Code: 15A03101a **R15**

B.Tech I Year I Semester (R15) Regular & Supplementary Examinations November/December 2018

ENGINEERING DRAWING

(Common to CE & EEE)

Time: 3 hours Max. Marks: 70

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

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UNIT – I

1 Construct a hyperbola with its foci 70 mm apart and the major axis (distance between the vertices) as 40 mm. Draw a tangent to the curve at a point 20 mm from the focus.

OR

2 Draw an epicycloid of rolling circle of diameter 50 mm which rolls outside another circle (base circle) of 180 mm diameter for one revolution. Draw a tangent and normal at any point on it.

UNIT – II

3 Construct a vernier scale to read meters, decimeters and centimeters and long enough to measure up to 4 m. The RF of the scale in 1/20. Mark on it a distance of 2.28 m.

OR

4 Draw the projections of the following point on a common reference line:
(i) Point A is 40 mm above HP and 60 mm in front of VP
(ii) Point A lying on HP and 25 mm in front of VP.
(iii) Point A lying on VP and 70 mm above HP.
(iv) Point C is 40 mm below HP and 30 mm behind VP.
(v) Point A is in V.P and 55 mm above H.P

UNIT – III

5 Draw the projections of straight line AB 60 mm long parallel to HP and inclined at an angle of 40° to VP. The end A is 30 mm above HP and 20 mm in front of VP.

OR

6 A pentagonal plane ABCDE 35 mm side has its plane inclined 50° to H.P. Its diameter joining the vertex B to the midpoint F of the base DE is inclined at 25° to the xy-line. Draw its projections keeping the corner B nearer to VP.

UNIT – IV

7 A pentagonal prism of side of base 25 mm and axis 40 mm long is resting on HP on a corner, of its base. Draw the projections of the prism, when the base is inclined at 60° to HP and the axis appears to be inclined at 30° to VP.

OR

8 A cone of base 50 mm diameter and axis 60 mm long is resting on its base on HP. It is cut by a section plane, perpendicular to VP and parallel to an extreme generator and passing through a point on the axis at a distance of 20 mm from the apex. Draw the development of the retained solid.

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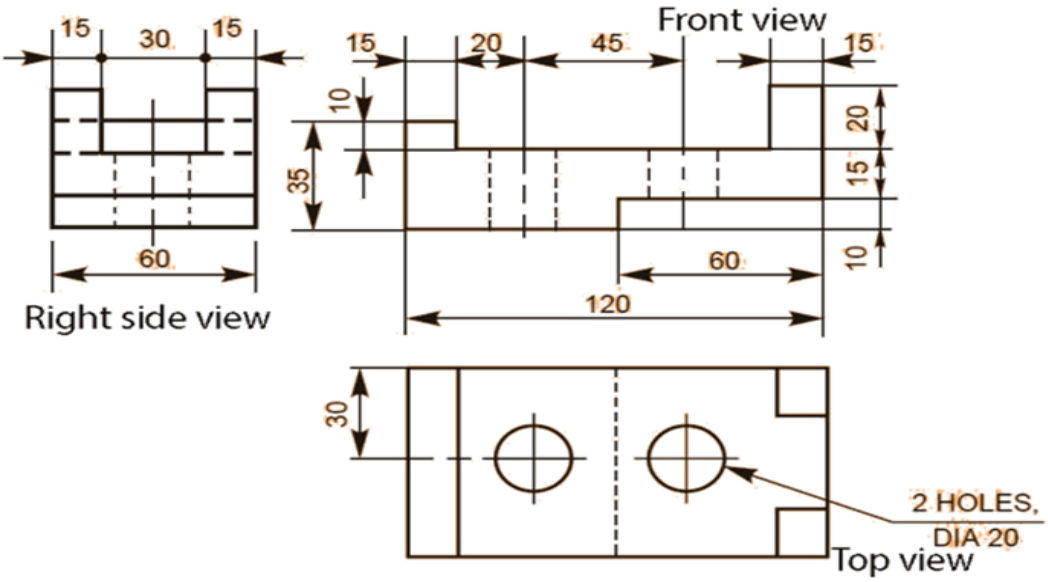
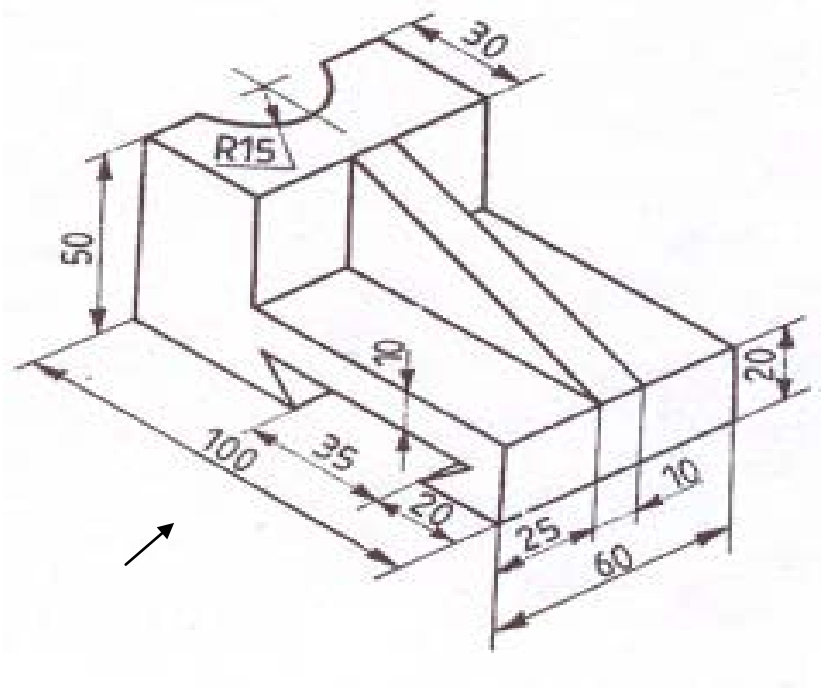
UNIT – V

9 Draw the isometric view of the given orthographic projection of the object? All dimensions are in mm. Assume any missing dimension.



OR

10 Make free hand sketches of the front, top and side views of the object shown in figure below. All dimensions are in mm.



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