

- 1 Describe Hooke's Law with a graph.
- 2 List various Elastic Constants.
- 3 Define Poisson's Ratio.
- 4 Differentiate between rigid and deformable bodies.
- 5 Show the relation between modulus of elasticity and modulus of rigidity.
- 6 Evaluate the load carried by a bar if the axial stress is  $10 \text{ N/mm}^2$  and the diameter of bar is  $10 \text{ mm}$ .
  
- 7 A circular rod  $2 \text{ m}$  long and  $15 \text{ mm}$  diameter is subjected to an axial tensile load of  $30 \text{ kN}$ . Calculate the elongation of the rod if the modulus of elasticity of the material of the rod is  $120 \text{ KN/mm}^2$
- 8 Define principal planes and principal stresses.
- 9 Where the Mohr's circle method can be used?
- 10 Express Young's modulus in terms of Bulk and Rigidity modulus.
- 11 Define factor of safety.
- 12 Discuss shortly about thermal stress.
- 13 Differentiate tensile stress from compressive stress.