

Question Paper Code : 61001

B.E./B.Tech. DEGREE EXAMINATIONS, JANUARY 2012.

First Semester

GE 2111 — ENGINEERING GRAPHICS

(Common to all branches)

(Regulations 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

(5 × 20 = 100)

1. (a) Draw the locus of a point P which moves in a plane in such a way that the ratio of its distances from a fixed point F and a fixed straight line AB is always 2/3. The distance between the fixed point F and fixed straight line is 50 mm. Also draw a tangent and normal on a point on the locus at a horizontal distance of 55 mm from the fixed straight line. (20)

Or

- (b) Draw the free hand sketches of the Front View, Top view and Right side view of the machine component given below in figure. 1(b) : (20)

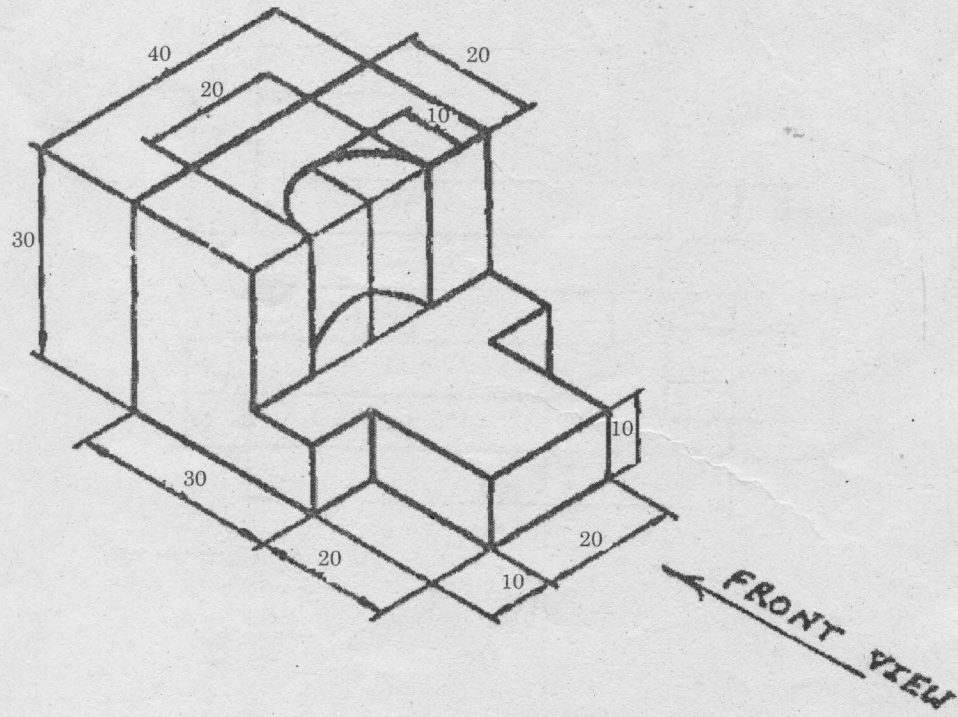


Fig. 1 (b)

2. (a) A line PQ measuring 70 mm is inclined to H.P. at 30° and to V.P. at 45° with the end P 20 mm above H.P. and 15 mm in front of V.P. Draw its projections. (20)

Or

- (b) A rectangular plate of side 50×25 mm is resting on its shorter side on H.P. and inclined at 30° to V.P. Its surface is inclined at 60° to H.P. Draw its projections. (20)
3. (a) Draw the projections of a pentagonal prism of 30 mm base edges and axis 60 mm long when the axis is inclined at 75° to the H.P. and parallel to the V.P. with an edge of the base on the H.P. (20)

Or

- (b) A right regular hexagonal pyramid, edge of base 25 mm and height 50 mm, rests on one of its base edges on H.P. with its axis parallel to V.P. Draw the projections of the pyramid when its base makes an angle of 45° to the H.P. (20)
4. (a) A square pyramid base 40 mm side and axis 65 mm long has its base on H.P. and all the edges of the base are equally inclined to V.P. It is cut by a section plane perpendicular to V.P. and inclined at 45° to H.P. and bisecting the axis. Draw its sectional top view, and the true shape of the section. (20)

Or

- (b) Draw the development of the lateral surface of the lower portion of a cylinder of diameter 50 mm and axis 70 mm. The solid is cut by a section plane inclined at 40° to H.P. and perpendicular to V.P. and passing through the midpoint of the axis. (20)
5. (a) Draw the isometric projection of the object from the views shown in Fig. 5(a). (20)

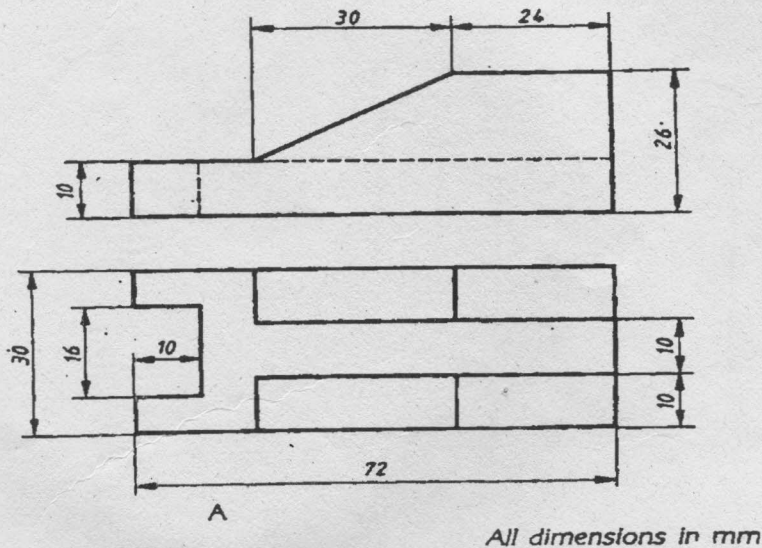


Fig. 5(a)

Or

- (b) A rectangular pyramid, base $30\text{ mm} \times 20\text{ mm}$ and axis 35 mm long, is placed on the ground plane on its base, with the longer edge of the base parallel to and 30 mm behind the picture plane. The central plane is 30 mm to the left of the apex and station point is 50 mm in front of the picture plane and 25 mm above the ground plane. Draw the perspective view of the pyramid. (20)
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