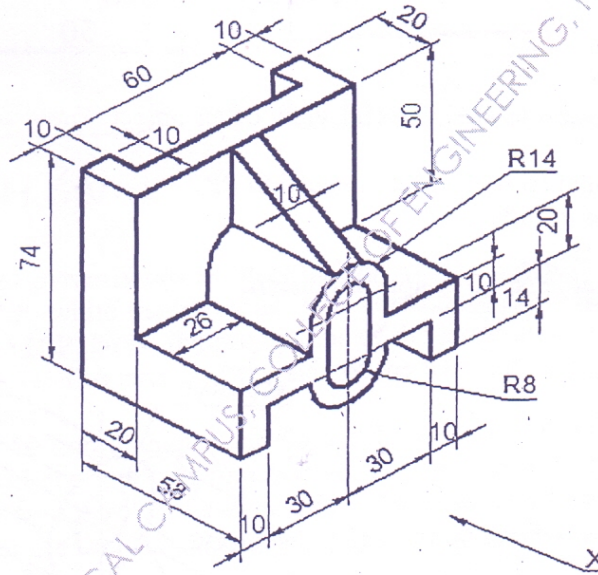(3 Hours) [TOTAL MARKS 60

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.:-
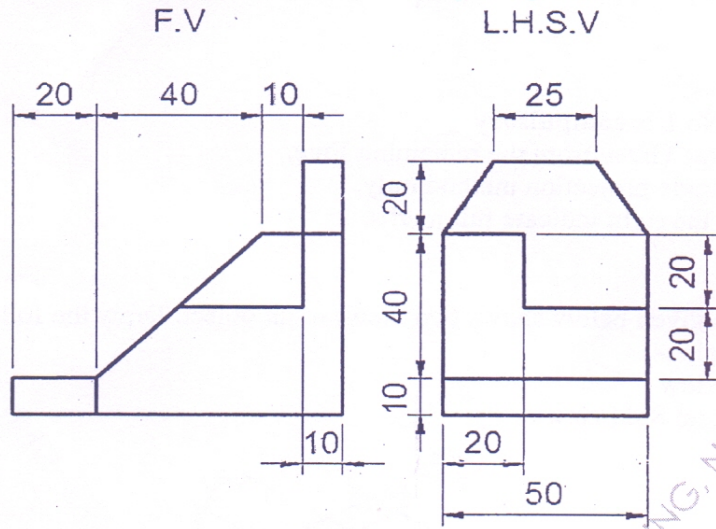i) Front view 5
ii) Left hand Side view 4

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 infront 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° to HP. Also find the inclination of line with VP. 7

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b   Draw the isometric view of the following using the natural scale   8

F.V   L.H.S.V
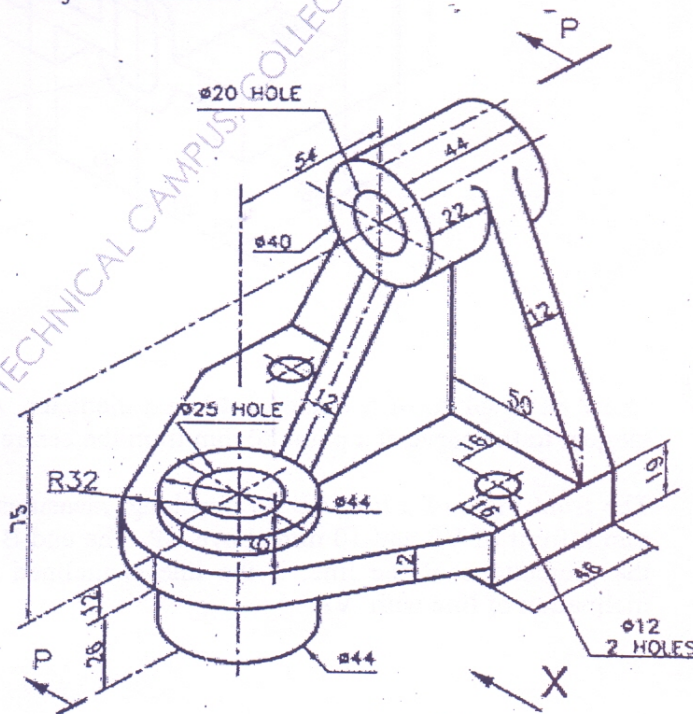

Q3   Figure shows the pictorial view of an object. Draw the following views to full
        scale.
   i)   Sectional front view along section PP   5
   ii) Left hand Side view   4
   iii) Top View   4
        Insert at least 10 major dimensions   2

Q4 a)   A square prism, edge of base 35 mm and axis length 70mm, is resting on HP on   6
         one of its base edges and the axis makes an angle 40^0 to HP and Parallel to VP.
         Draw its projections.

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

R20

5 20 5   5   5   10

50   60   20

20

R.H.S.V   F.V
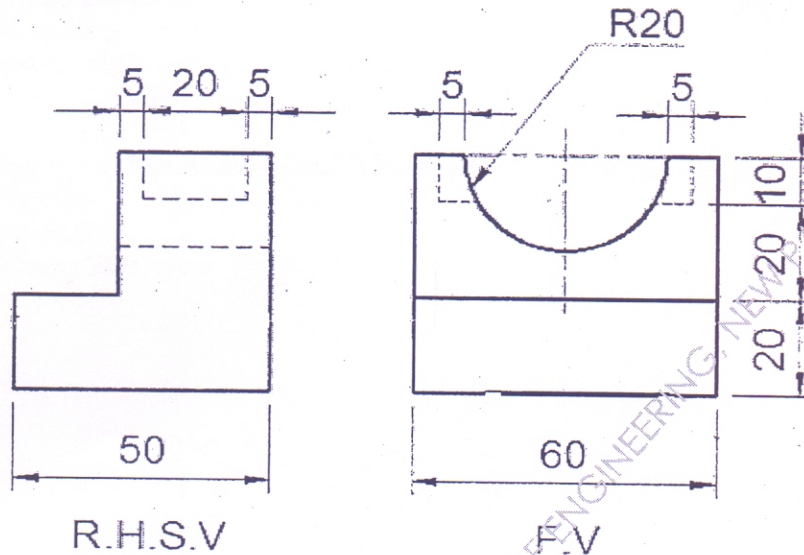
Q5   A pentagonal pyramid has an edge of base in the H.P. and inclined at an angle   15
         30^0 to the V.P. while the triangular face containing that edge makes an angle of
         45^0 with the H.P. Draw the projections of the pyramid when the apex in nearer
         to the observer. The length of the side of the base of the pyramid is 35 mm and
         axis 70 mm.

Q6   A cylinder, 40 mm diameter and 60 mm long is resting on its base on HP. It is   15
         cut by a section plane perpendicular to VP , inclined at 45^0 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.

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