# Department of Mechanical Engineering
# Punjab Engineering College (Deemed to be University), Chandigarh

## Assignment No. 3

Course Name**: Engineering Drawing** Assignment Topic**: Projection of Lines**

Ques 1: End A of line AB is 20mm above HP and 35mm in front of VP and end B 15mm behind the VP and 25mm below the HP. The end projectors are 45mm apart. Draw the projections of the line and find its TL, ϕ, HT, and VT.

Ques 2: Distance between the end projectors of a line AB is 53mm. End A is 26mm away from VP and 41mm away from HP and is in third quadrant. End B is 10mm away from the HP and 22mm from the VP and is in first quadrant. Draw the projections of the line and find out its TL, θ, ϕ, HT and VT by the panel or trapezoid method of finding TL.

Ques 3: A line AB is contained by a profile plane. Its end A is 44mm behind VP and 12mm below HP and end B is 8mm behind the VP and 52mm below the HP. Draw its projections and find out its TL, θ, ϕ, HT and VT.

Ques 4: A line AB 70mm long, is inclined at $45^0$ to HP and $30^0$ to VP. Its mid-point P is 30mm below the HP and 25mm behind the VP. Draw the projections of the line.

Ques 5: A line AB, inclined at $30^0$ to VP, has its end A 15mm and end B 50mm below HP. The length of its elevation is 60mm and its VT is 7mm below the HP. Draw its projections and determine the TL of AB, its inclination (θ) with the HP and HT.

Ques 6: The projectors draw through the HT and the VT of a line AB are 70mm apart while the projectors drawn through the ends of the line are 44mm apart. The HT is 32mm behind the VP, the VT is 48mm below the HP. End A is 9mm below the HP. Draw the projections of the line and determine its TL, θ and ϕ.

Ques 7: A line AB is in third quadrant. Its end A is 25mm below HP. The line is inclined at 30° to the VP. The lengths of its elevation and plan are 70mm and 60mm, respectively, and its HT is 25mm behind the VP. Draw its projections.

Ques 8: The front view, a'b', of a line AB makes an angle of 30° with XY line. The HT of the line is 45mm in front of the VP and its VT is 30mm below the HP. End A is 12mm above the HP and end B is

105mm in front of the VP. Draw the projections of the line and find its TL, θ and ϕ.

Ques 9: The front view of a line PQ measure 52mm and it makes an angle of 45° with XY. End P is in HP and VT of the line is 12mm below the HP. The line is inclined at 30° to VP. Draw its projections and find its TL and θ.

Ques 10: The projectors of two points A and B in space are 60mm apart. A is 35mm in front of VP and 20mm above HP. B is 25mm in front of the VP and 45mm above the HP. A third point C is 34mm from A and 65mm from B and is in the HP. Draw the projections of the lines AC and BC and measure the distance of point C from the VP.