

- Q.20 What are different types of pressure measuring devices?
- Q.21 What are causes, effects and control corrosion?
- Q.22 What is the difference between Shear and volumetric strain?

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 What are different physical properties of metals and alloys? Describe any four.
- Q.24 What do you mean by Kinematic of fluids? Briefly describe type of fluid flow.
- Q.25 Define corrosion. What are its causes, effects and how would you control corrosion?

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**1st Year / Agriculture Engg.**

**Subject:- Basics of Agriculture Engg.**

Time : 3Hrs.

M.M. : 60

### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Manometer is used to measure
- a) Velocity at a point    b) Pressure at a point  
c) Discharge of fluid    d) All of the above
- Q.2 The ability of material to be drawn from a large section to a small section such as in wire drawing.
- a) Toughness                      b) Ductility  
c) Elasticity                      d) Plasticity
- Q.3 The property of the material which enables it to regain its original shape after deformation is
- a) Plasticity                      b) Elasticity  
c) Stiffness                      d) Ductility

- Q.4 Mass per unit volume of the material is
- a) Porosity                      b) Structure
- c) Density                        d) Stiffness
- Q.5 The process of heat transfer in which heat flows from a hotter to cold body in the form of electromagnetic waves.
- a) Conduction                  b) Radiation
- c) Convection                  d) Thermal radiation
- Q.6 The ratio of the maximum load to original sectional area is
- a) Yield strength              b) Tensile strength
- c) Strength                        d) Impact strength

### SECTION-B

**Note:** Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Define kinetic energy.
- Q.8 Define Vapour pressure.

- Q.9 Define Elasticity.
- Q.10 Define Young's Modulus.
- Q.11 Define Atmospheric pressure.
- Q.12 Define Specific gravity.

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 What are the factors affecting mechanical properties of materials?
- Q.14 What are the different modes of heat energy transfer?
- Q.15 Describe different types of stresses.
- Q.16 Write down the practical applications of hydraulics.
- Q.17 What is the difference between Laminar flow and turbulent flow?
- Q.18 Enlist the applications of refrigeration and air conditioners in agriculture.
- Q.19 Define Surface tension and viscosity.