

**MECHANICAL ENGINEERING DEPARTMENT**

Course No.: UTA015

Course Title: ENGG. DRAWING

**Tutorial No. 3 (Manual Drafting and AutoCAD)  
(PROJECTION OF LINES)**

**(Time: 2Hours)**

1.	<p>Draw the projections of the following lines in</p> <p>(a) First quadrant in <b>Manual Drafting Tute</b></p> <p>(b) Third quadrant in <b>AutoCAD Lab</b></p> <p>I. Line AB 40 mm long, parallel to both HP and VP. Point A is 15 mm from VP and 20 mm from HP.</p> <p>II. Line CD 50 mm long parallel to VP and <math>30^0</math> to HP. Point C is 10 mm from VP and 20 mm from HP.</p> <p>III. Line EF 45 mm long parallel to HP and <math>40^0</math> to VP. Point E is 25 mm from VP and 20 mm from HP.</p> <p>IV. Line GH 50 mm long, normal to HP. Point G is 15 mm from VP and 15 mm from HP.</p> <p>V. Line JK 25 mm long, normal to VP. Point J is 10 mm from VP and 20 mm from HP.</p> <p>VI. Line MN in profile plane. Point M is 10 mm from VP and 15 mm from HP. Point N is 50 mm from VP and 40 mm from HP.</p>
2.	<p>End point A of line AB is 25 mm from HP and 10 mm from VP. End B is 50 mm from HP and 45 mm from VP. Distance between the end projectors as measured parallel to XY is 60 mm. Draw elevation, plan and profile view in first and third quadrants.</p>
3.	<p>Line PQ is 80 mm long. It is normal to VP and 30 mm above HP. One fourth of the line is in first quadrant. Draw front and top view of the given line.</p>
4.	<p>Point A is 25 mm above HP and 20 mm in front of VP. Front view is inclined at <math>30^0</math> to XY line and measures 65 mm. Point B is in third quadrant. Plan of the line is <math>45^0</math> to the XY line. Draw the projections of the line (FV, TV and side View)</p>
5.	<p>Mid point of the projections of the line is in HP and VP. Distance between the projectors is 70 mm. The line is in two quadrants. FV and TV measures 100 mm and 120 mm respectively. Draw FV, TV and left side view.</p>
6.	<p>Line AB has its ends A 10 mm from VP and 20 mm from HP. Point B is 55 mm from VP and 50 mm from HP. Distance between end projectors is 50 mm. Draw the front view, top view and L.side view of the line assuming the line to be in first quadrant.</p>