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1. Strain is defined as the ratio of
(a) change in volume to original volume
(b) change in length to original length
(c) change in cross-sectional area to original cross-sectional area
(d) any one of the above
(e) none of the above.
Ans: d

2. Hooke's law holds good up to
(a) yield point
(b) limit of proportionality
(c) breaking point
(d) elastic limit
(e) plastic limit.
Ans: b

3. Young's modulus is defined as the ratio of
(a) volumetric stress and volumetric strain
(b) lateral stress and lateral strain
(c) longitudinal stress and longitudinal strain
(d) shear stress to shear strain
(e) longitudinal stress and lateral strain.
Ans: c

4. The unit of Young's modulus is
(a)   mm/mm
(b)   kg/cm
(c)   kg
(d)   kg/cm2
(e)   kg cm2.
Ans: d

5. Deformation per unit length in the direction of force is known as
(a)   strain
(b)   lateral strain
(c)   linear strain
(d)   linear stress
(e)   unit strain.
Ans: c

6. It equal and opposite forces applied to a body tend to elongate it, the stress so produced is called
(a) internal resistanpe
(b) tensile stress
(c)   transverse stress
(d) compressive stress

(e) working stress.
Ans: b

7. The materials having same elastic properties in all directions are called
(a) ideal materials
(b) uniform materials
(c) isotropic materials
(d) paractical materials
(e) elastic materials.
Ans: c

8. A thin mild steel wire is loaded by adding loads in equal increments till it breaks. The extensions noted with increasing loads will behave as under
(a) uniform throughout
(b) increase uniformly
(c) first increase and then decrease
(d) increase uniformly first and then increase rapidly
(e) increase rapidly first and then uniformly.
Ans: d

9. Modulus of rigidity is defined as the ratio of
(a) longitudinal stress and longitudinal strain
(b) volumetric stress and volumetric strain
(c) lateral stress and lateral strain
(d) shear stress and shear strain
(e) linear stress and lateral strain.
Ans: d

10. If the radius of wire stretched by a load is doubled, then its Young's modulus will be
(a)   doubled
(b)   halved
(c) become four times
(d) become one-fourth
(e) remain unaffected.
Ans: e