# DEPARTMENT OF MECHANICAL ENGINEERING <br> UNIVERSITY INSTITUTE OF ENGINEERINGAND TECHNOLOGY, CSJM UNIVERSITY, KANPUR Engineering Drawing (TCA-S101) 

Semester: 2023-24 (Even Semester)
Year: $\mathbf{1}^{\text {st }}$ Year (2K24)

## Mid Semester Examination (A-2)

1. The projectors drawn from the H.T. and the V.T. of a straight line $A B$ are 80 mm apart while those drawn from its ends are 50 mm apart. The H.T. is 35 mm in front of the V.P. , the V.T. is 55 mm above the H.P. and the end $A$ is 10 mm above the H.P. Draw the projections of $A B$ and determine its length and inclinations with the reference planes.
2. A line $A B$ measures 100 mm . The projectors through its V.T. and the end $A$ are 40 mm apart. The point $A$ is 30 mm below the H.P. and 20 mm behind the V.P. The V.T. is 10 mm above the H.P. Draw the projections of the line and determine its H.T. and inclinations with the H.P. and the V.P.
3. A line PQ, 100 mm long, is inclined at $45^{\circ}$ to the H.P. and at $30^{\circ}$ to the V.P. Its end $P$ is in the second quadrant and $Q$ is in the fourth quadrant. A point $R$ on $P Q, 40 \mathrm{~mm}$ from $P$ is in the both the planes. Draw the projections of PQ .
4. A line $A B, 75 \mathrm{~mm}$ long, is inclined at $45^{\circ}$ to the H.P. and $30^{\circ}$ to the V.P. Its end $B$ is in the H.P. and 40 mm in front of the V.P. Draw its projections and determine its traces.
5. A line AB, inclined at $40^{\circ}$ to the V.P., has its ends 50 mm and 20 mm above the H.P. The length of its front view is 65 mm and its V.T. is 10 mm above the H.P. Determine the true length of AB, its inclination with the H.P. Determine the true length of AB, its inclination with the H.P. and its H.T.

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1. The projectors drawn from the H.T. and the V.T. of a straight line $A B$ are 80 mm apart while those drawn from its ends are 50 mm apart. The H.T. is 35 mm in front of the V.P. , the V.T. is 55 mm above the H.P. and the end $A$ is 10 mm above the H.P. Draw the projections of $A B$ and determine its length and inclinations with the reference planes.
2. A line $A B$ measures 100 mm . The projectors through its V.T. and the end $A$ are 40 mm apart. The point A is 30 mm below the H.P. and 20 mm behind the V.P. The V.T. is 10 mm above the H.P. Draw the projections of the line and determine its H.T. and inclinations with the H.P. and the V.P.
3. A line PQ, 100 mm long, is inclined at $45^{\circ}$ to the H.P. and at $30^{\circ}$ to the V.P. Its end $P$ is in the second quadrant and $Q$ is in the fourth quadrant. A point $R$ on $P Q, 40 \mathrm{~mm}$ from $P$ is in the both the planes. Draw the projections of PQ .
4. A line $A B, 75 \mathrm{~mm}$ long, is inclined at $45^{\circ}$ to the H.P. and $30^{\circ}$ to the V.P. Its end $B$ is in the H.P. and 40 mm in front of the V.P. Draw its projections and determine its traces.
5. A line $A B$, inclined at $40^{\circ}$ to the V.P., has its ends 50 mm and 20 mm above the H.P. The length of its front view is 65 mm and its V.T. is 10 mm above the H.P. Determine the true length of $A B$, its inclination with the H.P. Determine the true length of $A B$, its inclination with the H.P. and its H.T.
