R15

Code: 15A03101b

B.Tech I Year I Semester (R15) Regular & Supplementary Examinations December 2017
ENGINEERING DRAWING
(Computer Science and Engineering)

Time: 3 hours   Max. Marks: 70

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

1   The major and minor axes of an ellipse are 125 mm and 100 mm respectively. Draw the curve by concentric circles method and locate its foci. Also determine the eccentricity. Also, draw a tangent and normal to the curve through a point P, when it is situated at a distance of 30 mm from axis and lying on the curve.

OR

2   Draw a Hyperbola when the asymptotes are inclined at 60° to each other and it passes through a point P at a distance of 40 mm and 50 mm from the asymptotes.

UNIT – II

3   An area of 144 sq.cm on a map represents an area of 36 sq.km on the field. Find the R.F of scale for this map and draw a diagonal scale to show kilometer, hectameter and decameter so as to measure up to 7 km. Indicate on it a distance of 6.56 km.

OR

4   (a) Draw the projections of the following points on the same reference line, keeping the projectors 30 mm apart.
    (i) A, 30 mm above HP and 30 mm infront of VP.
    (ii) B, 45 mm below HP and 30 mm behind VP.
    (iii) C, 40 mm above HP and in the VP.
    (iv) D, 40 mm infront of VP and in HP.
  (b) A point P is 15 mm above H.P and 20 mm infront of the V.P. Another point Q is 25 mm behind the V.P and 40 mm below the H.P. Draw projections of P and Q keeping the distance between their end projectors equal to 90 mm. Draw straight lines joining: (i) Top views. (ii) Front views.

UNIT – III

5   (a) The end A of a line AB is in the H.P and 25 mm in front of the V.P. The end B is in the V.P and 50 mm above the H.P. The distance between the end projectors is 65 mm. Draw the projections of AB and determine its true length.
  (b) A straight line is parallel to both VP and HP. Its one end is 25 mm behind VP and 15 mm above HP. Length of the line is 10 m. Draw its projection.

OR

6   Draw the projections of a circle of 50 mm diameter resting in the H.P on a point A on the circumference, its plane inclined at 45 degrees to the H.P and the diameter AB making 30 degrees angle with the V.P.

UNIT – IV

7   Draw the projections of a pentagonal prism, base 25 mm side and axis 50 mm long, resting on one of its rectangular faces on the H.P with the axis inclined at 45° to the V.P.
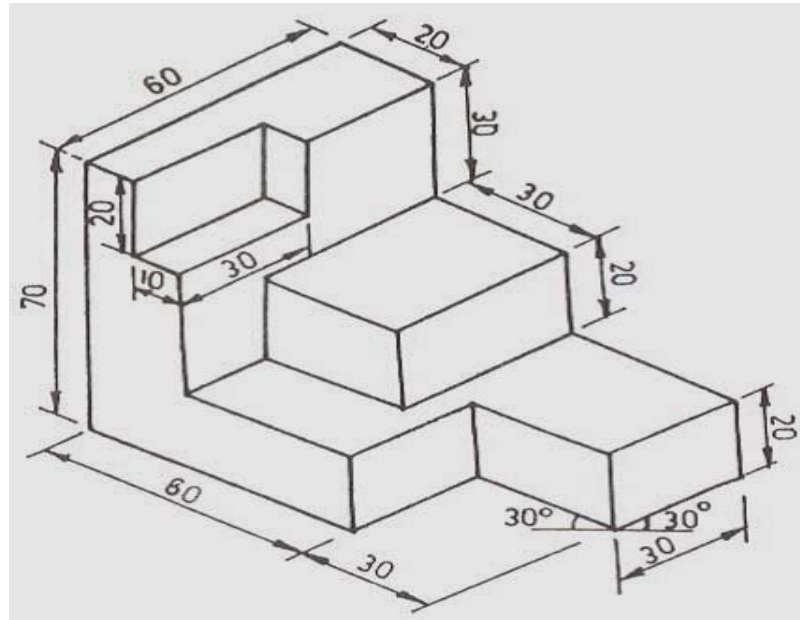
OR

8   Draw the development of the lateral surface of the pentagonal prism which is cut at an angle 45° with the horizontal and passing the center of the height of the prism. The base side is 25 mm and height is 80 mm and one of the base side is parallel to V.P.

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UNIT – V

9   A hexagonal prism with a 30 mm base and 45 mm axis has an axial hole with a 30 mm diameter. Draw its isometric projection.

OR

10   Draw the front, top and both side views of the isometric projection given in figure below. All dimensions are in mm.

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