

Q.24 List different mechanical properties of metals.
Explain any four of them.

No. of Printed Pages : 4
Roll No.

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Q.25 List different properties of fluids. Describe any four of them in brief.

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 The property of a material by which it deforms continuously under a steady load
a) Wear resistance b) Fatigue
c) Hardness d) Creep

Q.2 A flow in which the velocity of flow at a given instant of time changes from one point to other.
a) Steady b) Unsteady
c) Uniform d) Non-uniform

Q.3 The ratio of normal stress to normal strain is
a) Young's Modulus b) Hook's Law
c) Bulk Modulus d) Poisson's Ratio

- Q.4 The ability of a given material to conduct / transfer heat.
- Conduction
 - Thermal conductivity
 - Electrical conductivity
 - Convection
- Q.5 The ability of material to get stretched into a wire by pulling or drawing
- | | |
|-----------------|---------------|
| a) Toughness | b) Ductility |
| c) Malleability | d) Plasticity |
- Q.6 The device used for measuring pressure
- | | |
|---------------|---------------|
| a) Viscometer | b) Hydrometer |
| c) Manometer | d) Barometer |

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

- Q.7 Define Lustre.
- Q.8 Define Porosity.
- Q.9 Define Yield strength.
- Q.10 Define Atmospheric pressure.
- Q.11 Define Brittleness.
- Q.12 Define Wear resistance

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SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. $(8 \times 4 = 32)$

- Q.13 What are different modes of heat transfer?
- Q.14 Write a short note on the importance of engineering materials.
- Q.15 Describe the principle of refrigeration.
- Q.16 Describe causes, effects and control of corrosion.
- Q.17 Enlist different pressure measuring devices.
- Q.18 Write down the practical applications of hydraulics.
- Q.19 Describe applications of refrigeration and air conditioners in agriculture.
- Q.20 Enlist different pressure measuring devices.
- Q.21 Describe any four physical properties of metals.
- Q.22 What is the difference between uniform and non-uniform flow?

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 8 = 16)$

- Q.23 What is meant by kinematics? Describe any four types of fluid flow in brief.

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