

22207

23124

4 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
  - (6) Retain all construction lines.

**Marks**

1. Solve **any FIVE** :

**10**

- (a) Draw neat and proportionate free hand sketch of single-Riveted (Single-strap) butt joint.
- (b) Draw free hand proportionate sketch of Eye foundation Bolt.
- (c) Draw neat and proportionate free hand sketch of Muff coupling.
- (d) Draw the conventional representation of following materials :
  - (i) Wood
  - (ii) Steel



- (e) Draw the conventional representation of following welded joints :
- (i) Square butt weld
  - (ii) Fillet weld
- (f) If a line is parallel to VP and inclined to HP, state whether following statements are True or False :
- (i) Front view of the line shows its true length.
  - (ii) Top view of the line is inclined to XY.
- (g) With a simple sketch, show Removed Section.

**2. Solve any THREE :**

**12**

- (a) Top view of 80 mm long line CD measures 68 mm, while the length of its front view measures 54 mm. Its one end 'c' is in HP and 15 mm in front of VP. Draw the projections of line CD and determine its inclination with HP and VP.
- (b) A circular plate of diameter 60 mm is kept on HP on a point of its circumference. The surface of circular plate makes an angle of  $40^\circ$  to the HP and perpendicular to VP. Draw three views.

- (c) A square plate ABCD of side 50 mm rests on a corner 'A' on HP in such a way that its diagonal 'AC' makes an angle of  $30^\circ$  with the HP. Draw the projections of plate when diagonal BD is perpendicular to VP.
- (d) A square pyramid 40 mm side of base and axis length 60 mm is kept on HP on a corner of its base, such that its axis makes an angle of  $30^\circ$  to the HP and parallel to VP. Draw the projections.
- (e) A pentagonal prism side of base 25 mm and axis 65 mm long rests with one of the edges of its base on the HP. Its axis is inclined at  $30^\circ$  to the HP and parallel to VP. Draw its projections.

**3. Solve any TWO :**

**16**

- (a) Draw the projection of cone base 50 mm diameter and axis 55 mm long when it is resting on the HP on a point of its base circle with axis inclined at  $30^\circ$  to the HP and parallel to VP.
- (b) A square prism 50 mm side of base and 80 mm in height is resting on its base on the HP with all sides of base making equal angle with VP. It is cut by a section plane normal to the VP and passing through the left bottom corner and top right corner of elevation.

Draw :

- (i) Front view
- (ii) Sectional top view
- (iii) True shape of the section



(b) Figure – 2 shows pictorial view of an object.

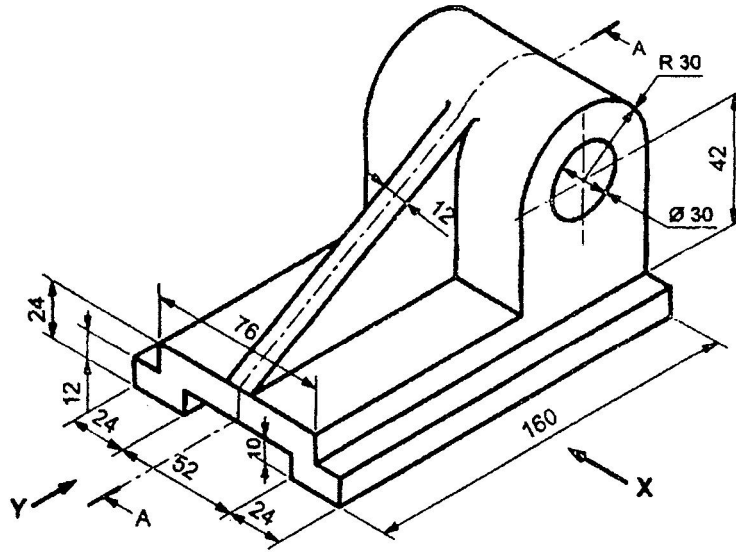


Figure – 2

Draw :

- (i) Sectional front view along section A – A.
- (ii) Top view

Use first angle method of projection

(c) Figure – 3 shows front view and left hand side view of the object. Draw the given views and project an auxiliary view looking in the direction of X.

