

Register No:

B.E/B.TECH. DEGREE EXAMINATIONS: MAY/JUNE 2011

First Semester

MEC101: ENGINEERING GRAPHICS

(Common to all Branches)

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (5 x 20 = 100 Marks)

1. a) Construct a conic when the distance of its focus from its directrix is equal to 50 mm and its eccentricity is $\frac{3}{4}$.

(OR)

- b) A carriage wheel having a diameter of 50mm is rolled on a rail. The wheel has a flange of 60 mm dia. Draw the path of a point on the flange for 1.5 complete rotations of the wheel. Name the curve

2. a) A point A is 25mm above HP and 35mm in front of VP. Another point B is 30mm below HP and 40mm behind VP. Draw the projection of these points taking the distance between the end projectors as 60mm. Also find the length of the line joining their plans and elevations.

(OR)

- b) A line AB 80mm long has its end A 20mm above HP and 25mm in front of VP. The line is inclined at 45 degree to HP and 35 degree to VP. Draw its projections.

3. a) A square plane of side 40mm has its surface parallel to VP and perpendicular to HP. Draw its projections when one of the sides is inclined at 30 degree to HP.

(OR)

- b) Draw the projection of a cylinder of base 30mm dia and axis 70mm long. Its one of the base is 20 mm above HP and axis is 50mm in front of VP and parallel to VP.

4. a) A hexagonal prism of base side 30mm resting on HP on one of its base with two of the vertical faces perpendicular to VP. It is cut by a plane inclined at 50 degree to HP and

perpendicular to VP and passing through a point at a distance 12mm from the top base. Draw its front view, Sectional top view and true shape of the section.

(OR)

b) A cylinder of base dia 50mm and axis length 60mm is resting on HP on its base, cut by a plane inclined at 65 degree to HP and perpendicular to VP. The cutting plane is passing through a point on the axis at a distance 15mm from the top end. Draw the development of the lateral surface of the remaining portion of the cylinder.

5. a) Draw the Isometric view of a frustrum of 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 20mm and top 8mm. The height of the frustrum is 55mm.

(OR)

b) Draw the orthographic view of the given Isometric view shown below


