

### **Assignment**

1. Obtain an expression for the Volumetric Strain of a rectangular bar subjected to tensile stress in three mutually perpendicular directions
2. Obtain the relationship between Young's Modulus and Bulk Modulus
3. A steel bar 30cm long, 5cm wide and 1.2cm thick is subjected to an axial pull of 84KN. Determine the change in the length, breadth, thickness and volume of the bar.

Take  $E = 2 \times 10^5 \text{ N/mm}^2$  and  $\frac{1}{m} = 0.32$