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Roll No.:

National Institute of Technology, Delhi

Name of the Examination: B. Tech- MID TERM. March, 2019

Branch : ECE (Gr-I)

Semester : 1st^{2nd}

Title of the Course : Engineering Visualization

Course Code : MEB100

Time: 2 Hours

Maximum Marks: 25

Note: Use of pen/free hand curves for drawing sketches is forbidden.

Q1. The distance between two points on a map is $5\frac{3}{4}$ ". The points are actually 20 miles apart. Construct a diagonal scale of the map showing miles and furlongs and to read up to 25 miles. (Consider, 1 inch = 1.58×10^{-5} mile; 1 mile = 1.61×10^5 cm; 1 mile = 8 furlongs).

(6)

Q2. Trace the path of the ends of a rod PQ, 85 mm long, when it rolls, without slipping, on a semicircle having diameter 50 mm. Assume the rod PQ to be tangent to the semicircle at the starting position.

(6)

Q3. Draw the projection of a circle of 50 mm diameter resting in the HP on a point A on the circumference, its plane inclined at 45° to the HP and the diameter AB inclined at 30° with the VP. Mention steps briefly.

(6)

Q4. The end projectors of a line PQ are 65 mm apart. P is 25 mm behind VP and 30 mm below the HP. The point Q is 40 mm above the HP and 15 mm in front of VP. Find the third point C in the HP and in front of the VP such that its distance from a point P is 45 mm and that from Q is 60mm. Determine inclinations of PQ with the HP and VP. Mention steps briefly.

(7)

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