

**Department of Mechanical Engineering**
**ASSIGNMENT - 1**

<b>Department</b>	<b>: Mechanical Engineering</b>	<b>Semester</b>	<b>: 1<sup>st</sup> Semester A</b>
<b>Subject Name</b>	<b>: Engineering Visualization</b>	<b>Subject code:</b>	<b>: 21EV15</b>
<b>Maximum marks</b>	<b>: 10</b>	<b>Publication Date</b>	<b>: 24/01/2022</b>
<b>Staff In-charge</b>	<b>: Dr. Raghavendra Reddy N V</b>	<b>Submission Date</b>	<b>: 31/01/2022</b>

**Instructions**

- Write your Name, Class, Section, USN/Roll number and assignment number in the all the sheets.
- Answer neatly and legibly in A4 size grid sheets / white sheets
- An incomplete assignment is NOT acceptable for submission.

<b>Sl. No</b>	<b>Assignment Questions</b>
<b>1</b>	<p>Draw the projections of the following points on the same XY line, keeping convenient distance between each projector. Name the quadrants in which they lie.</p> <p>25 mm above HP and 35 mm in front of VP.</p> <p>30 mm above HP and 40 mm behind VP .</p> <p>40 mm above HP and on VP.</p> <p>40 mm below HP and 30 mm in front of VP.</p>
<b>2</b>	<p>Draw all the three views of a point P lying 60 mm below HP, 70 mm in front of VP and 40 mm from the RPP. Also state the quadrant in which it lies.</p>
<b>3</b>	<p>The point P is 45 mm above HP, 65 mm behind VP, 30 mm from RPP. Draw the three views of the point. Also state the point in which it lies.</p>
<b>4</b>	<p>A point A is 20 mm above HP &amp; 25 mm in front of VP. Another point B is 25 mm behind VP and 40 mm below HP. Draw their projections when the distance between their projectors parallel to XY line is zero mm. Add the right-side view only to point B.</p>
<b>5</b>	<p>A point is A is 40 mm in front of VP and is situated in the fourth quadrant. Its shortest distance from the intersection of XY and <math>X_1Y_1</math> is 45 mm. Draw its projections. Also find its distances from HP.</p>
<b>6</b>	<p>A point 30 mm above XY line is the front view of three points P, Q and R. The top view of R is 40 mm behind VP, the top view of Q is on XY line and top view of point P is 45 mm in front</p>

	of VP. Draw the projections of the points & state the quadrants in which the points are situated.
<b>7</b>	A point 'M' is 30 mm in front of VP and 20 mm above HP. Another point N is 15 mm behind VP & 25 mm below HP. The horizontal distance between the points parallel to XY line is 50 mm. Draw the projections of the points M & N and join their front and top views. Draw the right-side view for the point N only.
<b>8</b>	Two points P and Q are on HP. The point P is 30 mm behind VP, while Q is 50 mm in front of VP. The line joining their top views makes an angle of $40^\circ$ with XY. Find the horizontal distance between their projectors parallel to XY line.
<b>9</b>	A point is lying on VP, 10 mm below HP & 30 mm behind/ in front/ from LPP. Draw its projections and name the side view.
<b>10</b>	Draw all the three views of a point P lying 60 mm below HP, 70 mm in front of VP and 40 mm from RPP. Also state the quadrant in which it lies.
<b>11</b>	A point B is lying on VP, 20 mm below HP & 30 mm behind / in front / from LPP. Draw its projections and name the side view.
<b>12</b>	A point P is on HP and 30 mm in front of VP. Another point Q is on VP and 40 mm above HP. The distance between their projectors parallel to XY line is 50 mm. Find the distance between their front and top views of the points P and Q.
<b>13</b>	The common point 40 mm below XY line represents not only the front views of 3 points A, B and C but also the top view of point C. The top view of point B lies on XY line and top view of point A lies 50 mm above it. Draw the projections of the points and add the right- side view to the point A only. Also state the positions of points with respect to the reference planes and state in which quadrants the point lie.
<b>14</b>	Draw the projections of point A lying 30 mm above HP and in first quadrant, if its shortest distance from the line of intersection of HP and VP is 50 mm. Also, find the distance of the point from VP.
<b>15</b>	A point is lying on HP, 20 mm behind VP and 35 mm behind / in front/ from RPP. Draw its projections and name the side view.