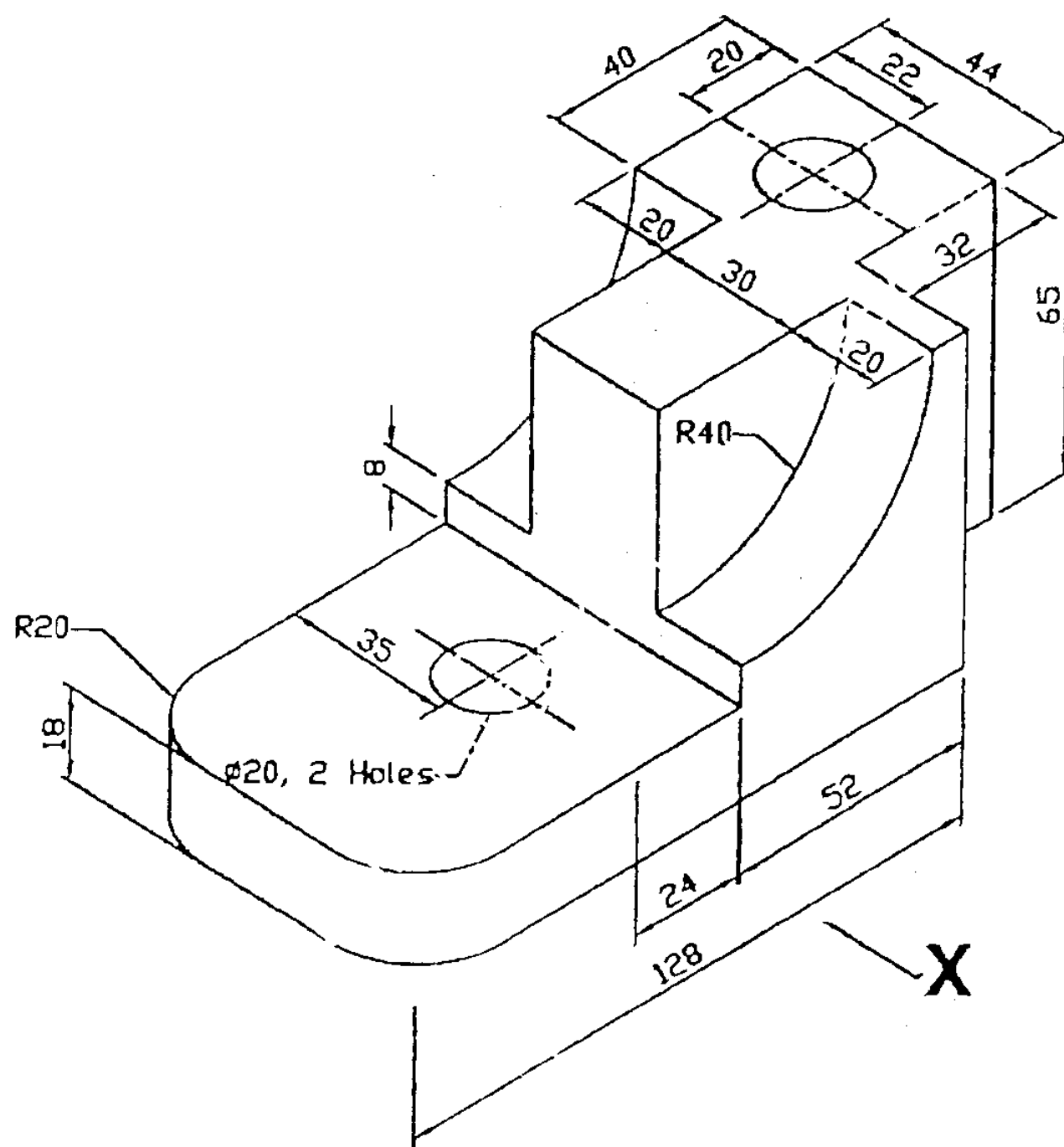


Question number 1 is compulsory.  
Answer any **three** from the remaining **five**.  
Figures to the right indicate full marks.  
Use first angle projection method only.

