



22207

12223

4 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Figures to the right indicate full marks.
 - (3) Assume suitable data, if necessary.

Marks

1. Solve any FIVE :

10

- (a) Draw the conventional representation of following materials :
 - (i) Wood
 - (ii) Rubber
- (b) Draw the conventional representation of following welded joints :
 - (i) Double V-Butt
 - (ii) Single J-Butt
- (c) Draw the cross sections of the following :
 - (i) V Belt
 - (ii) V-Belt Pulley
- (d) Draw neat & proportionate free hand sketch of Rag Foundation bolt.
- (e) Draw neat & proportionate free hand sketch of Muff-coupling.



- (f) If cutting plane is inclined at mid-point of axis of cone, then answer the following :
- (i) T.V. of section will be ?
 - (ii) True shape of section will be ?
- (g) Define the following :
- (i) Tetrahedron
 - (ii) Frustum of a cone

2. Solve any THREE :

12

- (a) A line CD, 70 mm long has its one end C in the V.P. & other end D 15 mm above H.P. 50 mm in front of V.P. Draw the projections of lines when the sum of its inclination with H.P. & V.P. is 90° .
- (b) A regular pentagonal plate has 25 mm side, has a central hole of 20 mm diameter. The plate is resting on its corners in H.P. with its surface perpendicular to V.P. & inclined at 45° to H.P. Draw its projections.
- (c) A rectangular plate of sides 50 mm & 25 mm is hung from one of its corners. Draw the projections of plane.

- (d) An isosceles triangle ABC having its base $AB = 40$ mm & altitude 60 mm is hung from one of the corner of its base. Draw the projections of triangle.
- (e) A circular plate of 60 mm diameter has a hexagonal hole of 20 mm side, centrally punched. The plate is resting on the V.P. on a point of its circumference such that diameter passing through that point is making an angle of 45° the V.P. Draw the elevation & plan of the plate when it is normal to H.P.

3. Solve any TWO :

16

- (a) A right circular cone of 40 mm base diameter & 75 mm long is resting on its base on H.P. The position of cutting plane line is such that it is inclined at 50° to H.P. & perpendicular to V.P. bisecting the axil.

Draw :

- (i) Front View
- (ii) Sectional Top View
- (iii) True shape of section

- (b) Cone base 50 mm diameter & Axis 55 mm long is resting on H.P. on a point of its base. Draw its projections, if base makes an angle of 30° to the H.P. & axis parallel to V.P.
- (c) A pentagonal prism side of base 30 mm & axis length 60 mm is kept on H.P. on one of its base edges in such way that its base makes an angle of 60° to H.P. & axis is parallel to V.P. Draw the projections.

4. Solve any TWO :

16

- (a) Fig. 4.1 shows isometric view of a machine component. Draw the following views :
- Sectional F.V. looking in the direction of X (Section B – B)
 - T.V.

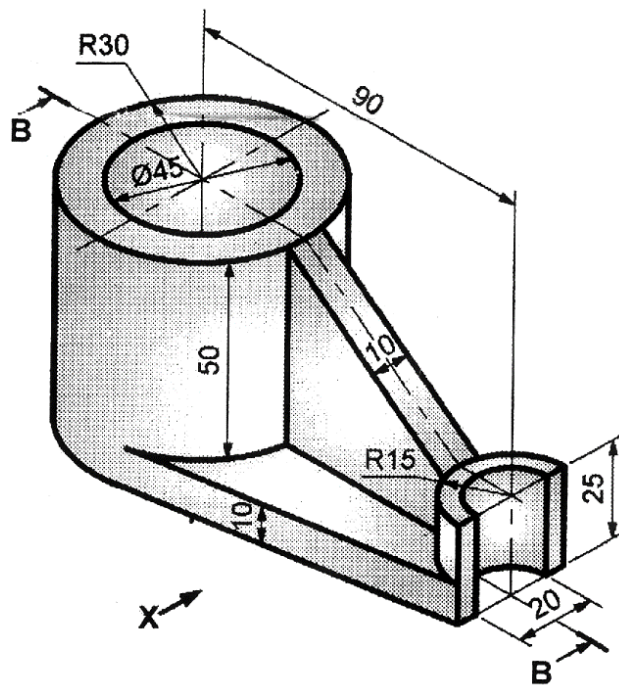


Fig. 4.1

- (b) Fig. 4.2 shows pictorial view of an object. Draw the following views :
 (i) Sectional F.V. looking in the direction of X (Section B-B).
 (ii) R.H.S.V.

