

**I B. Tech I Semester Supplementary Examinations, December-2021****ENGINEERING DRAWING**

(Com. to CE, ME, ECE, PE, EIE, FE)

Time: 3 hours

Max. Marks: 70

**Answer any five Questions one Question from Each Unit****All Questions Carry Equal Marks****UNIT-I**

1. a) A circle of 40 mm diameter rolls without slipping on a straight line. Trace the locus of a point on the circumference of the circle for one complete revolution. (10M)
- b) Construct a regular pentagon of side 60mm by general method (4M)

**Or**

2. a) Construct an ellipse with major axis 90mm and minor axis 60mm by arcs of circles method (10M)
- b) Construct a regular hexagon of side 60mm by general method (4M)

**UNIT-II**

3. a) Draw the projections of the following points, keeping the projectors 25 mm apart. P- in the HP and 25 mm behind the VP, Q- 45 mm above the HP and 30 mm in front of the VP, R- in the VP and 50 mm above the HP, S- 30 mm below the HP and 35 mm behind the VP and T- in both the HP and VP. (7M)
- b) The top view of a 75mm long line measures 55mm. The line is in the V.P., its one end being 25mm above the H.P. Draw its projections. (7M)

**Or**

4. a) Draw the projections of a 75mm long line inclined at  $30^{\circ}$  to the H.P and its one end 20mm above the H.P, parallel to and 25mm in front of the V.P. (7M)
- b) Draw the projection of the following points along a common reference line. (i) Point M 15mm below HP and 35mm behind VP. (ii) Point N 20mm away from the reference planes and is in IV quadrant. (iii) Point R 10mm above HP and the same distance behind VP. (7M)

**UNIT-III**

5. a) A pentagonal plane of side 30mm is in the V.P with one of its edge in the H.P. Draw its projections. (7M)
- b) A circle of 50 mm diameter is resting on HP on end A of its diameter AC which is  $30^{\circ}$  include to HP, while its top view is inclined to VP. Draw its projections. (7M)

**Or**

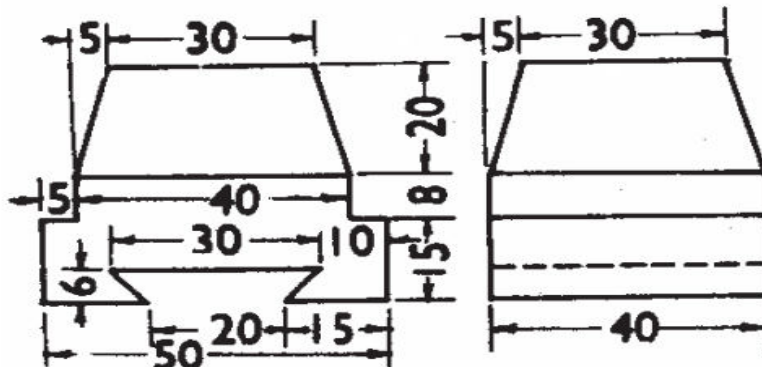
6. a) Draw the projections of a hexagonal lamina of 35mm side, having its surface inclined at  $45^{\circ}$  to the VP and the side on which it rests on the VP makes an of  $60^{\circ}$  with the HP. (7M)
- b) Draw the projections of an equilateral triangle of side 40mm, one edge in the V.P and its surface in the H.P (7M)

## UNIT-IV

7. a) Draw the projections of a pentagonal prism, situated with a rectangular face parallel to and 10mm above the HP, axis perpendicular to the VP and one base in the VP. Take side of the base 40mm and the axis 65mm long. (7M)
- b) Draw the projections of a cone, base 35mm diameter and axis 50mm long, with its base on the H.P and axis perpendicular to H.P (7M)
- Or**
8. a) Draw the projections of a cylinder, base 35mm diameter and axis 55mm long, with its base in the V.P (7M)
- b) Draw the projections of a square pyramid of base edges 30 mm and axis 54 mm, resting on its base edge on H.P with one base edge parallel to VP and axis inclined at  $45^\circ$  to the HP. (7M)

## UNIT-V

9. Draw the isometric projection of the object from the views shown in figure below. (14M)  
All dimensions are in mm.



Or

- 10 Draw the three orthographic views of the object shown in figure. All dimensions are in mm. (14M)

