

Code: 15A03101a

B.Tech I Year II Semester (R15) Supplementary Examinations December 2018

ENGINEERING DRAWING

(Common to ECE & EIE)

Time: 3 hours

Max. Marks: 70

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

UNIT – I

- 1 Construct a parabola when the distance between focus and directrix is 40 mm. Also draw a normal and tangent to the curve at any point.

OR

- 2 A roller of 50 mm diameter rolls on a straight line without slip in the initial position of a diameter PQ of the circle is parallel to the line on which it rolls. Draw the locus of the point P from one complete revolution of the roller. Name the curve. Draw the tangent and normal at any point on the curve.

UNIT – II

- 3 (a) Construct a diagonal scale to read up to 1/100 of kilometers having given the value of R.F 1:50,000 and to measure up to 8 km. Indicate on the scale, a distance of 6.76 km.
(b) A point A is 15 mm above HP and 20 mm in front of VP. Another point B is 25 mm behind VP and 40 mm below HP. Draw the projections of A and B, keeping the distance between the projectors equal to 90 mm. Draw straight lines, joining: (i) The top views. (ii) The front views.

OR

- 4 (a) A rectangular plot of land of area 0.45 hectare is represented on a map by a similar rectangle of 5 sq. cm. Calculate the scale of the map. Also construct a scale to read up to a single meter and a long enough to measure 600 m. Mark on it a distance of 375 m.
(b) Two points A and B are on HP, the point A is 30mm in front of VP and point B is 40 mm behind the VP. The line joining their top views makes an angle of 45° with xy. Find the horizontal distance between two points.

UNIT – III

- 5 A line PQ is inclined at 30° to the H.P. The end P is 15 mm in front of the V.P and the mid-point of the line is 40 mm above the H.P. The front view measures 60 mm and is inclined at 45° with the reference line. Draw the projections of the line and determine its true length and inclination with V.P.

OR

- 6 A regular pentagon of 30 mm side is resting on one of its edges on HP, which is inclined at 45° to VP. Its surface is inclined at 30° to the H.P. Draw its projections.

UNIT – IV

- 7 A hexagonal prism of base 25 mm and axis 50 mm long, is positioned with one of its base edges on HP, such that the axis inclined 30° to the H.P and 45° to VP. Draw its projections.

OR

- 8 A cylinder of the base diameter 50 mm and axis 70 mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to the V.P., inclined at 45° to the H.P passing through the top of a generator and cuts all the other generators. Draw the development of its lateral surface.

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UNIT – V

- 9 A square of base side 25 mm and axis 40 mm rests centrally over a cylindrical block of base diameter 50 mm and thickness 20 mm. Draw the isometric projection of the arrangement.
- OR**
- 10 Pictorial views of an objects is shown figure below. Using first angle projection, draw its front from the X-direction, top view and left side view.


