangular face parallel to the VP and farther away from it. A hole of 35mm diameter is drilled centrally through the prism in such a way that the axis of the hole bisects the axis of the prism at right angles. The axis of the hole is perpendicular to the VP. Draw the development of the lateral surfaces of the prism.

5.a) A cylinder of 50mm diameter and axis height 60mm is resting on the ground on its base. It is cut by a section plane which is perpendicular to the VP and inclined at 55° to the HP. The section plane passes through a point on the axis which is at a distance of 45mm from the base. Draw the isometric view of the bottom portion of the cylinder.

OR

5.b) A square pyramid having base of side 40mm side and height 60mm rests on the GP with an edge of the base parallel to and 15mm behind the picture plane. The station point is 90mm above the GP and 75mm in front of the picture plane and lies in a central plane which is 40mm towards the right of the axis of the pyramid. Draw its perspective view.