

Instructions:

- You must attempt three questions from Section A and two questions from Section B.
- Each Section must be answered on separate sheet.
- All construction lines must be shown.
- All dimensions are in mm.
- The intended marks for questions are given in brackets.

SECTION A (48 Marks)  
(Attempt any 3)

Q.1 A Line measuring 250mm on the drawing was marked as 10 metre. Find the R.F. Construct a Plain scale long enough to measure upto 8 metre. (16)

Show the working neatly.

Using the above scale draw a line  $AB = 3.5$ metre. Draw an arc of radii 2.3 metre passing through A and B. Find the length of arc AB. Measure and record its length in mm.

Q.2 Refer Figure (1). Copy the given template. Show all centres neatly. Insert any six Dimensions. (16)

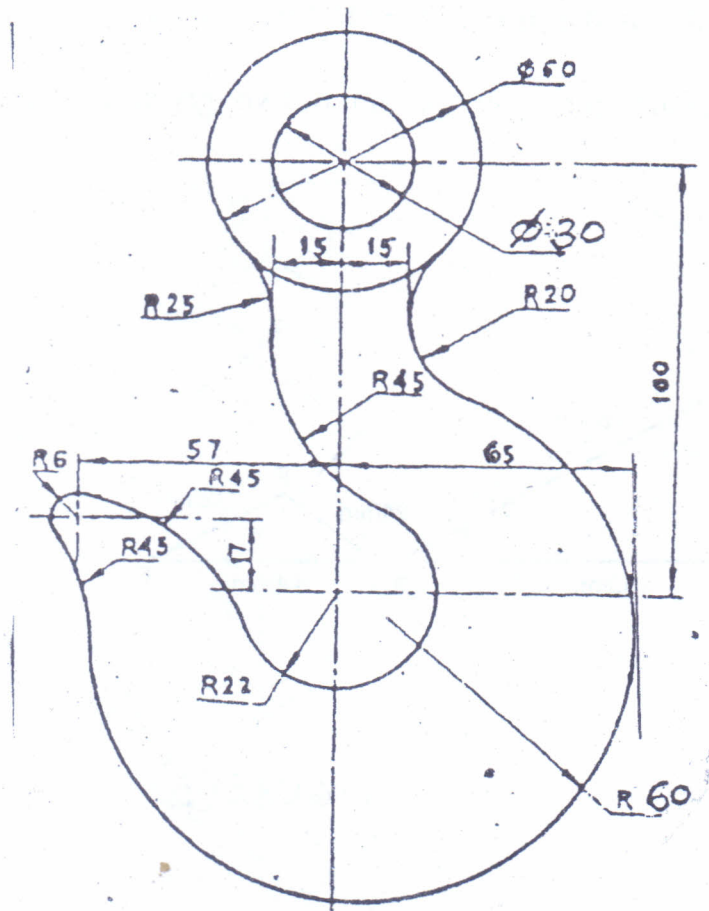
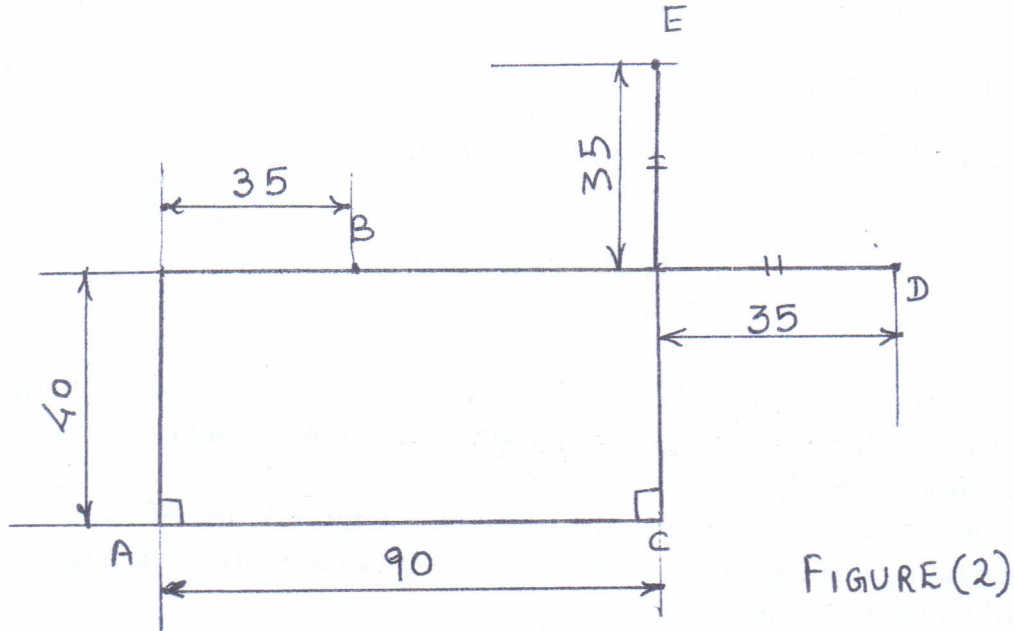


