

Ganpat University
B.Tech. Sem. I (CE/IT/EC/BM&I/Marine)
CBCS Regular Examination Nov-Dec 2013
Subject: 2ME102 Engineering Graphics

Time: 3 hours

Total Marks: 70

Instruction:

1. All questions are compulsory
2. Figures to the right indicate full marks
3. Answer to the two sections must be written in separate drawing sheet
4. Assume all necessary data
5. All dimensions are in mm and figures drawn in the question paper are not to the scale.

SECTION-1

Que.1. Draw the following views in the 1st angle projection system Fig. No.1. 12

1. Front view from X direction
2. Top view
3. L.H.S.V.

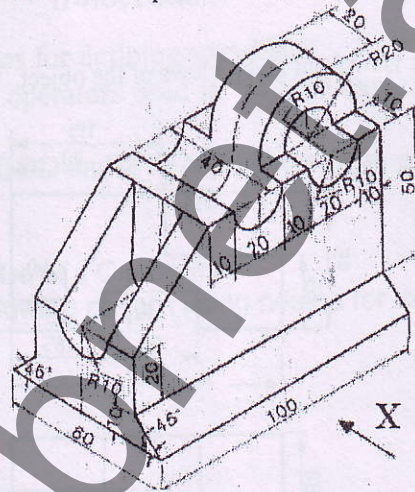


Fig.No.1.

OR

Que.1. Draw the sectional orthographic projection using 1st angle projection system Fig. No.2. 12

- (1.) Front view from X direction
- (2) Top View
- (3). Full section side view taking along section X-X

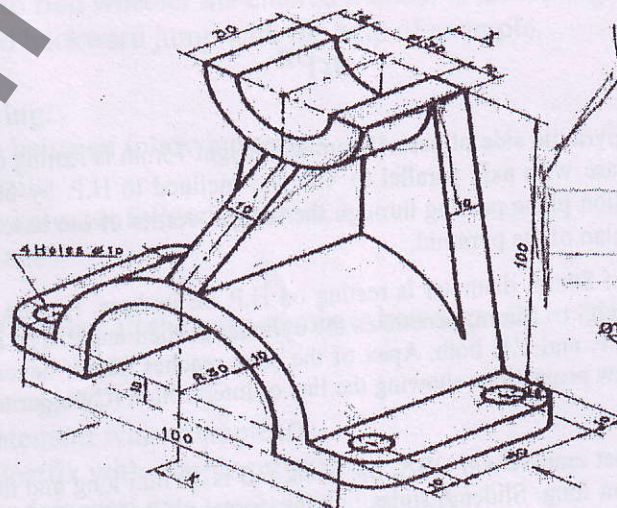


Fig.No.2.

Que.2. The distance between the end projectors of a straight line AB is 80mm. Point A is 10mm above H.P. and 30mm in front of V.P. Point B is 40mm above H.P. and 50mm behind V.P. Draw the projections and find the inclination of straight line AB with H.P. & V.P., True length of the line AB and H.T, V.T. 11

OR

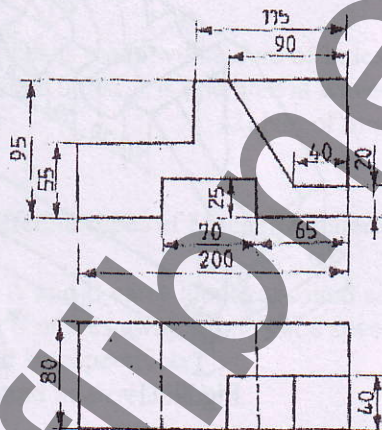
Que.2. An isosceles triangular plate, of 50 mm base and 75 mm altitude, appears as an equilateral triangle of 50 mm in front view. Draw the projections of plate if its 50 long edge is on the V.P. and inclined at 45° to the H.P. what is the inclination of a plate with the V.P. 11

Que.3. (a) The distance of vertex point 50 mm from straight wall and its eccentricity is $5/3$ construct the engineering curves and give the name of curves 6

(b) The dimension of major axis and minor axis are 120 mm and 70 mm respectively construct the ellipse by concentric circle method 6

SECTION-II

Que.4. Draw the Isometric view from given views of the object. 11



Que.5. A cone of base is 50 mm diameter and the true length of generator 80 mm long is lying on the one of its generators on the H.P. The top view of the axis making an angle of 45° with the V.P. Draw the projection 12

OR

Que.5. A pentagonal pyramid side of base 45 mm and height 75mm is resting on H.P. on one of its edges of base with axis parallel to V.P. and inclined to H.P. by 60° it is cut by a horizontal section plane passing through the highest corner of the base. Draw elevation and sectional plan of the pyramid. 12

Que.6. A cylinder of 80mm diameter is resting on H.P. on its base. A cone, diameter of base 90mm and height 110mm, penetrates the cylinder at right angle. The axis of the cone is parallel to H.P. and V.P. both. Apex of the cone reaches 60mm beyond the axis of the cylinder. Draw projections showing the line of intersection (Cylinder to Cone). 12

OR

Que.6. (a) In an offset crank chain OBA, the crank OB is 30 mm long and the connecting rod BA is 100 mm long. Slider A slides in a horizontal guide 15 mm below the horizontal from O. draw the loci of midpoint P on connecting rod BA for one revolution of crank OB. 6

(b) Draw the free hand sketch (i) Dome Nut (ii) Double riveted double strip butt joint. 6