

17/5/13

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B.E. (FULL TIME) DEGREE END SEMESTER EXAMINATIONS, MAY 2013
FIRST SEMESTER - (REGULATIONS 2008)
GE 9111 ENGINEERING GRAPHICS

45

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

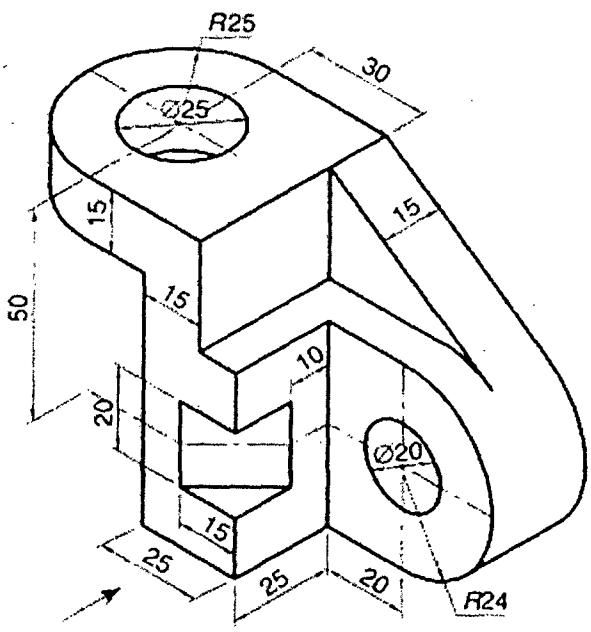


Fig.1

- 2.a) The top view of a 75 mm long line PQ measures 50 mm. The end P is 15mm above the H.P and 50 mm in front of the V.P. The end Q is 20 mm in front of the V.P. and above the H.P. Draw its projections and determine its true angles of inclination with the reference planes.

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 hexagonal pyramid, of base edge 35 mm and axis 80 mm long, has an edge of its base parallel to the H.P. The axis is parallel to the V.P and inclined at 45° to the HP. Draw its projections when the axis is at a distance of 50 mm from V.P and apex lies on the HP.

OR

- 3.b) A cylinder with a base diameter of 50mm and axis 80mm is lying on a generator on the HP with its axis parallel to 40mm from the VP. It is cut by a plane inclined at 30° to the HP and passing through a point on the axis 30 mm from the right end such that the plane cuts the right end and the top generator. Draw the sectional top view and obtain the true shape of the section.

- 4.a) A cone of base diameter 60 mm and height 75 mm rests vertically on its base on the ground. It is cut by a plane perpendicular to the V.P. and inclined at 30° to the H.P. The cutting plane bisects the axis of the cone. Draw the development of the lateral surfaces of the truncated cone.

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

OR

- 5.b) A square prism having base of side 40 mm and axis 60 mm long, lies on its base in the GP with a rectangular face parallel to and 15 mm behind the PP. The station point lies in a Central Plane which is 50 mm towards the right of the axis, 65 mm in front of the PP and 80 mm above GP. Draw its perspective view.