

**Instructions:**

1. Read the instructions carefully.
2. Answers to this paper must be written on the paper provided separately.
3. You will not be allowed to write/draw during first 15 minutes. This time is to be spent in reading the question paper.

Attempt **five** questions in all.

Each section must be answered on a **separate** answer sheet.

All construction lines must be shown.

All dimensions are in mm.

Assume suitable data if necessary.

The intended marks for questions or parts of questions are given in brackets ( )

**Section A: (48 marks)**

**(Attempt any three questions)**

**(Question no.1 is compulsory)**

Q.1. A cone, of base 40mm diameter and axis 60 mm long is resting on its base on H.P. It is cut by a section plane inclined to the H.P. & perpendicular to V.P. such that the true shape of a section is an isosceles triangle of base 30 mm.

Draw

- i) F.V. (2)
- ii) Sectional T.V & Sectional S.V. (4)
- iii) Measure the inclination of a cutting plane with H.P. (2)
- iv) True shape of a section. (2)
- v) Auxiliary T. V. (4)
- vi) DLS of the lower remaining portion of the cone. (4)

Q.2. A frustum of a hexagonal pyramid is resting on the of its corners of the base with axis inclined at  $45^\circ$  to the HP and parallel to VP. Draw the projections of the frustum assuming base edges of 35 mm, top edges of 20 mm and height of frustum 80 mm in length. Refer fig.no.1.

(15)

Q.3. a) Copy the given template shown in fig no.2.

(9)

b) The length of a major axis is 120 mm & length of a minor axis is 90 mm. Draw an ellipse by Arc's of circle method.

(6)

Fig. no. 1.

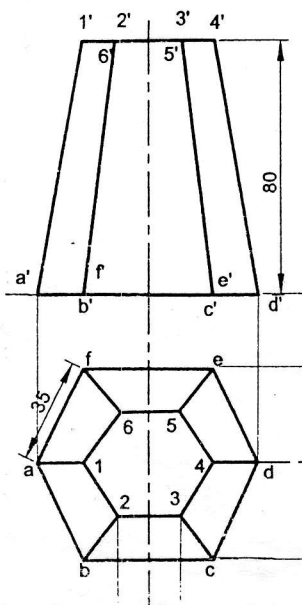
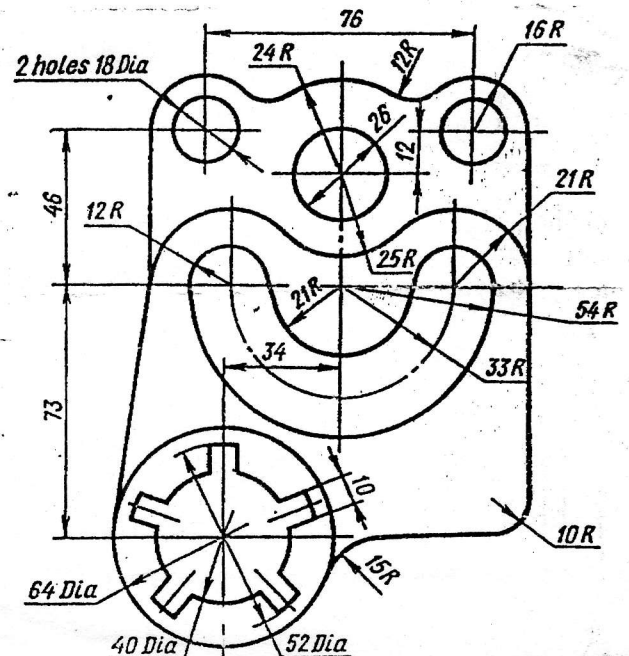


Fig. no. 2.



- Q.4. a) The T.V. of line measures 60 mm and inclined at  $56^\circ$  to the XY line. Point A is 10 mm above the H.P. and 20 mm in front of the V.P. Point B is 45 mm above the H.P. and in front of the V.P. Find the inclination of line AB with the H.P. & V.P. and its True Length. (7)
- b) A circular plate of 60 mm diameter is inclined to H.P. in such a way so that top view appears to be an ellipse of minor axis is 34 mm draw the projections of plate & find its inclination with H.P. (8)

**Section A: (52 marks)**  
**(Attempt any two questions)**  
**(Question no.5 is compulsory)**

- Q.5. **Fig. no. 3.** Shows two views of support bracket. Draw the following views using First Angle method of projection in scale 1:1
- a) Sectional front elevation at A-A (9)  
 b) Sectional side elevation at B-B (8)  
 c) Sectional plan at C-C (9)
- Q.6. **Fig. no. 4.** Shows pictorial view of an object Draw the following views using First Angle method of projection.
- a) Sectional front view in the direction X (section along A-A) (9)  
 b) Sectional top view along the cutting plane PQ. (9)  
 c) R.H.S.V. in the direction Y. (8)
- Q.7. Two views of an object are shown in **Fig. no. 5.** Draw an isometric view. (26)

Fig. no. 3.