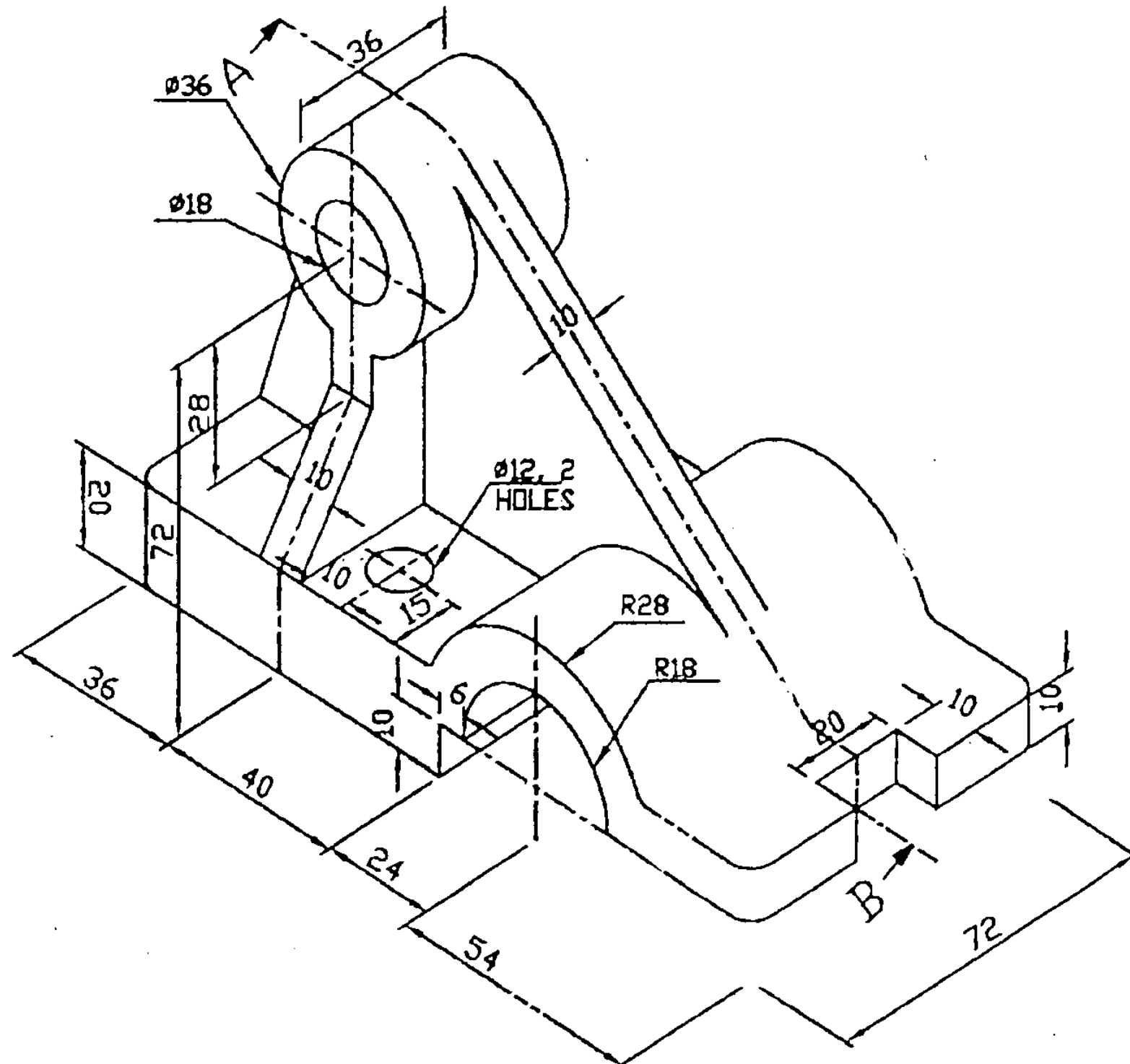
Maximum marks: 60  
Time : Three Hours

- Q1 a) A circle of diameter 50 mm rolls without slip on a horizontal surface by half a revolution and then it rolls up on a vertical surface by another half revolution. Draw the locus of a point P which is initially at the bottom of the circle. [6]
- b) The pictorial view of a machine part is given in the figure .Draw the following views
- i) Front View [5]
- ii) Top view [4]



[TURN OVER

- Q2 Figure given below shows the pictorial view of an object. Draw to full scale the following views
- i) Sectional front view(section AB) [5]
  - ii) Top view [4]
  - iii) Right hand side view [4]
- Insert 10 major dimensions [2]

