



Reg. No. :

--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : X20658

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020
First Semester
Civil Engineering
GE6152 – ENGINEERING GRAPHICS
(Common to All Branches Except Marine Engineering)
(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

(5×20=100 Marks)

1. a) The distance between Chennai and Madurai is 400 km. It is represented by a distance of 8 cm on a railway map. Find the R.F. and construct a diagonal scale to read kilometres. Show on it the distances of 543 km, 212 km and 408 km.

(OR)

- b) Sketch free hand the top, front and right side views of the object shown in fig. 1 (b).

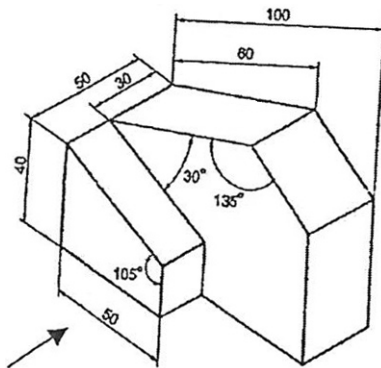


Fig. 1 (b)

2. a) The distance between the projectors of two points A and B is 70 mm. Point A is 10 mm above the H.P. and 15 mm in front of the V.P. Point B is 50 mm above the H.P. and 40 mm in front of the V.P. Find the shortest distance between A and B by the rotating line method. Measure the true inclinations of the line AB with the V.P. and the H.P. Also mark the traces.

(OR)



b) A pentagon of 35 mm side is resting on one of its corners on the VP. The edge opposite to that corner makes an angle of 30° to the HP. The surface of the pentagon is inclined at 40° to the VP. Draw the projections.

3. a) A pentagonal pyramid of base side 30 mm and axis length 60 mm is resting on HP on one of its base corner such that the slant edge containing the resting corner is perpendicular to HP and Parallel to VP. Draw its projections.

(OR)

b) Draw the projections of a cylinder of diameter 50 mm and axis length 70 mm when it is lying on the ground with its axis inclined at 45° to the VP and parallel to the ground.

4. a) A square pyramid of 40 mm base side and 65 mm long axis has its base on the H.P. and all the edges of base are equally inclined to the V.P. It is cut by a section plane perpendicular to the V.P. and inclined at 45° to the H.P. and bisecting the axis. Draw the sectional top view and true shape of the section.

(OR)

b) A cone with a 50 mm base diameter and 60 mm long axis, rests with its base on the H.P. Draw the development of its lateral surface when it is cut by an auxiliary inclined plane which bisecting the axis and inclined 60° to the H.P.

5. a) Draw the isometric view of a frustum of a hexagonal pyramid when it is resting on its base on the HP with two sides of the base parallel to the VP. The side of base is 20 mm and top 8 mm. The height of the frustum is 55 mm.

(OR)

b) A square prism of base 25×25 mm and height 40 mm rests on the GP on one of its ends with a rectangular face receding away from the PP towards right making 60° with PP. The corner nearest to the PP is 40 mm to the left of the station point and 20 mm behind the PP. The station point is 60 mm above the GP and 50 mm in front of the PP. Draw the perspective view of the prism by visual ray method . Use the top view and the front view
