

General Instructions:

- (i) Attempt all the questions.
- (ii) Use both sides of the drawing sheet, if necessary.
- (iii) All dimensions are in millimeters.
- (iv) Missing and mismatching dimensions, if any, may be suitably assumed.
- (v) Follow the SP: 46, 2003 revised codes. (with First angle method of projection).
- (vi) Number your answers according to questions.

1. Construct a regular hexagon ABCDEF, of side 30 mm. **3**

2. Draw an internal tangent to two circles, each of radius 32 mm when their centres are 96 mm apart. **3**

3. Inscribe a circle in a regular pentagon whose one side = 35 mm. **4**

4. Draw the projections of the following points on a common reference line: **5**

Point A is 20 mm above H.P. and 25 mm in front of V.P.

Point B is 40 mm above H.P. and 30 mm behind V.P.

Point C is 35 mm below H.P and in V.P.

Point D is 25 mm below H.P. and 30 mm behind V.P.

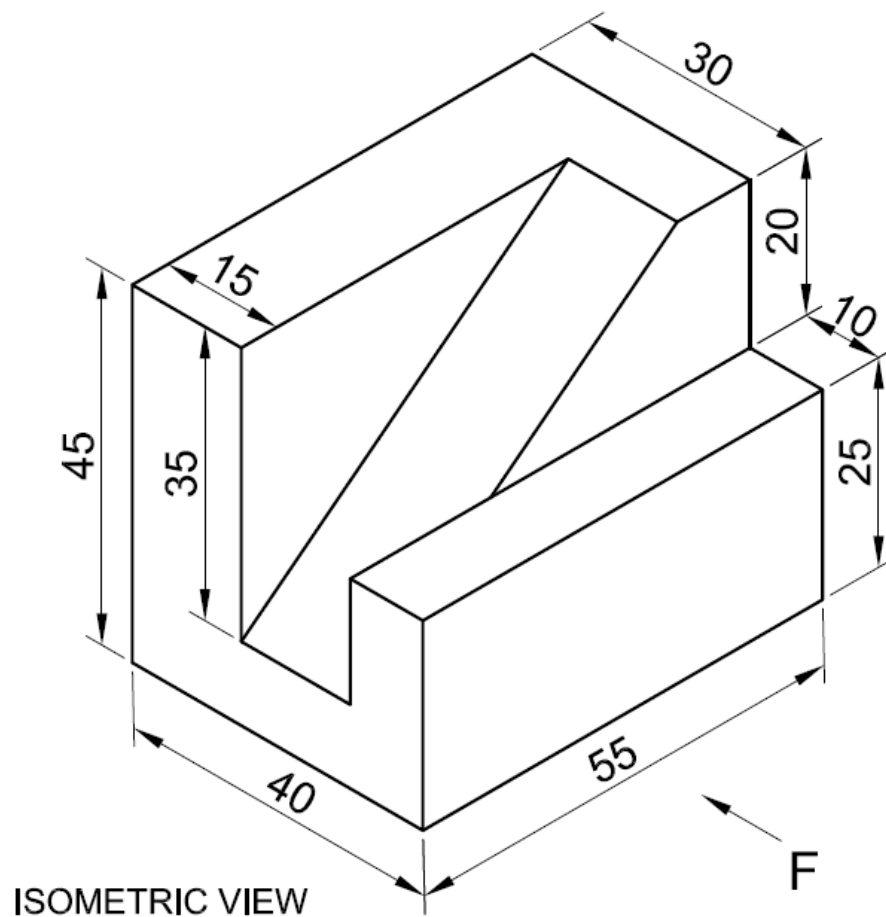
Point E is 45 mm below H.P. and 20 mm in front of V.P.

