

Indian Institute of Space Science & Technology  
Thiruvananthapuram  
B.Tech. Second Semester (Jan- June 2023)  
**AE 141: Engineering Graphics**

**Tutorial-1**

**Topic: Projection of points and lines**

**Note:** Draw these questions on the back side of the notebook, and bring the notebook while coming to the Engineering graphics lab sessions.

1. Draw the projections of the following points.

- i) L is located 30 mm below HP and 66 mm behind VP.
- ii) R is 20mm above HP and in VP.
- iii) D is 30mm behind VP and in the HP.
- iv) D is lying in both the planes.

2. A point P is 30 mm below H.P. and 25mm behind V.P. The point Q is also situated at the same distance from H.P. and V.P. respectively. If the projectors are 80 mm apart draw the projections of the lines?

3. A line AB 40 mm long is parallel to H.P. and perpendicular to V.P. Point A is nearer to V.P. and is 30 mm above H.P. and 20 mm in front of V.P. Draw its projections.

4. The distance between the projectors of A and B is 40mm. A is 30mm above HP and 15mm in front of VP and B is 50mm above HP and 40mm in front of VP. A third point C is at a distance of 50mm and 30mm from A and B respectively in FV and 35mm from A in TV. Draw the projections of point C and find the distance from the reference planes if C is in the II<sup>nd</sup> quadrant.

5. Draw the projections of a point S situated in a plane passing through the xy-line and inclined at 30° to H.P. If the distance of the point is:

- a) 50mm from the xy- line in side view
- b) 25mm from H.P.
- c) 35mm from V.P.