FIGURE (1)

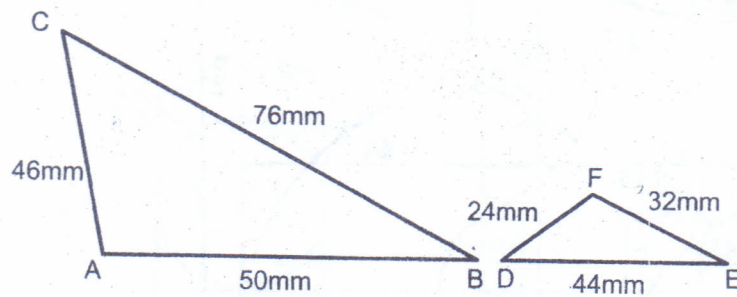
Q.3 a) A ball thrown up in the air reaches maximum height of 65 metres and travels a horizontal distance of 125 metres. Trace the path of the ball assuming it to be Parabolic. Take scale (1mm=1 metre) (Oblong Method). (8)

b) Copy Figure (2). Draw the continuous arc passing through A,B,C,D, and E (8)



Q.4 a) Draw F.V and T.V of a cone when its axis is inclined at  $30^\circ$  to V.P. and Parallel to H.P. with the apex nearer to the observer. Use First angle method. Radius of base = 30mm and axis height = 90 mm. (10)

b) Construct a triangle equal in area to the sum of two given triangles as shown in Figure (3) below. (6)



- 5 Draw the oblique view of the orthographic projection given in Figure (4). with receding axis at an angle of  $45^\circ$  to the horizontal. Insert length, width and height. (16)

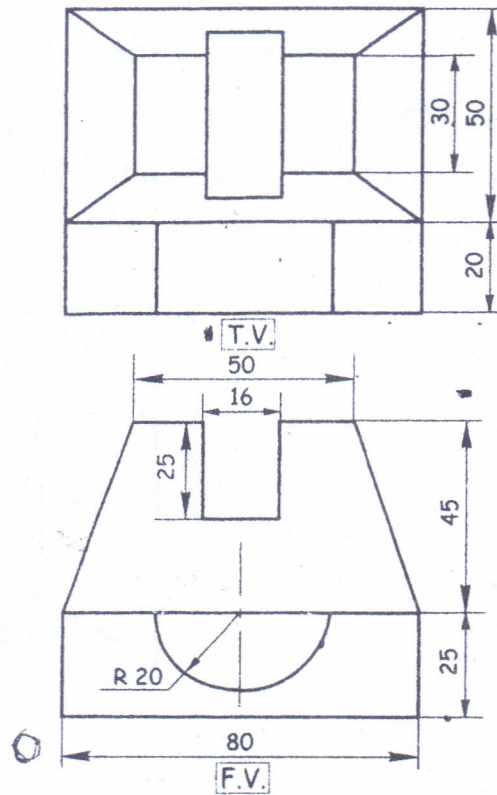


FIGURE (4)

SECTION B (52 Marks)

(Attempt any two questions)

- Q.6 Refer Figure(5). Copy the given Isometric view. Copy the given figure Using ISOMETRIC SCALE. (Do not insert any dimensions) (26)