5. A straight line PQ 60 mm long is parallel to the H.P. and inclined at 45° to the V.P. The end P is 15 mm in front of the V.P. and the line is 20 mm above the H.P. Draw its projections. **3**

6. A pentagonal plate of 30 mm sides is perpendicular to VP and parallel to HP. One of the edges of the plate is 20 mm from HP and 30 mm from VP. Draw it's projections. **4**

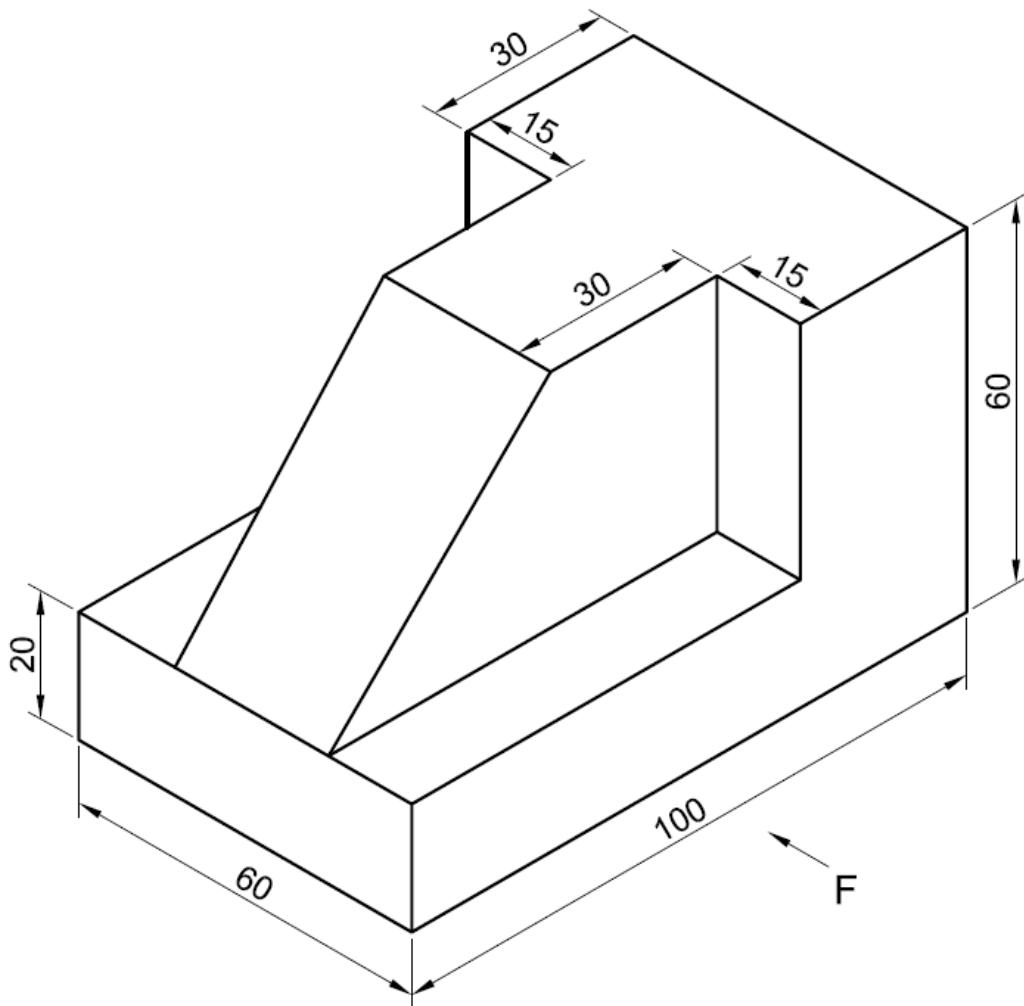
7. Project the front view and top view of a cone of diameter 50 mm and height 60 mm is resting on the HP and center of the cone 40 mm in front of the VP. **4**

8. Project the Front View and Top View of a pentagonal pyramid of 30 mm base edges and 60 mm long horizontal axis, parallel to V.P., when it is resting on one corner of its base with one edge of its base on top, \parallel to H.P. 7
9. A square prism of base side 50 mm and height of axis 70 mm has its base on HP. It is cut by a section plane perpendicular to V.P. and inclined to HP such that it passes through the two opposite corners of the rectangular face in front. Draw the sectional Top View and Front View. 7
10. Draw the Orthographic Projections of the object given below. 7



11. Draw the Orthographic Projections of the object given below.

7



ISOMETRIC VIEW

12. Construct an isometric scale of 70 mm.

4

13. Draw the isometric projection of a circle of diameter 50 mm in V.P.

6

14. Draw the isometric projection of a regular hexagon of base side 30 mm in H.P.

6