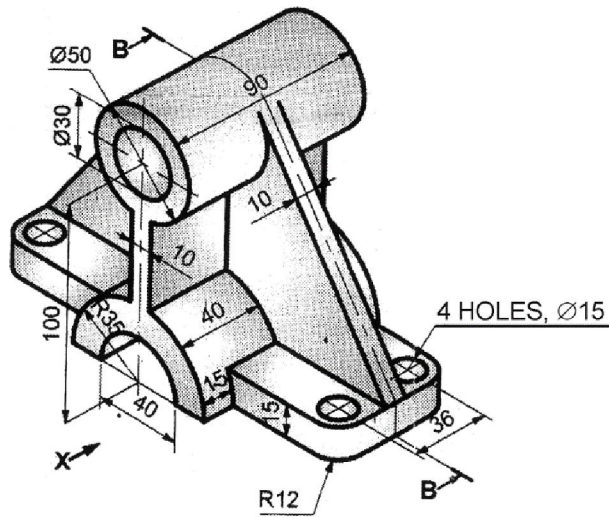


Fig. 4.2

- (c) Fig. 4.3 shows T.V. & F.V. of an object, draw the missing view, By First Angle method of projection.

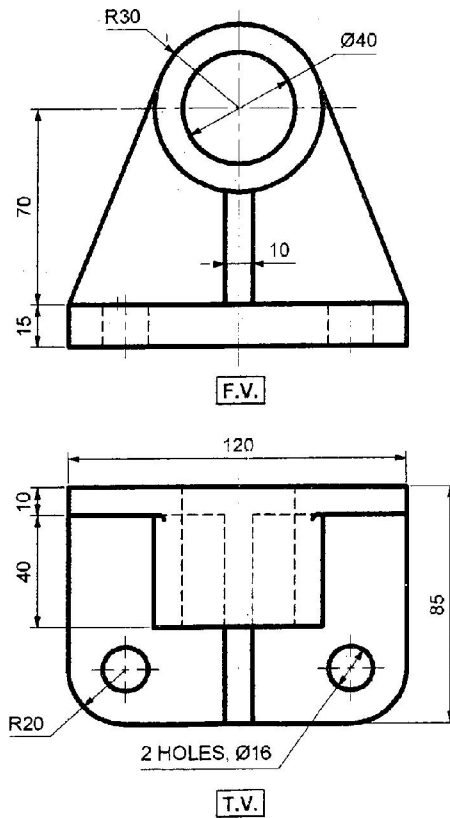


Fig. 4.3

5. Solve any TWO :

(a) Fig. 5.1 shows two views of an object. Draw its Top View.

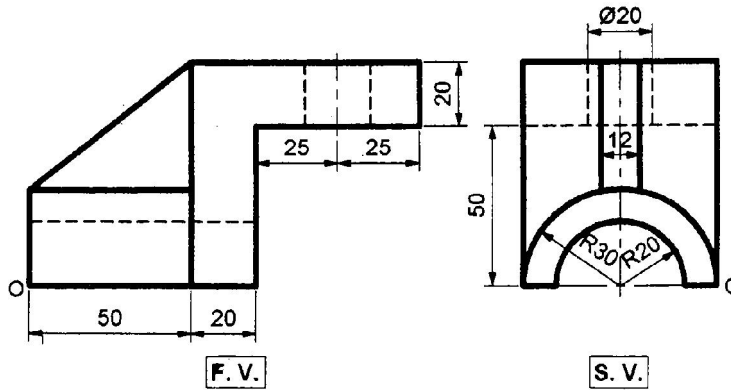


Fig. 5.1

(b) Fig. 5.2 shows Front View, Auxiliary Top View & Incomplete side view.

Complete the side view.