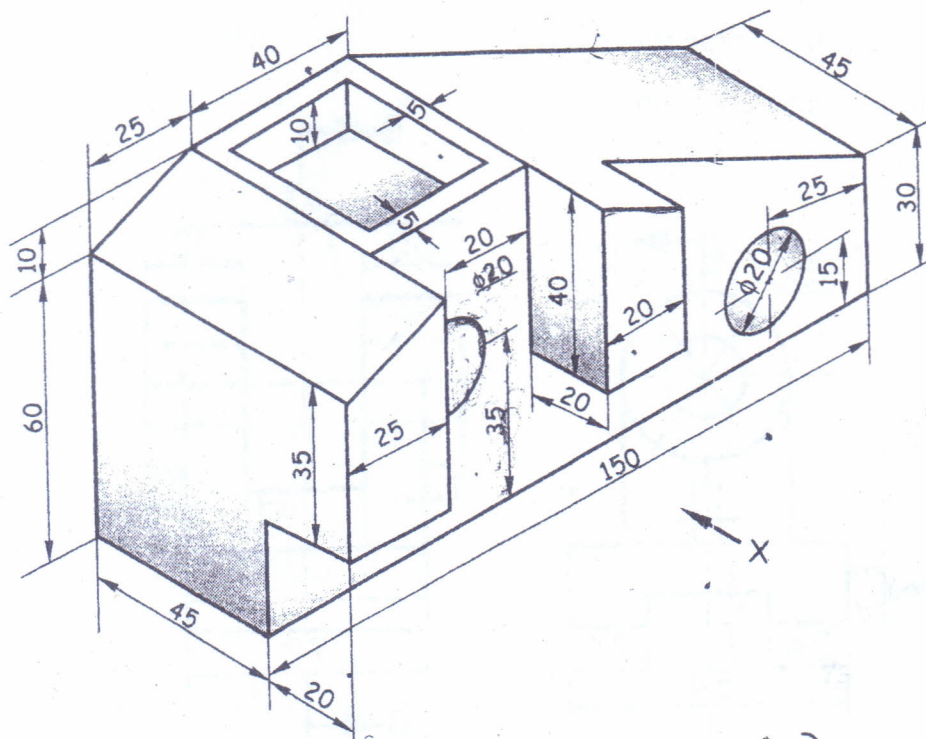


FIGURE (5)

Q.7a) A Hexagonal pyramid of side = 30mm and axis = 70mm is cut by a cutting plane inclined at  $45^\circ$  to V.P. and 10mm away from the axis shown in Figure (6). Draw (16)

- Top view (2)
- Sectional Front view (4)
- Auxiliary front view showing true shape (5)
- Development of retained portion (5)

b) Refer Figure (7). Draw the development of the lateral surface of cylinder (10)  
cut by three planes as shown.

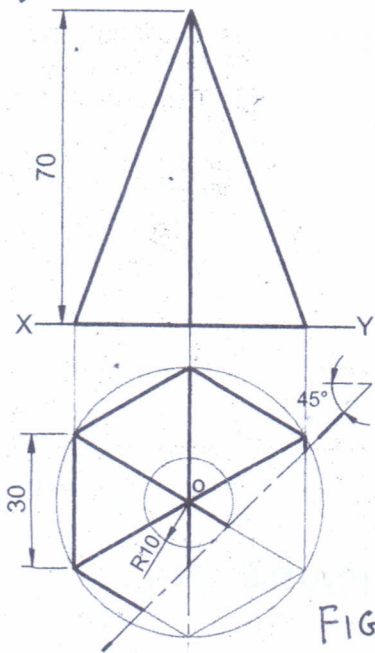


FIGURE (6)

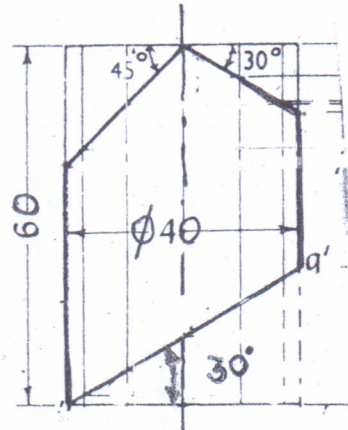


FIGURE (7)

Q8. Refer Figure(8). It shows two views of an object. Draw in First Angle (26)  
method of projection

- Sectional Front View a (8)
- Missing Top View (8)
- Sectional Left hand side view (8)
- Dimensioning and Labelling (2)

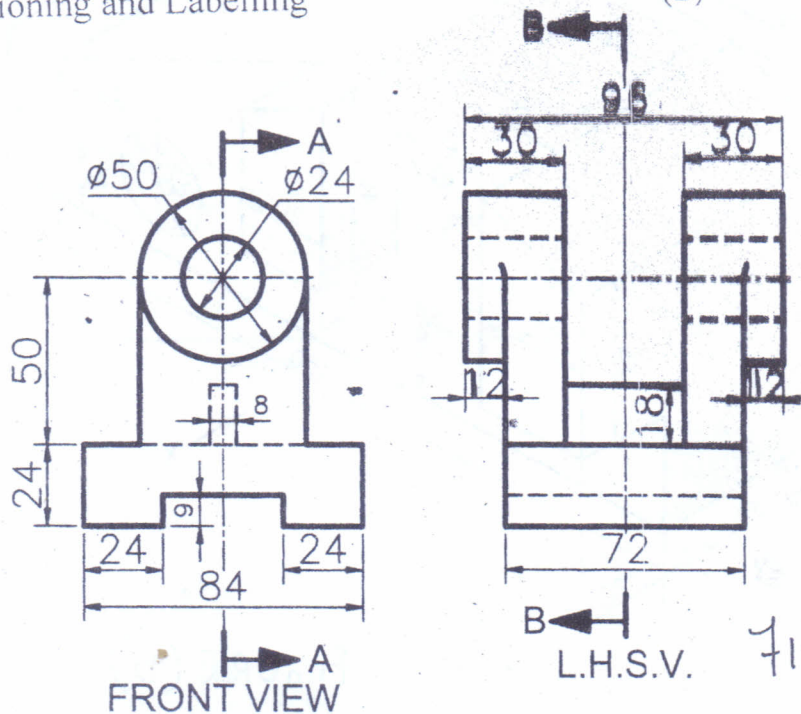


FIGURE (8)