1. Which of the following substances posses the highest elasticity?

A. Rubber
B. Steel
C. Glass
D. Copper

Answer: Option **B**

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2. What is the SI unit of modulus of elasticity of substance?

A. Nm-2
B. Jm-2
C. Nm-1
D. Being a number it has no unit.

Answer: Option **A**

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3. What are the dimensions of stress?

A. MLT-2
B. ML-2T-1
C. ML-1T-2
D. ML?T-1

Answer: Option **C**

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4. The figure shown the stress-strain graph of a certain substance. Over which region of the graph is Hooks law obeyed?

A. AB
B. BC
C. CD
D. ED

Answer: Option **D**

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5. Which one of the following physical quantities does not have the dimensions of force per unit area?

A. Stress
B. Strain
C. Youngs modulus
D. Pressure

Answer: Option **B**

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6. A rubber cord of cross-sectional area 2cm2 has a length of 1m. When a tensile force of 10N is applied the length of the cord increases by 1cm. What is the youngs modulus of rubber?

A. 2x108 Nm-2
B. 5x106 Nm-2
C. 0.5x10-6 Nm-2
D. 0.2x10-6Nm-2

Answer: Option **B**

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7. A ire of length L is stretched by a length ? when a force F is applied at one end. If the elastic limit is not exceeded the amount of energy stored in the wire is

A. F?
B. (F?)
C. F? 2/L
D. F?2

Answer: Option **B**

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8. When a force is applied at one end of an elastic wire it produces at strain ? in the wire. If y is the youngs modulus of the material of the wire the amount of energy stored per unit volume of the wire is given by

A. Y?
B. Y?
C. Y?2
D. Y?2

Answer: Option **D**

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9. A wire suspended vertically from one end is stretched by attaching a weight of 20N to the lower end. The weight stretches the wire by 1mm. How much energy is gained by the wire?

A. 0.01J
B. 0.02J
C. 0.04J
D. 1.0J

Answer: Option **A**

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10. A certain stress applied to an elastic material produces a certain strain in it. If the elastic limit is not exceeded the energy gained per unit volume of the material is given by

A. Stress/strain
B. (stress/strain)

C. Stress x strain

D. (Stress / strain)

Answer: Option **D**