A rod is placed between two fixed supports and it is heated. What type of stress is developed on a rod?

1. Compressive stress

2. Tensile stress

3. Shear stress

4. Relative stress

The property of a body, by virtue of which it tends to regain its original size and shape when the applied force is removed, is known as _____.

1. elasticity

2. plasticity

3. viscosity

4. rigidity

Which of the following substances has the highest elasticity?

1. Rubber

2. Copper

3. Sponge

4. Steel

if a body completely regains its original shape and size after removal of an external deforming force, such body is known as _____.

1. Perfectly elastic body

2. Perfectly plastic body

3. Deformed body

4. None of the above

The property of the material due to which it regains its original shape or size when the load is removed is called:

1. Elasticity

2. Viscosity

3. Plasticity

4. None of these

Malleability of a material is the _____.

1. Ability of material to undergo large permanent deformations in tension

2. Ability of material to undergo large permanent deformations in compression

3. Ability of material to recover its original shape and size after deforming force is applied on it

4. None of the above

A liquid has only

1. shear modulus

2. Youngs modulus

3. bulk modulus

4. All of the above

Ductility is the property of metal which is used to make

1. Thin metal sheets

2. Long wire

3. Solid sphere

4. Delicate artifact

Couple required per unit radian twist is

1. $\dfrac{M\pi r^4}{2l}$

2. $\dfrac{M^2\pi r^4}{4l}$

3. $\dfrac{M\pi r^4}{4l}$

4. $\dfrac{M^2\pi^2 r^2}{2l}$

The steel is used to make the spring compare to aluminium because:

1. Steel is cheaper than aluminium

2. Aluminium is more elastic than steel

3. Steel is more elastic than aluminum

4. None of these

Which one is the correct expression for Poisson's ratio?

1. $\dfrac{\Delta R}{L} \times \dfrac{R}{\Delta L}$

2. $\dfrac{\Delta R}{R} \times \dfrac{L}{\Delta L}$

3. $\dfrac{\Delta R}{\Delta R} \times \dfrac{L}{\Delta L}$

4. $\dfrac{\Delta R}{R} \times \dfrac{\Delta L}{L}$

The maximum and minimum values of Poisson's ratio for a metal lie in the following limits

1. -1 to +1

2. -1 to 0

3. 0 to 1

4. 0 to 0.5

If a rubber band of cross section 0.04 m² is stretched by the force of 100 N, then the stress acting on the rubber band is _____?

1. 10000 N

2. 7500 N

3. 5000 N

4. 2500 N

What will be the Young's modulus of wire if 1000 N/m² load can extend wire by 20% from its initial value and consider area of cross section of wire remains unchanged in this process?

1. $1000 \ N/m^2$

2. $2500 \ N/m^2$

3. $5000 \ N/m^2$

4. $10000 \ N/m^2$

If we have a wire of length 10 m and it is loaded with 100 kg mass which causes it to elongate and because of this stress the new length of wire is 12 m, in this case strain caused on wire is _____.

1. 0.1

2. 0.2

3. 0.3

4. 0.4