



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

- Subject- Physics Answers of Worksheet- -29 Class – IX
- Date -29.04.2020
- Chapter- Elasticity
- Answer the following questions (MCQ) :

(1×15):

Question1:

The formula we use to find stress is

1. area/force
2. force/area
3. force + area
4. force×area

Answer B

Question 2:

The unit of strain is

1. newton
2. joule
3. pascal
4. no unit

Answer D

Question 3:

A comparison of such a change caused by the stress with the original shape, volume or length is called

1. stress
2. strain
3. density
4. elasticity

Answer B

Question 4:

The property of a body to restore its original size and shape as the deforming force ceases to act is called

1. energy
2. floating
3. elasticity
4. density³

Answer C

Question 5:

If stress produces a change in the length of an object then the strain is termed as

1. zero strain
2. constant strain
3. former strain
4. tensile strain

Answer D

Question 6.

The substance which shows practically no elastic after effect is (AFMC 94)

Quartz
Copper
Silk
Rubber

Answer Quartz

Question 7.

The Young's modulus of the wire of length L and radius r is Y . if the length is reduced to $L/3$ (and radius to $(r/2)$) its Young's modulus will be (MHT-CET 2001)

Y
 $4Y/3$
 $3Y/4$
 $12Y$

Answer $12Y$

Question 8.

The force constant of a wire is K and that of another wire of the same material is $2K$. when both the wires are stretched, then work done is (MHT-CET-2000)

W2 0.5 W1
W2 W1
W2 2W
W2 2W12

Answer W20.5W1

Question 9.

Energy in a stretched wire is

Half of load strain
Half of stress strain
Stress strain
Load strain

Answer Stress strain

Question 10.

In a wire, when the elongation is 2 cm, the energy stored is E. if the wire is stretched by 10 cm, then the energy stored in the wire will be

E
5E
25E
 $25/2 * E$

Answer $25/2 * E$

Question 11.

On stretching a wire, the elastic energy per unit volume is,

$1/2 * F * l / A * L$
 $1/2 * F * l / A * L$
 $1/2 * F * l / A$
 $1/2 * F * l$

Answer $1/2 * F * l / A$

Question 12.

Out of the following materials, whose elasticity is independent of temperature?

Copper
Invar steel

Brass
Silver

Answer Invar steel

Question13.

Young's modulus of the material of a wire of length L and radius r is Y N/m². if the length is reduced to $L/2$ and radius to $r/2$, the Young's modulus will be

Y
2Y
Y/4
Y/2

Answer 2Y

Question 14 .

Two steel wires of the same radius have their lengths in the ratio of 1:2. if they are stretched by the same force, then the strains produced in the two wires will be in the ratio of

1:2
2:1
1:1
1:4

Answer 1:4

Question 15.

Which of the following is dimensionless quantity?

Stress
Young' s modulus
Strain
Pressure

Answer Youngsmodulus

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