

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 On a map, a line of 4 cm was marked as 10 m. Find the R.F. Construct a scale long enough to measure up to 37 meters. Using this scale draw an ELLIPSE of Major axis = 24m and Minor axis height = 18m by **CONCENTRIC CIRCLE** method. Show the data and Calculations neatly. (16)
- Q.2a) Draw the elevation and plan of a CONE when its axis is inclined at  $30^\circ$  to the Horizontal plane and parallel to Vertical plane. Use **FIRST** angle method of projection. Given: Radius of base = 30mm and Axis height = 80mm. (10)
- b) Draw triangle ABC, base AB = 80mm, Side BC = 55mm, and angle B =  $60^\circ$ . In the same figure construct Triangle PQR having base QR = 100mm so that Area of Triangle PQR = Area of Triangle ABC. (6)
- Q3 a) **Figure (1)** shows a **Square Pyramid** of side 40mm and axis height 75mm with an axis perpendicular to V.P. and parallel to H.P. One side of the base is inclined at  $30^\circ$  to H.P. Copy the given figure. Draw the **Auxiliary Front View** when axis is inclined at  $45^\circ$  to V.P. (10)

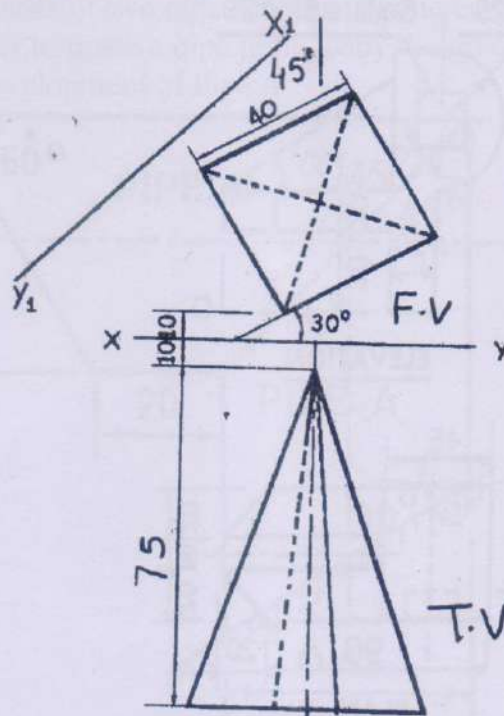


Figure . 1

Q3 b) Construct a Direct Common Tangent to two circles of R40 and R15 whose centers are 95mm apart. (6)

Q.4 Refer **Figure 2** . Copy the given template ( Insert any six dimensions). (16)

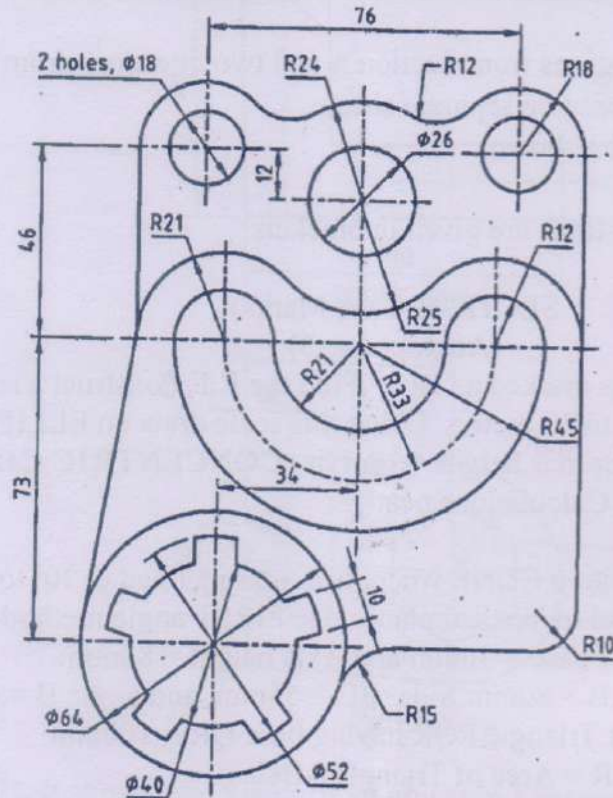


Figure 2

Q.5 Refer **Figure 3**. It shows F.V and T.V of an object .Draw the oblique view when the receding axis is inclined at 45° to the horizontal. Do not insert any dimensions (16)

