

Worksheet: Mechanical Properties of Solids

Gujarat State Board · Class 11 · Physics · 5 questions · 13 marks

Name: _____

Date: _____

Score: _____ / 13

Q1. Which has the higher Young's modulus, rubber or steel? [2 marks]

Q2. Why does a wire become thinner when stretched? [2 marks]

Q3. A 3 m steel wire ($Y = 2 \times 10^{11}$ Pa, area 2 mm^2) carries a 100 kg load. Find the elongation ($g = 10 \text{ m/s}^2$). [3 marks]

Q4. Water is compressed by 1%. Find the pressure increase ($B = 2.2 \times 10^9$ Pa). [3 marks]

Q5. A steel wire ($L = 2 \text{ m}$, area 1 mm^2 , $Y = 2 \times 10^{11}$ Pa) is stretched by 1 mm. Find the energy stored. [3 marks]
