

I B. Tech I Semester Supplementary Examinations, April - 202
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) Draw a straight line AB of any length. Mark a point F, 65mm from AB. Trace the path of a point P moving in such away, that the ratio of its distance from the point F, to its distance from AB is 2:3. Draw a normal and a Tangent to the curve at a point on it, 50mm from directrix. (8M)
- b) Construct a forward reading vernier scale to read distance correct to decametre on a map in which the actual distances are reduced in the ratio of 1: 40,000. The scale should be long enough to measure up to 6 km. Mark on the scale a length of 3.34 km and 0.59 km. (7M)

Or

2. a) The foci of an ellipse are 80mm apart and the minor axis is 55mm long. Determine the length of the major axis and draw the ellipse by concentric-circle method. Draw a curve parallel to the ellipse and 20mm away from it. (8M)
- b) Draw a vernier scale of RF = 1 / 25 to read centimeters upto 4 meters and on it, show lengths 2.39 m and 0.91 m (7M)

UNIT II

3. a) Two points A and B are on H.P the point A being 30mm in front of V.P, while B is 45mm behind V.P. The line joining their top views makes an angle of 45° with xy. Find the horizontal distance between two points. (8M)
- b) A line GH 45 mm long is in HP and inclined to VP. The end G is 15 mm in front of VP. The length of the front view is 35 mm. Draw the projections of the line. Determine its inclination with VP. (7M)

Or

4. a) A point at 25mm above the reference line x y is the front view of two points A and B. The top view of A is 40mm behind VP. and the top view of B is 50mm in front of VP. Draw the projections of the points and state their positions relative to the planes of projection and the quadrants in which they lie. (8M)
- b) A line AB is 75 mm long. A is 50 mm in front of VP and 15 mm above HP. B is 15 mm in front of VP and is above HP. Top View of AB is 50mm long. Draw and measure the front view. Find the true inclinations. (7M)

UNIT III

5. a) An equilateral triangle of 50mm side is parallel to VP. Perpendicular to HP. Draw its projections when one of the side is (i) Perpendicular to HP. (ii) Parallel to HP. (iii) Inclined 45° to HP. (8M)
- b) Draw the projections of a circle of 5 cm diameter, having its plane vertical and inclined at 30° to VP. Its center is 3 cm above the HP. and 4 cm in front of the VP. (7M)

Or

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6. a) A rectangle of 60 X 40 mm is parallel to HP. perpendicular to VP. Draw its projections when one of its shorter side is (8M)
 (i) Perpendicular to VP.
 (ii) Parallel to VP.
 (iii) Inclined 30° to VP.
- b) A Circular plane of 60mm diameter rests on VP. on a point A on its circumference. (7M)
 Its plane is inclined at 45° to VP. Draw the projections of the plane when
 (i) The front view of the diameter AB makes 30° with HP. and
 (ii) The diameter AB itself makes 30° with HP.

UNIT IV

7. A square prism, side of base 30 mm and axis 45 mm long lies on HP such that its axis is parallel to both HP and VP., Draw the top and front views of the prism when (i) it lies with one of its rectangular faces on HP. and (ii) it lies with one of its longer edges on HP. (15M)

Or

8. A hexagonal prism has one of its rectangular faces parallel to the HP. Its axis is perpendicular to the VP. and 3.5 cm above the ground. Draw its projections when the nearer end is 2 cm in front of the VP. Side of base 2.5cm long, axis 5 cm long. (15M)

UNIT V

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

Or

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

