

Code: 15A03101

B.Tech I Year I Semester (R15) Regular Examinations December/January 2015/2016

ENGINEERING DRAWING

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

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

UNIT – I

- 1 (a) Draw an ellipse having the major axis of 70 mm and the minor axis of 40 mm.
(b) Draw epicycloids if a circle of 40 mm diameter rolls outside another circle of 120 mm diameter for one revolution.

OR

- 2 (a) Draw a parabola if the distance of the focus from the directrix is 60 mm.
(b) Construct a hyperbola, when the distance of the focus directrix is 65 mm and eccentricity is $2/3$.

UNIT – II

- 3 (a) The dimensions of an ancient tower are as follows:
Height = 79 yards and 1 foot, Bottom diameter = 15 yards 2 feet and 3 inches, Top diameter = 3 yards. If the height is represented by a $29 \frac{3}{4}$ inch long line on the drawing, find RF. Draw a diagonal scale of this RF long enough to show the diameters of tower. (Conversion 1 yard = 3 feet = 36 inches 91.44 cm).
(b) Draw the projections of the following points:
(i) A (+30 mm, +25mm).
(ii) B (+28 mm, -22mm).
(iii) C (-30 mm, -28mm).
(iv) D (-25 mm, +40mm).

OR

- 4 (a) The FVs of two points P and Q coincide at 30 mm above XY. Their TVs are 30 mm below and 10 mm above XY respectively. Draw the three views of each point and determine the distance between them.
(b) Construct a vernier scale of LC 2 mm. The LOS is 20 cm. Show the following distances on it:
(i) 13.4 cm. (ii) 2.80 cm.

UNIT – III

- 5 The TV of a line CD measures 80 mm and makes an angle 55° with XY. End C is in VP and the HT of line is 25 mm above XY. The line is inclined at 30° to the HP. Draw the projections of line CD. Determine its true length, true inclination with VP and VT.

OR

- 6 (a) Two electric lamp posts, each 11 m high, produce shadows OA and OB of lengths 8 m and 4 m respectively on the ground, of a 6 m high pole, OP. The angle between the shadows is 70° . Determine graphically the distance between the bulbs and also from the pole top to each bulb. Take a suitable scale.
(b) A Rectangle of size 80 mm $\times$ 50 mm is seen as a square of 50 mm side in TV. Draw the projections of rectangle if one of its diagonals is parallel to the VP. Find the angle made by the rectangle with the VP.

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UNIT - IV

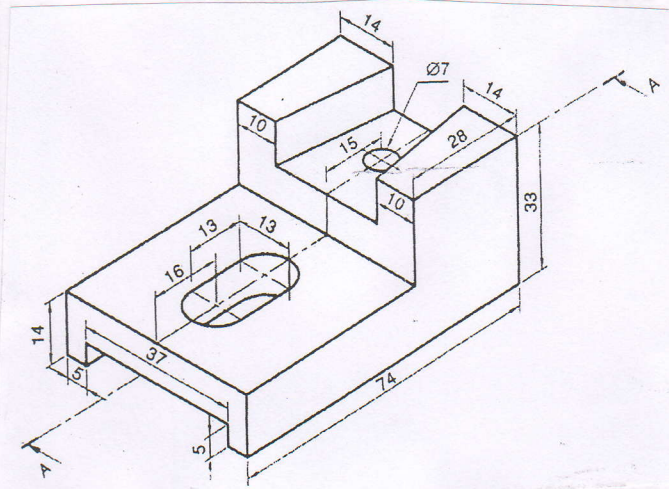
- 7 A square prism of base side 40 mm and length of axis is 70 mm is resting on the HP on one of its longer edges with axis parallel to the both the RPs. One of the rectangular faces is inclined at 30° to the HP. Draw its three views.

OR

- 8 A cylinder of base 60 mm diameter and height 80 mm has the midpoint of the axis 60 mm away from both the RPs. The axis is inclined at 30° to the VP and 60° to the HP. Draw the projections.

UNIT - V

- 9 Draw the sectional FV, TV and SV of the object shown in the following figure.



OR

- 10 Draw the isometric projections of the object shown in below.