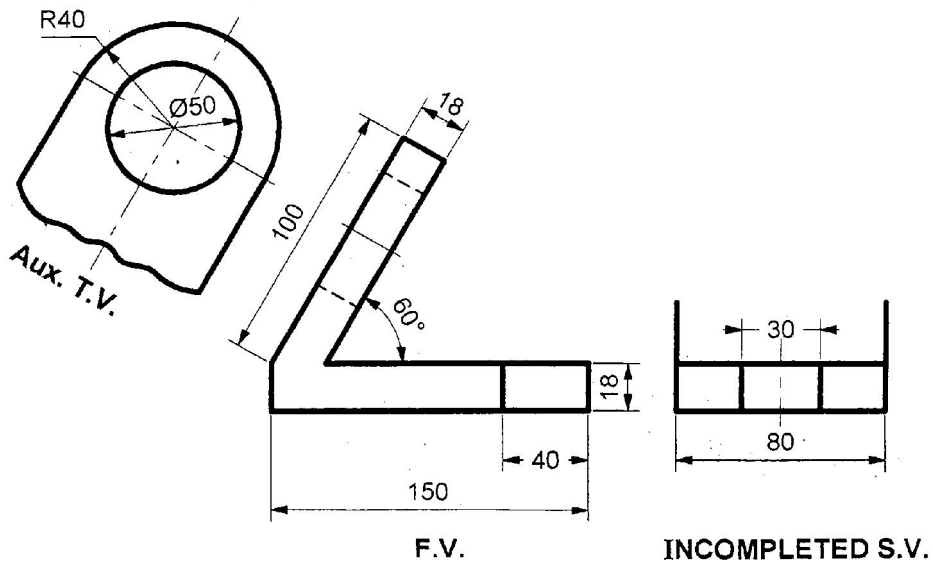


Fig. 5.2

- (c) F.V., partial right hand side view & partial auxiliary view shown in fig. 5.3
 Draw the given views & complete the R.H.S.V.

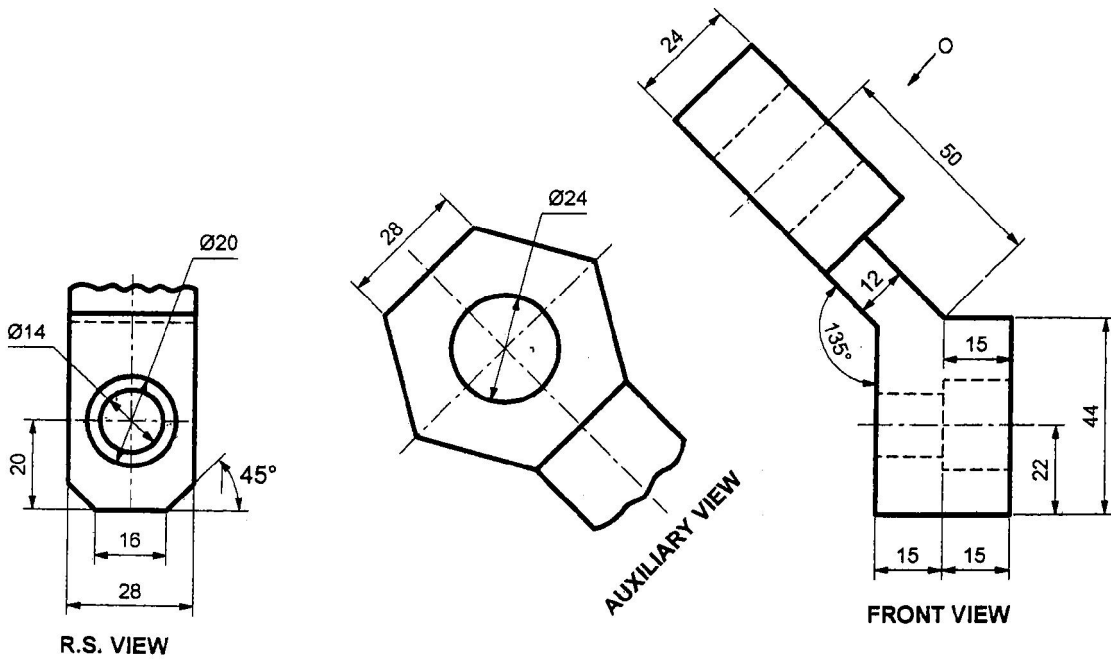


Fig. 5.3

