Unit 2 - Prequisite Assignment

Assignment 0

Due date: 2025-05-17, 14:00 (UT)

1. In the diagram below, the forces acting on the beam are shown. Identify the forces and their magnitudes.

2. The beam shown in the diagram is subjected to various loads. Calculate the reactions at the supports.

3. In the diagram, a column is shown with a load applied. Determine the axial force and shear force in the column.

4. The beam shown in the diagram is subjected to a point load. Calculate the bending moment and shear force at the point of application of the load.

5. In the diagram, a truss is shown with various loads. Calculate the forces in the members of the truss.

6. The beam shown in the diagram is subjected to a distributed load. Determine the bending moment and shear force along the length of the beam.

7. In the diagram, a cantilever beam is shown with a load applied. Calculate the deflection and rotation at the free end.

8. The beam shown in the diagram is subjected to a combination of loads. Calculate the forces and reactions at the supports.

9. The beam shown in the diagram is subjected to a combination of loads. Determine the maximum values of bending moment and shear force along the length of the beam.

10. In the diagram, a column is shown with a load applied. Determine the axial force and shear force in the column.