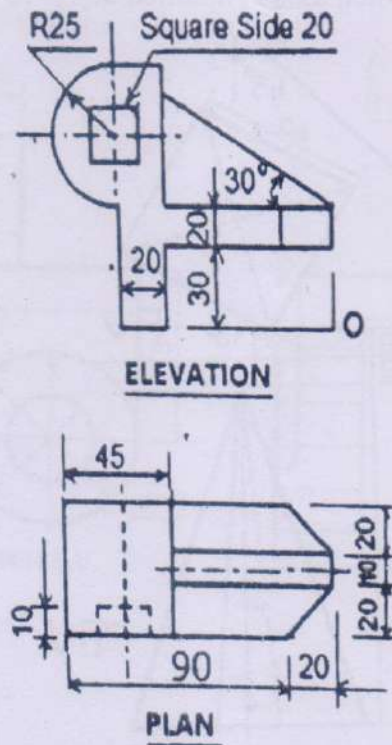


Figure 3

SECTION B (52 Marks)

(Attempt any two questions)

Q6 a) Refer **Figure 4**. Shows two views of a Hexagonal pyramid with axis Perpendicular to H.P. and parallel to the V.P. in **First Angle Method**. It is cut by a cutting plane inclined at  $45^\circ$  to H.P. as shown in the Figure Given Side of Base = 35mm and Axis Height = 75mm. (13)

Draw the following By using the same method of projection

- i) Front View (3)
- ii) Sectional Top View (5)
- iii) True Shape of the cut portion (5)

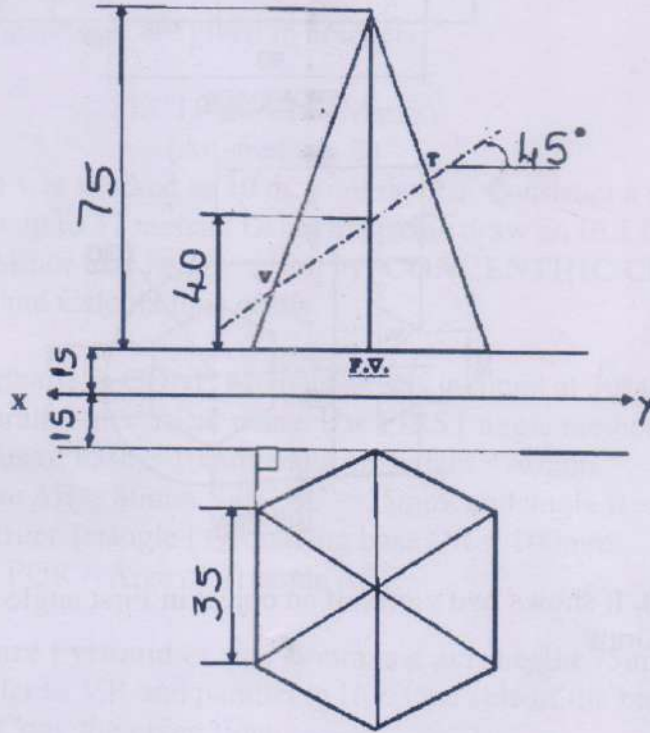


Figure 4

T.V.

Q6b) Refer **Figure (5)**. It consists of two pipes of equal diameters Pipe A and Pipe B which are joined together to make a pipe joint. Copy the given pipe joint. Draw Lateral surface development of Pipe A (13)