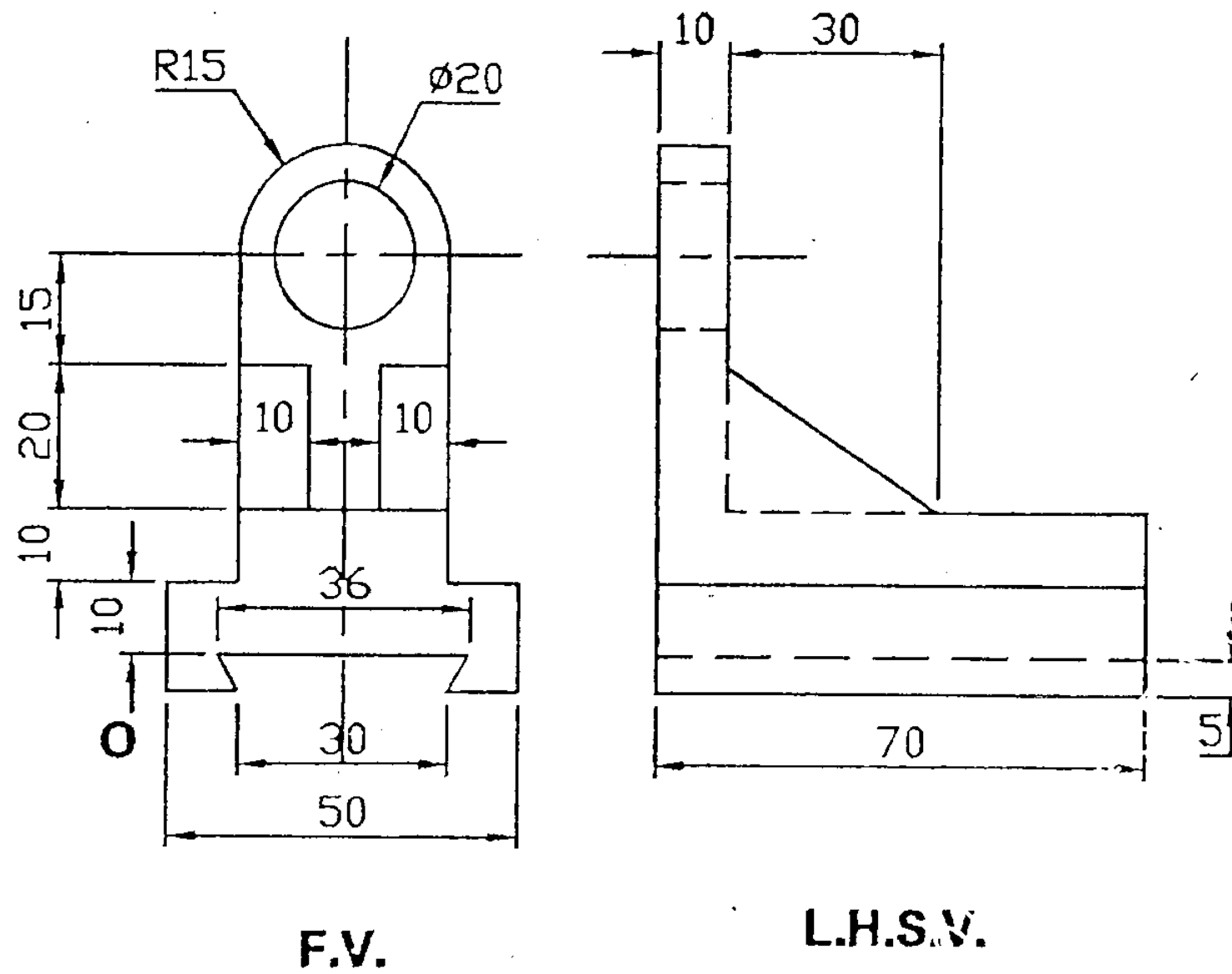


- Q3 A cone, diameter of base 60mm and height 70mm has one of the generators in the HP and the plane containing the axis and that generator makes an angle  $45^\circ$  with VP. Draw the projections of the cone when the apex is away from the observer. [15]
- Q4 A hexagonal pyramid of side of base 40mm and axis length of 70mm is resting on its base on HP with two base edges perpendicular to VP. It is cut by an auxiliary inclined plane  $60^\circ$  to HP and passing through a point on the axis 40mm above the base. Draw the front view, sectional top view and the true shape of the section. Also draw the development of the lateral surface of the cut pyramid after removing the portion containing the apex. [15]
- Q5 a) A pentagonal prism of 40mm edge of base and 70 mm length of axis is having an edge of base in the HP and the rectangular face containing that edge is inclined  $30^\circ$  to HP and perpendicular to VP. Draw the projections. [6]

