

Lukhdhirji Engineering College, Morbi

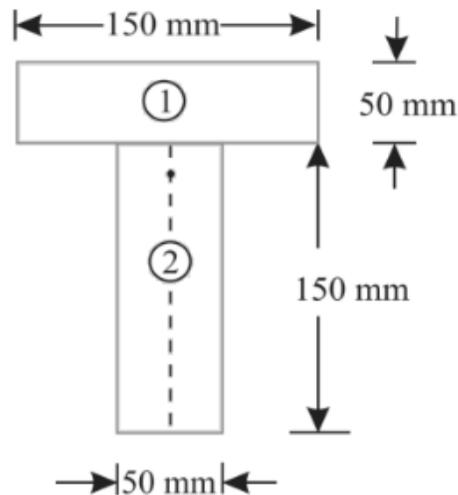
Department of Mechanical Engineering

Assignment 2- Moment of Inertia of Planar Cross Sections (CO1)

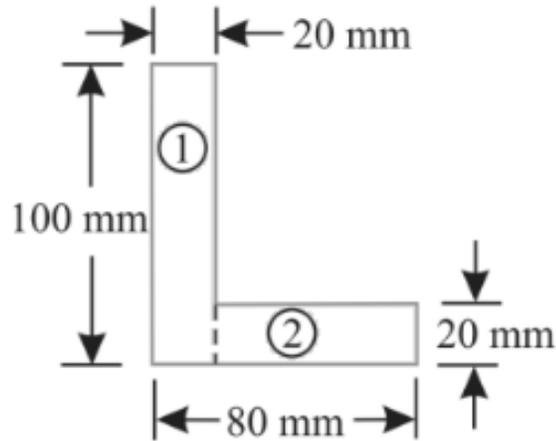
Subject: Fundamental of Machine Design (3141907) Semester: 4th

Year : 2022-23

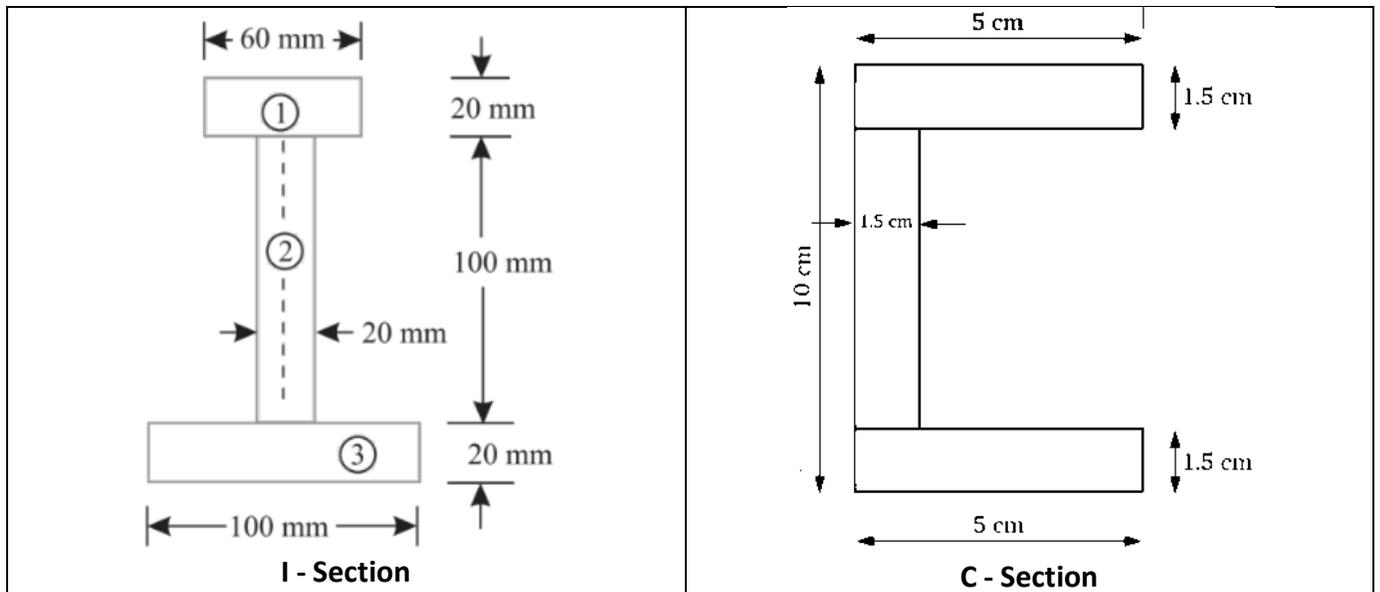
1. Determine the moment of inertia of following plane sections:
 - a. Rectangular Section
 - b. Hollow Rectangular Section
 - c. Triangular Section
 - d. Circular Section
 - e. Hollow Circular Section
 - f. Semicircular Section
2. Explain the terms: Moment of inertia and Polar moment of inertia.
3. Explain the Perpendicular axis theorems for moment of inertia.
4. Explain the parallel axis theorems for moment of inertia.
5. Determine the moment of inertia of following T-section about X-X and Y-Y axes through the center of gravity of the section.



6. Find the moment of inertia of L - section about centroidal X-X and Y-Y axes of the angle section.



7. Find the moment of inertia of following sections about its centroidal axes.



8. Find the moment of inertia of hollow section as shown in Fig 1 and Fig 2 about centroidal axes of the section.