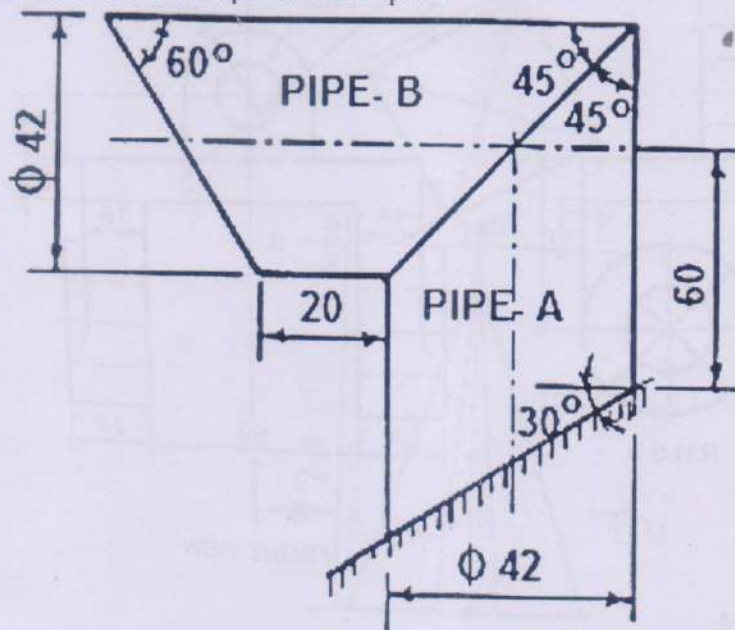


Figure 5

p.t.o

Q.7 Refer **Figure 6**. Two orthographic views are given. Complete the Isometric views Using scale 1:1 . Do not insert dimensions.

(26)

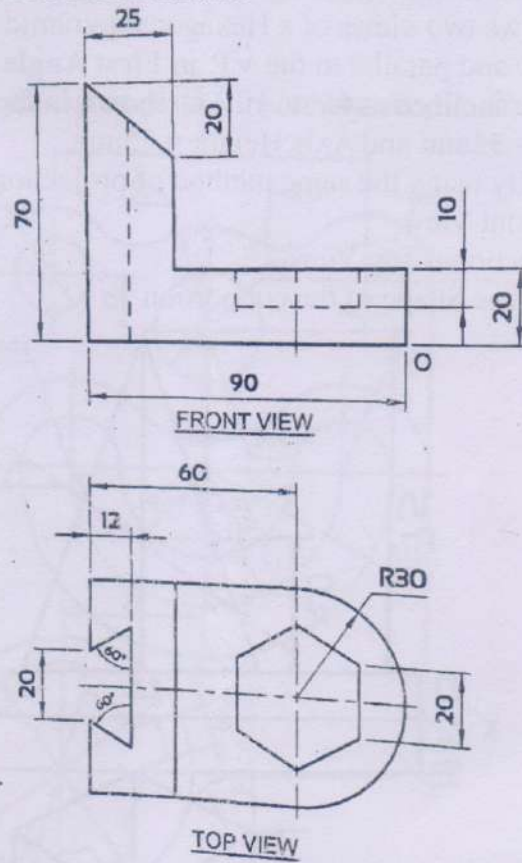


Figure 6

Q.8 Refer **Figure(7)**. It shows two views of an object in First angle method of projection. Draw

(26)

- a) Front View (8)
- b) Top View (8)
- c) Sectional Right hand side view (8)
- (Insert any six dimensions) (2)

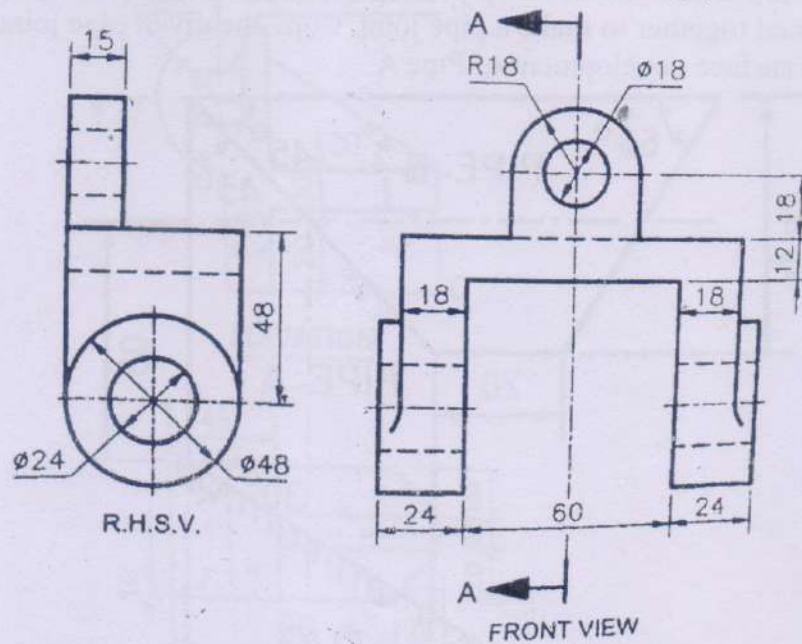


Figure 7