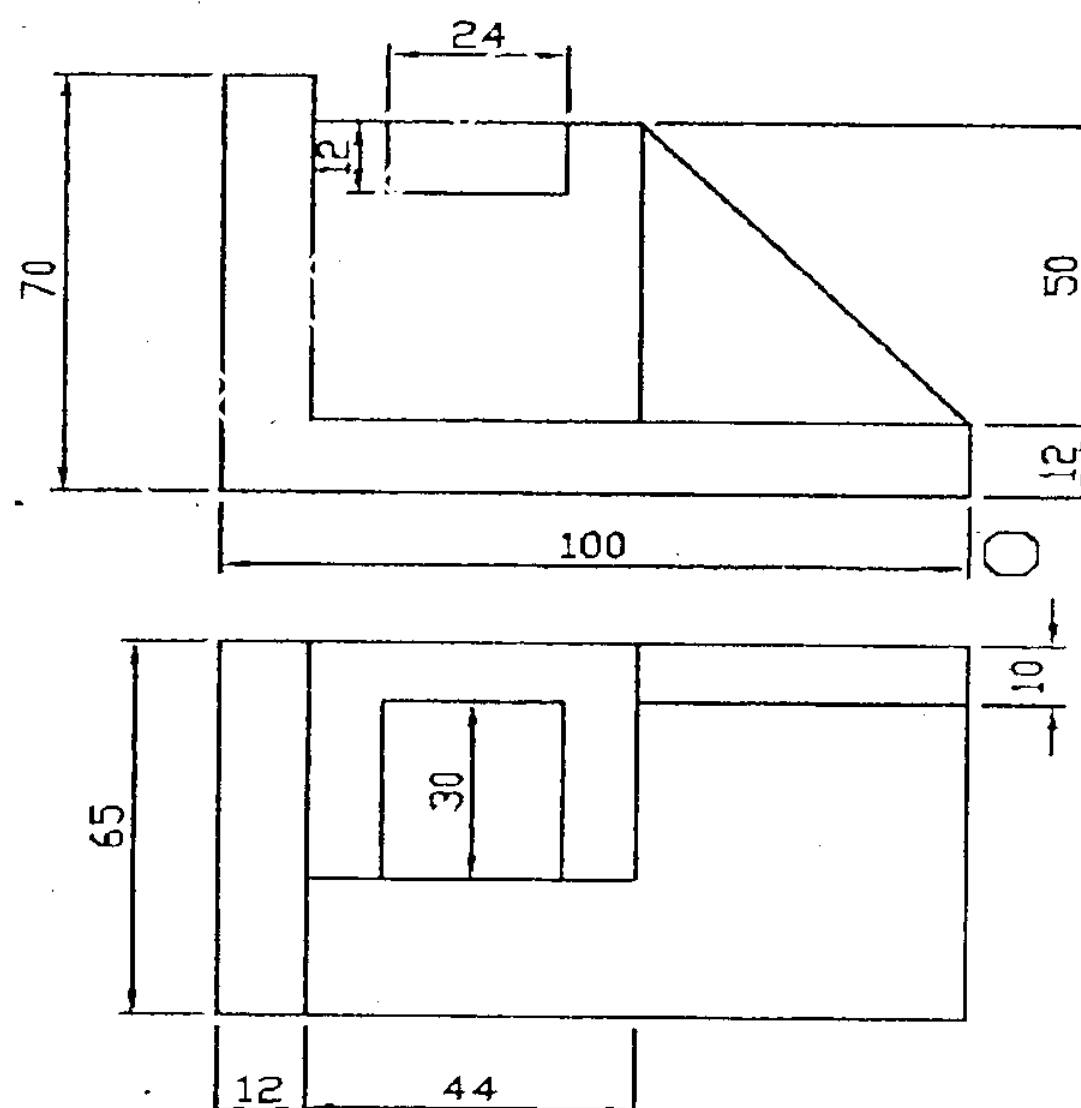
3

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- b) The orthographic projections of an object is given in the figure below. Draw [9]  
the isometric view.



- Q6 a) The top view and the front view of a line AB are 70mm and 80 mm [8]  
respectively. Its end A is 15mm above HP and 20mm in front of VP. The end  
B is in third quadrant. Draw the projections if the line is 100mm long. Also  
find its inclination with the principal planes.
- b) Draw the isometric view of the given views [7]



Con. 9435-14.