

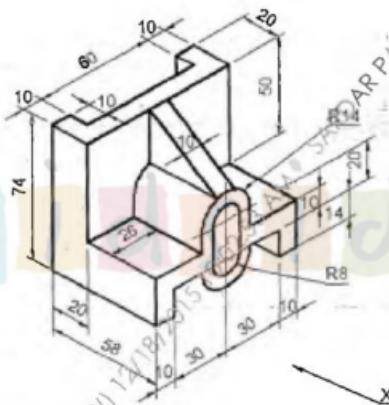
NB:

- 1) Question No 1 is compulsory.
- 2) Answer any Three from the remaining Five.
- 3) Use first angle projection method only.
- 4) Figures to the right indicate full marks.

Q1 a) Figure given below shows two views of an object. Draw the following views to full scale :-

- i) Front view
- ii) Left hand Side view

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b) Draw an involute of a circle of 40 mm diameter. Also draw the normal and tangent to the curve at a point 80 mm from the centre of the circle. 6

Q2 a) The front view of a line AB 80 mm long, measures 60 mm. The end A is 15 mm in front of VP and 10 mm above HP. The end B is in third quadrant. Draw the projections of the line, if the line is inclined  $30^\circ$  to HP. Also find the inclination of line with VP.

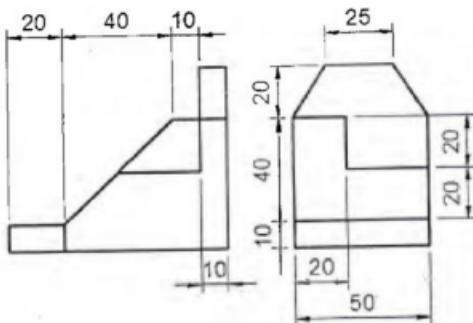
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b Draw the isometric view of the following using the natural scale

8

FV

L.H.S.V



Q3 Figure shows the pictorial view of an object. Draw the following views to full scale.

i) Sectional front view along section PP  
ii) Left hand Side view  
iii) Top View

Insert at least 10 major dimensions

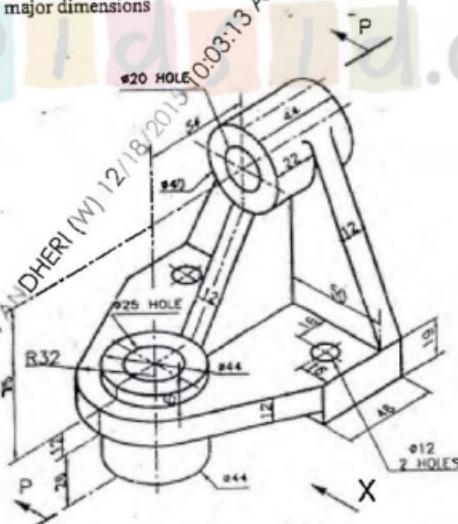
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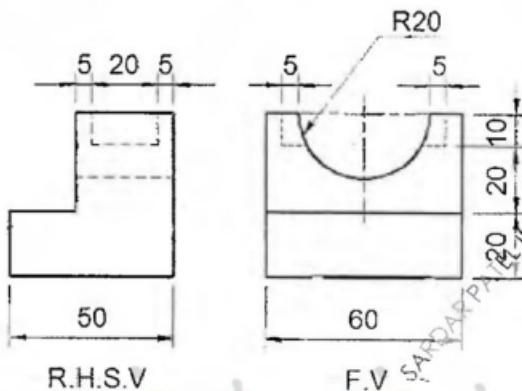
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Q4 a) A square prism, edge of base 35 mm and axis length 70mm, is resting on HP on one of its base edges and the axis makes an angle  $40^{\circ}$  to HP and Parallel to VP. Draw its projections. 6

b) Draw the isometric view of the following using the natural scale 9



Q5

A pentagonal pyramid has an edge of base in the H.P. and inclined at an angle  $30^{\circ}$  to the V.P. while the triangular face containing that edge makes an angle of  $45^{\circ}$  with the H.P. Draw the projections of the pyramid when the apex is nearer to the observer. The length of the side of the base of the pyramid is 35 mm and axis 70 mm. 15

Q6

A cylinder, 40 mm diameter and 60 mm long is resting on its base on HP. It is cut by a section plane perpendicular to VP, inclined at  $45^{\circ}$  to HP and passing through the midpoint of the axis. Draw the front view, sectional top view and true shape of the section. Also develop the lateral surface of the cut cylinder. 15