



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. A hexagonal pyramid, having a base of side 30mm and axis 70mm long, rests on the ground with a side of the base parallel to the V.P. A circular hole of diameter 30mm is cut through the faces of the pyramid such that the axis of the hole and pyramid intersects at right angles and 25mm above the base. Draw the development of the lateral surface of the pyramid.
- 2.a An 70 mm long line PQ has its end P 10mm above HP and the other end Q 80mm in front of VP. The line is inclined at 30° to the HP and 50° to the VP. Draw its projections.

OR

- 2.b A pentagon ABCDE with 40mm side, has its side AB in the VP and inclined at 30° to the HP. The corner A is 15mm above the HP and the corner D is 30 mm in front of the VP. Draw the projections of the plane and find its inclination with the VP
- 3.a A bucket in the form of a frustum of a cone has diameters 300mm and 750mm at the bottom and the top respectively. The bucket height is 800mm. The bucket is filled with water and tilted through 40° to the ground such that the axis is parallel to the vertical plane.. Draw the projections of the bucket showing the water surface in both the views.

OR

- 3.b A cylinder with a 50mm base diameter and axis 60mm long is resting on its base on the HP such that the axis is at a distance of 40mm from the VP. It is cut by a section plane perpendicular to the VP the VT of which cuts the axis at a point 40mm from the bottom face and makes an angle of 45° to the HP. The section plane cuts the left end of the cylinder. Draw its projections showing the sectional top view and true shape of the section.

4.a Draw the following views of the component shown in Fig.4a by free hand sketching.

- i) Front view
- ii) Top view and
- iii) Right side view
- iv) Left side view

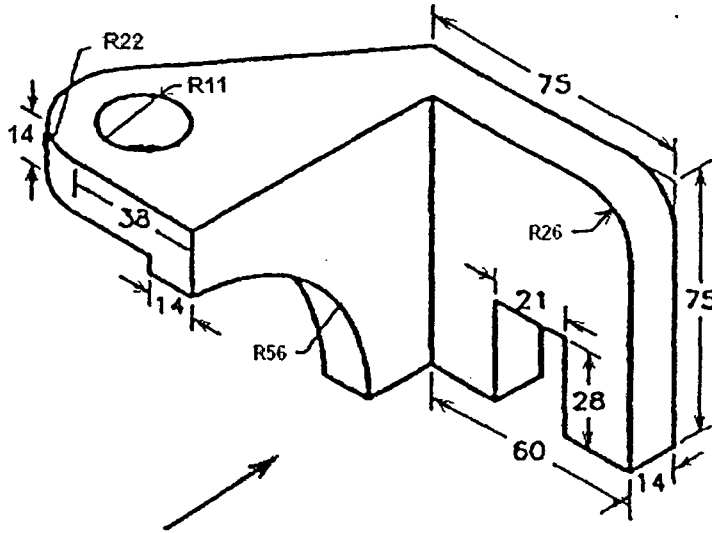


Fig.4a

OR

4.b Draw the path traced out by an end of a piece of thread when unwound to a length of 160mm from a circle of 45 mm diameter, the thread being kept tight when it is unwound. Name the curve traced.

5.a A hexagonal pyramid of base edge 25mm and height 50mm rests on the H.P. on its base with two of its base edges perpendicular to the V.P. It is cut by a plane whose VT is inclined at 30° to the xy. It intersects the axis of the pyramid 40 mm from the base. Draw the isometric view of the truncated pyramid.

OR

5.b Draw a perspective view of a pentagonal pyramid having base 40 mm side and axis 60 mm long, resting on its base in the GP with its axis at a distance of 40 mm behind the PP and an edge of the base to the right of the axis inclined at 60° to it. The station point is 50 mm in front of PP, 90 mm above GP and lies in a Central Plane which is 50 mm towards the right of the axis.