

# 23AST201-Mechanics of Solids for Aerospace-Unit-1

The crossword puzzle contains the following words:

- Across:**
  - 4 Hooke's Law
  - 7 Shear Stress
  - 10 Ductility
  - 12 Tensile Strength
  - 13 Yield Strength
  - 15 Ultimate Tensile Strength
- Down:**
  - 1 Poisson's Ratio
  - 2 Shear Strain
  - 3 Young's Modulus
  - 6 Compressive Strength
  - 8 Modulus of Elasticity
  - 9 Brittleness
  - 11 Ultimate Tensile Strength
  - 14 Elongation

**Across**

**Down**

- 4.** The principle stating that the strain in a material is proportional to the applied stress within the elastic limit.
- 5.** The deformation or displacement of a material relative to its original length, a dimensionless quantity.
- 7.** The stress component that acts parallel to the cross-section of a material.
- 11.** The ability of a material to undergo significant plastic deformation before rupture.
- 12.** The stress experienced by a material when subjected to pulling forces.
- 13.** The stress at which a material begins to deform plastically and will not return to its original shape.
- 15.** The maximum stress a material can withstand before breaking.
- 1.** The ratio of lateral strain to axial strain in a material under axial stress.
- 2.** The angular deformation produced by shear stress.
- 3.** A measure of the stiffness of a material, defined as the ratio of stress to strain in the linear elastic region.
- 6.** The slow, time-dependent deformation of a material under constant stress.
- 8.** The stress experienced by a material when subjected to pushing or compressive forces.
- 9.** The tendency of a material to fracture without significant plastic deformation.
- 10.** The internal resistance offered by a material to an external force, measured in force per unit area.
- 14.** The maximum stress a material can withstand without permanent deformation.