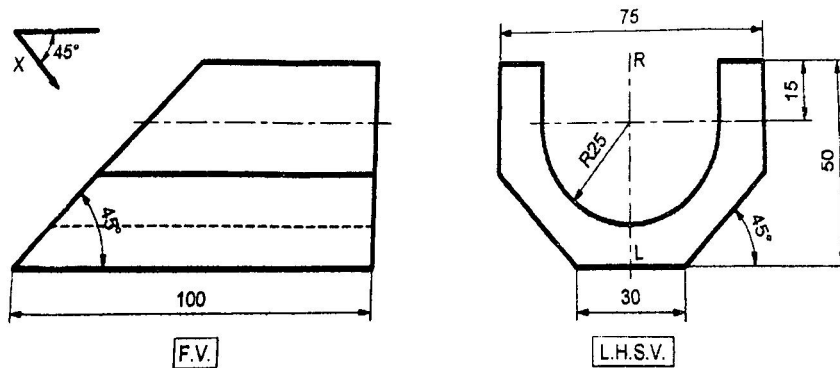


Figure – 3

5. Solve any TWO :

- (a) Figure – 4 show front view and top view of an object.  
Draw the following views

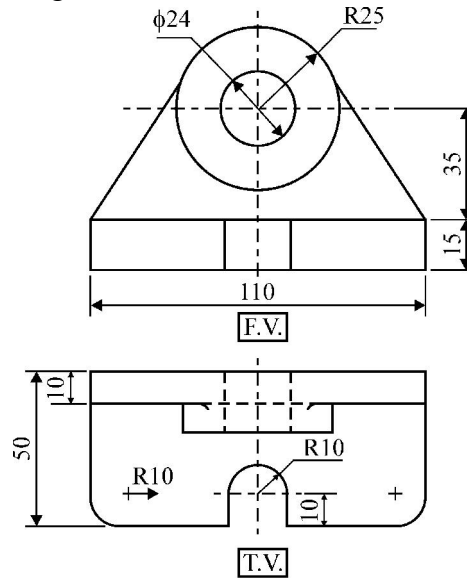


Figure – 4

- (i) Front view  
 (ii) Top view  
 (iii) Left hand side view
- (b) Figure – 5 shows front view and top view of an object.  
 Draw the following views

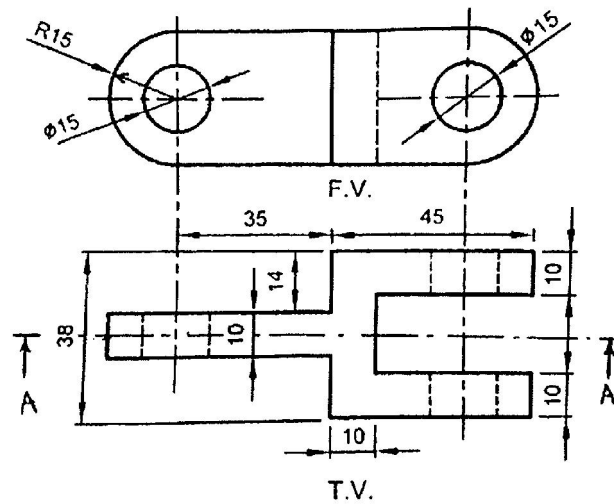


Figure – 5

- (i) Sectional front view along section A – A.  
 (ii) Top view  
 (iii) Right hand side view

- (c) Figure – 6 shows front view. Auxiliary view and incomplete top view.

Draw the given view and complete the Top view.

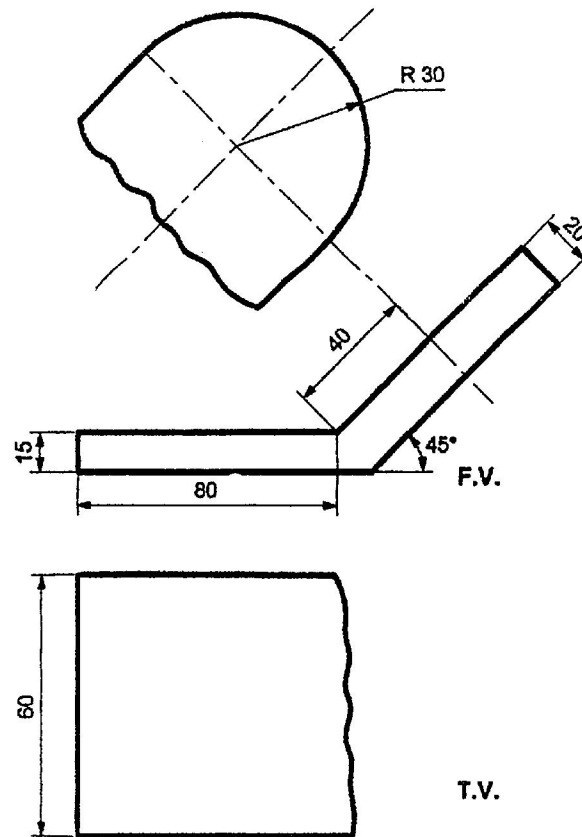


Figure – 6

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