



**B.E. (FULL TIME) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC2011
FIRST SEMESTER - (REGULATIONS 2008)
GE 9111 ENGINEERING GRAPHICS**

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. Draw the following views of the component shown in Fig.1 by free hand sketching.
- i) Front view
 - ii) Top view and
 - iii) Right side view
 - iv) Left side view

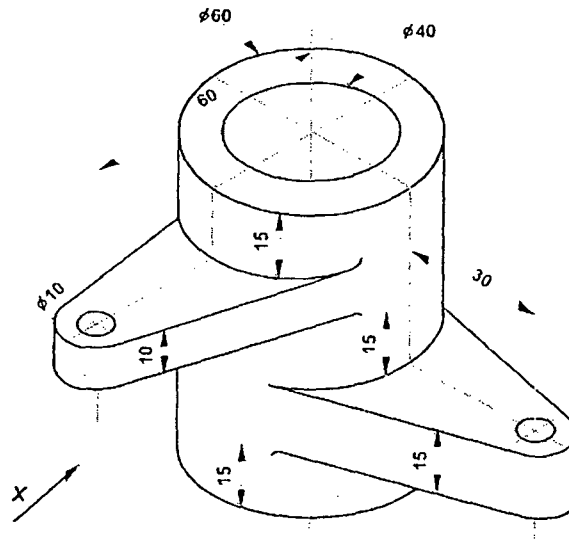


Fig.1

- 2.a Draw the projections of a line AB, 90 mm long whose mid point M is 50 mm above the HP and 40 mm in front of VP. The end A is 20 mm above the HP and 10 mm in front of the VP. Determine the inclination of the line with the HP and the VP.

OR

- 2.b Draw the projections of a circular plane of diameter 50mm resting on a point A of the circumference in the HP. Such that its surface is inclined at 45° to the HP and the diameter through the point A is inclined at 30° to the VP.

- 3.a** A frustum of a pentagonal pyramid, having a 40mm base edge and 20 mm top edge is resting on one of its inclined faces on the HP. Draw its projections when its axis which is 60 mm long is at a distance of 60 mm from the VP.

OR

- 3.b** A hexagonal prism, having a base of 30mm side and axis 70mm long is resting on a rectangular face on the ground with the axis parallel to the VP. It is cut by a plane which makes an angle of 45° to the VP and passes through a point on the axis 25 mm from the right end. The cutting plane passes through the right end of the prism and the face nearer the observer. Draw the sectional front view and obtain the true shape of the section.
- 4.a** A cylindrical drum with a 60mm diameter and axis 100mm long is resting on its base on the HP. A square hole with 50 mm side is cut through the cylinder such that one of the faces of the square hole makes an angle of 30° with the HP. The axis of the square hole is perpendicular to the VP and 12mm to the right of the axis of the cylinder. Draw the development of the retained cylinder.

OR

- 4.b** A vertical cylinder of diameter 50mm and height 70mm on its base with the axis perpendicular to the HP. It is completely penetrated by another horizontal cylinder of diameter 45mm and axis 80mm long. The axis of the horizontal cylinder is parallel to the VP and the two axes bisect each other. Draw the projections of the combination and show the curves of intersection.
- 5.a** A frustum of a cone of base diameter 60mm, top diameter of 30mm and height 75mm is resting on a cylindrical pedestal. The pedestal is of diameter 70 mm and height 30mm. Draw the isometric projection of the cone standing on the pedestal.

OR

- 5.b** A square pyramid having base of side 40 mm and axis 60 mm long, lies on its base in the GP with edge of the base parallel to and 15mm behind the picture plane (PP). The station point lies in a Central Plane which is 40 mm towards the right of the axis of the pyramid, 75 mm in front of the PP and 90 mm above GP. Draw its perspective view.