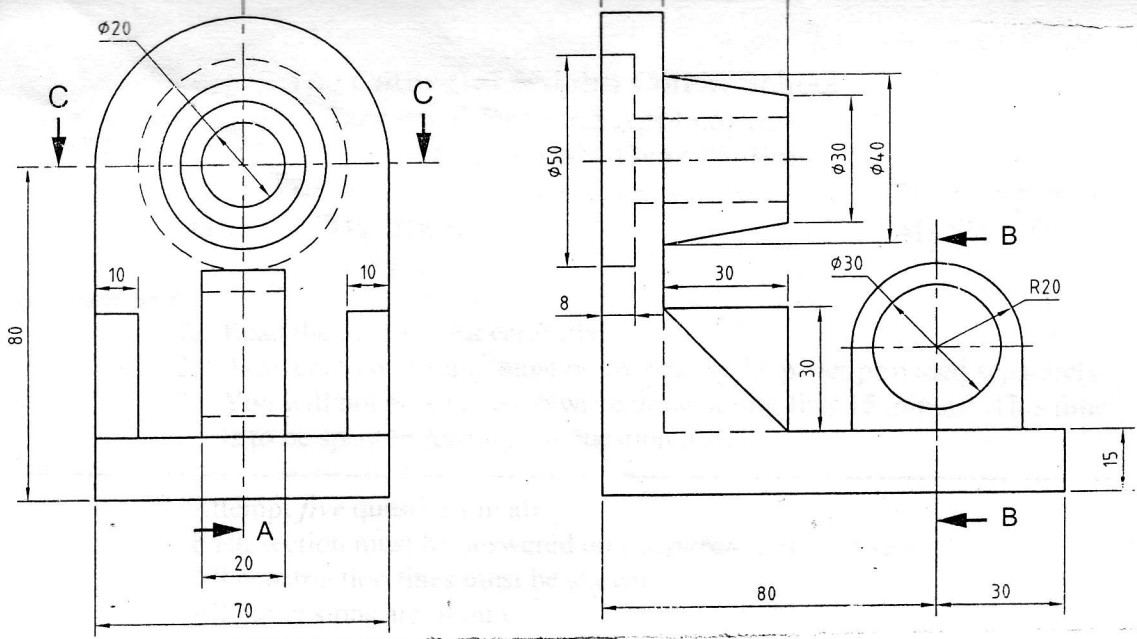


Fig. no. 4.

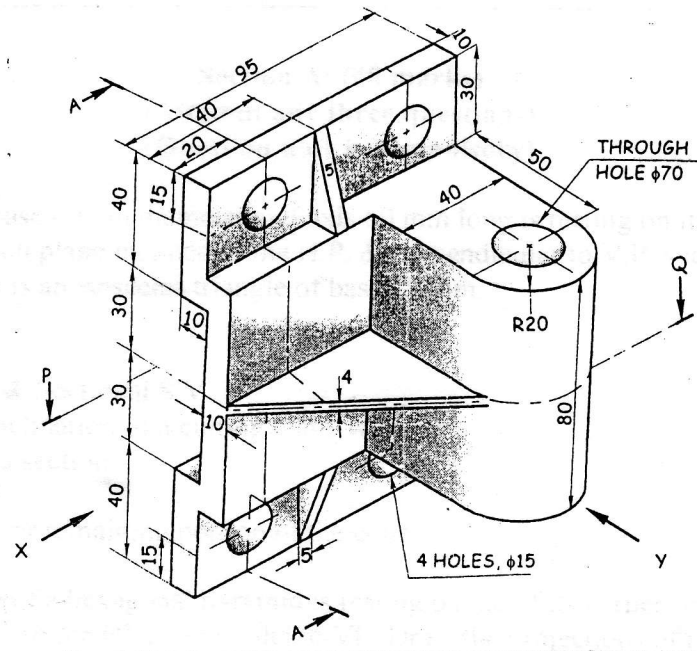


Fig. no. 5.

