## DEPARTMENT OF MECHANICAL ENGINEERING

UNIVERSITY INSTITUTE OF ENGINEERINGAND TECHNOLOGY, CSJM UNIVERSITY, KANPUR
Engineering Drawing (TCA-S101)
Semester: 2023-24 (Even Semester) Year (2K23)
Year: $1^{\text {th }}$
Mid Semester Examination (A-3)

## Time: 1.5 h

## Maximum marks: 30

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 infront 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. The front view of a line $A B$ measures 70 mm and makes an angle of $45^{\circ}$ with xy . $A$ is in the H.P. and the 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 it H.T. and inclinations with the H.P. and the V.P.
3. A line $A B, 80 \mathrm{~mm}$ long makes an angle of $30^{\circ}$ with the V.P. and lies in a plane perpendicular to both the H.P. and the V.P. Its end $A$ is in the H.P. and the end $B$ is in the V.P. Draw its projections and show its traces.
4. $A$ line $A B, 65 \mathrm{~mm}$ long, has its end $A$ in the H.P. and 15 mm in front of the V.P. The end $B$ is in the third quadrant. The line is inclined at $30^{\circ}$ to the H.P. and at $60^{\circ}$ to the V.P. Draw its projections.
5. The top view of line $A B$ measures 60 mm and inclined to reference line at 600 . The end point $A$ is 15 mm above the H.P. and 30 mm infront of the V.P. Draw the projections of the line when it is inclined at 450 to the H.P. and is situated in the first quadrant. Find true length and inclination of the line with the V.P. and traces.
[6 x 5]

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