

I B. Tech I Semester Supplementary Examinations, August/Sep - 2022
ENGINEERING DRAWING

(Com. to CE, EEE, ME, ECE, CSE, Chem E, EIE, IT, Pet E, Agri E)

Time: 3 hours

Max. Marks: 75

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT-I

1. a) The Directrix of a hyperbola is 65mm from its focus. Draw the curve if the eccentricity is $\frac{3}{2}$. Draw a normal and a tangent at a point on the curve, 75 mm from the Focci. (8M)
- b) Construct a plain scale of RF 1:50000 to show kilometers and hectometers and long enough to measure up to 7 kilometers. Measure a distance of 54 hectometers on your scale. (7M)

Or

2. a) Construct an ellipse when its major axis is 120mm and the distance between the foci is 108mm. Determine the length of the minor axis by intersecting arc (or) arc of circle (or) foci method. (8M)
- b) A map of size 500cm X 50cm wide represents an area of 6250 sq.Kms. Construct a vernier scale to measure kilometers, hectometers and decameters and long enough to measure upto 7 km. Indicate on it 5.33 km. (7M)

UNIT-II

3. a) A point P is 15mm above the H.P. and 20mm in front of the V.P. Another point Q is 25mm behind the V.P. and 40mm below the H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90mm. Draw straight lines joining (i) their top views and (ii) their front views. (8M)
- b) A 100mm long line is parallel to and 40mm above the HP. Its two ends are 25mm and 50mm in front of the VP respectively. Draw its projections and find its inclination with the VP. (7M)

Or

4. a) A point 30mm above xy line is the plan view of two points P and Q. the elevation of P is 45mm above the HP. while that of the point Q is 35mm below the HP. Draw the projections of the points and state their position with reference to the principal planes and the quadrant in which they lie. (8M)
- b) A line CD 80mm long is inclined at an angle of 30° to HP and 45° to VP. The point C is 20mm above HP and 30mm in front of VP. Draw the projections of the straight line. (7M)

UNIT-III

5. a) A pentagonal plate of 35mm side is perpendicular to VP and parallel to HP. One of its edges is perpendicular to VP. Draw its projections. (8M)

- b) Draw the projections of a circle of 75mm diameter having the end A of a diameter AB in the HP, the end B in the VP, and the surface inclined at 30° to the HP and at 60° to the VP. (7M)

Or

6. a) A regular pentagon of 25mm side has one side on the ground. Its plane is inclined at 45° to the HP. and perpendicular to the VP. Draw its projections. (8M)
- b) A circular plate of negligible thickness and 50mm diameter appears as an ellipse (7M) in the front view, having its major axis 50mm long and minor axis 30mm long. Draw its top view when the major axis of the ellipse is horizontal.

UNIT-IV

7. Square pyramid base 40 mm side, axis 60 mm long has its base in VP. One edge of base inclined to 30° to HP and corner contained by that edge is on HP. Draw its projections. (15M)

Or

8. Draw the projections of a pentagonal pyramid, base 30 mm edge and axis 50mm long, having its base on the HP. and an edge of the base parallel to the VP. Also draw its side view. (15M)

UNIT-V

9. Draw the isometric view of a hexagonal prism, with side of base 30mm and length of axis 60mm, when its axis is (i) vertical and (ii) Horizontal. Use the box method (15M)

Or

10. Draw the Front View, Top view & Both side views of the figure shown below. All dimensions are in mm. (15M)

