PVP 12

Code: **AE1T6, CE1T6, ME1T5**

I B.Tech-I Semester-Regular Examinations-February 2013

ENGINEERING DRAWING

(Common for AE, Civil, Mechanical)

Duration: 3hours Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. (a) Construct a scale of R.F. =1/84480to show furlongs and long enough to measure upto 6 miles. [7m]

   (b) The area of a field is 50,000m^2. The length and breadth of the field, on the map is 10cm & 8cm respectively. Construct a diagonal scale which can read up to 1m.Mark the length of 235m on the scale. [7m]

2. (a) Inscribe an ellipse in a parallelogram having sides 150mmand 100mm long and an included angle of 120^0.

   [7m]

   (b) A circle of 50mm diameter rolls on another circle of 175mm diameter and outside it. Trace the locus of a point on the circumference of the rolling circle for one complete revolution. Name the curve. [7m]

3. (a) The top view of a 75 mm long line CD measures 50 mm. C is 40 mm in front of the V.P. and 10 mm below the HP. D is 15 mm in front of the V.P. and is above the H.P.

Draw the front view of CD and find its inclinations with the H.P. and the V.P. Show its traces. [7m]

(b) Two points A and B are in the H.P. The point A is 30 mm in front of the V.P., while B is behind the V.P. The distance between their projectors is 75 mm and the line joining their top views makes an angle of 45^0 with xy. Find the distance of the point B from the V.P. [7m]

4. A thin 30^0-60^0 set-square has its longest edge in the V.P. and inclined at 30^0 to the H.P. Its surface makes an angle of 45^0 with the V.P. Draw its projections. [14m]

5. A square pyramid, base 38mm side and axis 50mm long, is freely suspended from one of thecorners of its base. Draw its projections when the axis as a vertical plane makes an angle of45^0 with the V.P. Consider when the pyramid is suspended freely from a corner of its base, the imaginary line joining that corner with the center of gravity of the pyramid will be vertical. [14m]

6. A pentagonal pyramid, base side 30mm, length of axis 80mm is resting on a base edge on the H.P. with a triangular face containing that edge being perpendicular to the V.P. and inclined to the H.P. at60^0. It is cut by a horizontal section plane whose V.T. passes through the mid- point of the axis. Draw the front view, sectional top view and add a profile view. [14m]

7. Draw the following views of the object shown in Fig. 1.All dimensions are in mm. [14m]

a) Front view. b) Top view. c) Side view.

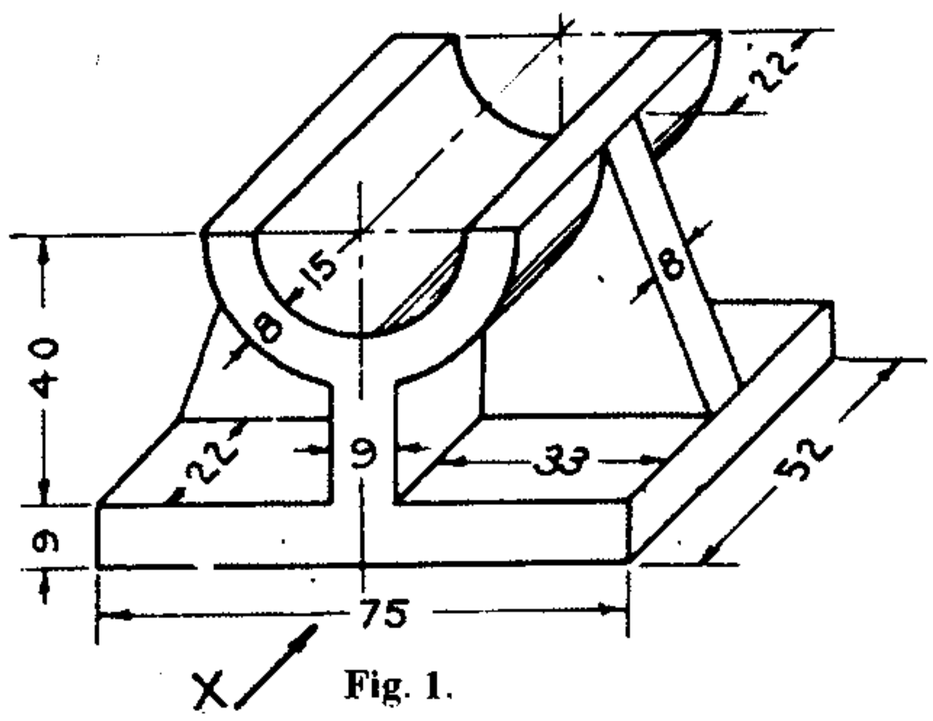

Fig. 1.

8. Draw the isometric projection of a sphere of 60mm diameter resting centrally on the top of a square prism having 30 mm side of the base and 50mm axis height. [14m]

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