

No. of Printed Pages : 4

Roll No.

180117

1st Year / Agri. Tech.

Subject : Basics of Agricultural Engineering

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 A flow in which the fluid particles move along well defined paths or streamline and streamline are straight and parallel
- a) Unsteady flow b) Compressible flow
 - c) Uniform flow d) Laminar flow
- Q.2 The internal resistance force per unit area is called
- a) Strain b) Stress
 - c) Load d) Poisson's Ratio
- Q.3 The ratio of tensile stress and tensile strain is
- a) Young's Modulus b) Hook's Law
 - c) Bulk modulus d) Poisson's Ratio
- Q.4 The weight per unit volume of a liquid at a standard temperature and pressure.
- a) Specific weight b) Specific gravity
 - c) Weight d) None of these

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- Q.5 The ratio of the shear stress to shear strain is
a) Bulk Modulus b) Modulus of Rigidity
c) Young's modulus d) None of these
- Q.6 The capacity of a material to withstand deformation under compression without rupture
a) Fatigue b) Malleability
c) Brittleness d) Ductility

SECTION-B

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

- Q.7 Define Tensile Stress.
- Q.8 Define surface tension.
- Q.9 Give the unit of pressure.
- Q.10 Define Malleability.
- Q.11 Define Specific Weight.
- Q.12 Define Elasticity.

SECTION-C

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

- Q.13 What is the difference between steady and unsteady flow?

- Q.14 What are the different causes and effects of corrosion?
- Q.15 Differentiate potential energy and kinetic energy.
- Q.16 Describe Hooke's Law.
- Q.17 Describe any four physical properties of metals.
- Q.18 What are different factors affecting mechanical properties?
- Q.19 Enlist different pressure measuring devices.
- Q.20 What are different causes and effects of corrosion?
- Q.21 Enlist the major components of air conditioner.
- Q.22 Write down the practical applications of hydraulics.

SECTION-D

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

- Q.23 What do you mean by corrosion? What are its causes, effects and how would you control corrosion.
- Q.24 List different mechanical properties of metals. Explain any four of them.
- Q.25 a) Write the applications of refrigeration and air conditioners in agriculture.
b) Write difference between uniform and non-uniform flow.