

Code: 15A03101c

B.Tech I Year I Semester (R15) Regular & Supplementary Examinations December 2017

ENGINEERING DRAWING

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

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

UNIT – I

- 1 Draw an ellipse by oblong method. The major and minor axes given as 150 mm and 90 mm respectively. Draw normal and tangent at any point on the ellipse at a distance of 55 mm from the geometrical center of the ellipse.

OR

- 2 Show by means of a drawing that when the diameter of the directing circle is twice that of the generating circle, the hypocycloid is a straight line. Take the diameter of the generating circle equal to 50 mm.

UNIT – II

- 3 The distance between Delhi and Agra is 200 km and its equivalent distance on map measures 10 cm. Draw a diagonal scale to indicate 223 km and 135 km.

OR

- 4 (a) Draw the projections of the following points on the same reference line, keeping the projectors 50 mm apart.
- (i) A, in the HP and 30 mm in front of VP.
 - (ii) B, 45 mm below HP and in the VP.
 - (iii) C, 40 mm above HP and 20 in front of the VP.
- (b) Two points A and B are in the H.P. The point A is 30 mm in front of the VP, while B is behind the VP. The distance between their projectors is 75 mm and the line joining their top views makes an angle of 45° with xy. Find the distance of the point B from the VP.

UNIT – III

- 5 (a) A line AB, 100 mm long, is inclined at 30° to the HP and parallel to the VP. Its end A is in the HP and 30 mm in front of the VP. Draw its projections.
- (b) Draw the projections of a regular pentagon of 25 mm side, with its surface making an angle of 45° with HP. One of the sides of the pentagon is parallel to HP and 15 mm away from it.

OR

- 6 A rhombus has its diagonals 100 mm and 60 mm long. Draw the projections of the rhombus when it is so placed that its top view appears to be a square of diagonals 60 mm long and the vertical plane through the longer diagonal makes 30° with the VP.

UNIT – IV

- 7 A hexagonal prism, base 30 mm side and axis 75 mm long, has an edge of the base parallel to HP and inclined at 45° to the VP. Its axis makes an angle of 60° with the HP. Draw its projections.

OR

- 8 A cone of base diameter 40 mm and slant height 60 mm is kept on the ground on its base. An AIP inclined at 45° to the HP cuts the cone through the midpoint of the axis. Draw the development of remaining portion after removing the cutting portion.

UNIT – V

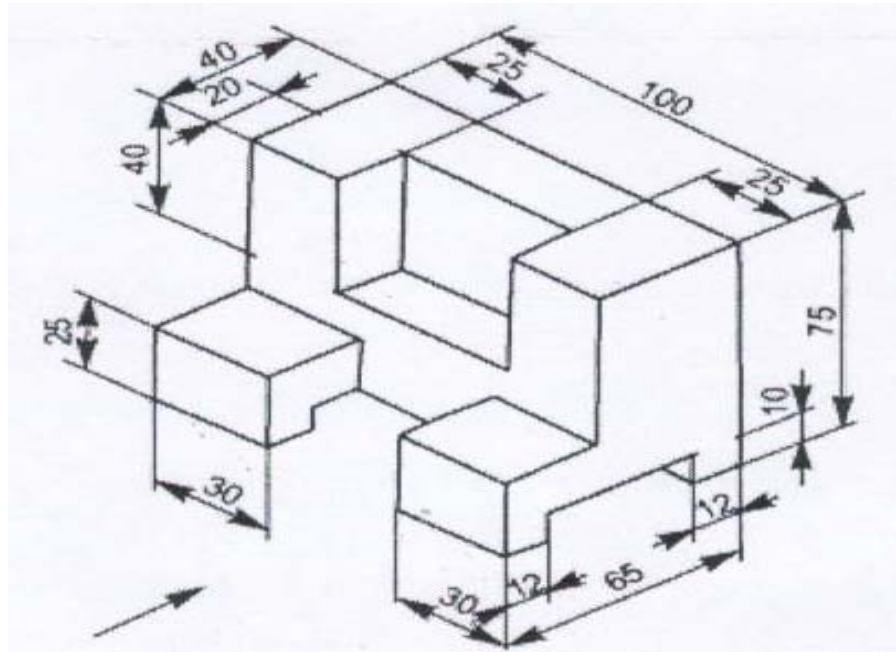
- 9 Draw the isometric projection of the frustum of a hexagonal pyramid of bottom base side 30 mm and top base side 15 mm having a height of 65 mm. the frustum is resting on HP on its bottom base with one of the edge of the base parallel to VP.

OR

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- 10 Draw the front view, top view and side view of the block shown in figure below. All dimensions are in mm.



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