

Code: 15A03101b

B.Tech I Year II Semester (R15) Supplementary Examinations December 2019

ENGINEERING DRAWING

(Common to IT and ME)

Time: 3 hours

Max. Marks: 70

(Answer all five units, 05 X 14 = 70 Marks)

UNIT – I

- 1 Construct a hyperbola when the distance of the focus from the directrix is 75 mm and eccentricity is $3/2$.

OR

- 2 Draw a parabola with a parallelogram of sides 100 mm and axis 50 mm, given that the acute angle is 70° .

UNIT – II

- 3 (a) Draw the projections of the following points:
(i) A, 25 mm above HP and 30 mm in front of VP.
(ii) B in both HP and VP.
(iii) C in VP and 35 mm below HP.
(iv) D in HP and 50 mm behind VP.
(v) E, 10 mm below HP and 20 mm behind VP.
(b) A point is situated in first quadrant. It is equidistant from the principal planes and its shortest distance from the point of intersection of HP, VP and auxiliary plane. Draw the projections of the point and determine its distance from the principal planes.

OR

- 4 (a) Draw the projections for the left side and right side views of the following points whose positions are given by the following coordinates:
(i) P(+35, +15, +25) mm.
(ii) Q(-35, -15, +25) mm.
(iii) R(-35, +15, -25) mm.
(b) A point Q is 20 mm below HP and lies in the third quadrant. Its shortest distance from XY is 40 mm. Draw its projections.

UNIT – III

- 5 A straight line AB has its end point A 15 mm above the HP and in VP. The front view of the line is 50 mm long and is inclined at 45° to the XY line. Draw the projections of straight line AB when its top view is inclined at 30° to the XY line. Find the true length and true inclinations of AB with the HP and the VP.

OR

- 6 A thin rectangular plan of side 40 mm X 20 mm has its shorter side in the HP and base resting is inclined at an angle of 30° to the VP. Project its front view when its top view is a perfect square of 20 mm side.

UNIT – IV

- 7 A square prism, side of base 35 mm and axis 50 mm long lies with one of its longer edges on HP such that its axis is perpendicular to VP. Also one of its rectangular faces containing that longer edge is inclined at 30° to HP. Draw its projections.

OR

- 8 A right regular pentagon pyramid of side 30 mm and 60 mm height is resting on its base on HP having one of its base edges perpendicular to the VP. Develop the lateral surface of the prism.

UNIT – V

- 9 A hexagonal pyramid of base side 25 mm and axis 60 mm stands on HP such that an edge of the base is parallel to VP and nearer to it. Draw the isometric projection.

OR

- 10 Draw the isometric projection of a cone of base diameter 40 mm and height 80 mm resting on HP with its base.