

UNITS AND DIMENSIONS

- Q.1 The dimensional formula for strain energy density is
(1) $M^1L^2T^{-3}$ (2) $M^1L^2T^3$
(3) $M^1L^{-1}T^{-2}$ (4) $M^1L^2T^{-2}$
- Q.2 The dimensional formula for areal velocity is
(1) $M^0L^{-2}T^{-1}$ (2) $M^0L^{-2}T^1$
(3) $M^0L^2T^{-1}$ (4) $M^0L^2T^1$
- Q.3 The physical quantity having the same dimensional formula as that of force is
(1) Torque (2) work
(3) pressure (4) thrust
- Q.4 Nm^{-1} is the SI unit of
(1) Velocity gradient (2) Rydberg's constant
(3) coefficient of viscosity (4) Spring constant
- Q.5 The dimensional of mass is zero in the following physical quantities.
(1) Surface tension (2) Coefficient of viscosity
(3) heat (4) Specific heat capacity
- Q.6 The SI unit of physical quantity is $[J m^{-2}]$. The dimensional formula for that quantity is
(1) $[M^1L^{-2}]$ (2) $[M^1L^0T^{-2}]$
(3) $[M^1L^2T^{-1}]$ (4) $M^1L^{-1}T^{-2}$
- Q.7 $[Jm^{-2}]$ is the unit of
(1) Surface tension (2) Viscosity
(3) Strain energy (4) Intensity of energy
- Q.8 The set of quantities which can form a group of fundamental quantities in any system of measurement is
(1) Length, mass and time (2) Length, mass and velocity
(3) Length, velocity and time (4) Velocity, mass and time
- Q.9 The fundamental unit which is common in C.G.S. and S.I system is
(1) metre (2) second
(3) gram (4) all of above
- Q.10 1 a.m.u is equal to
(1) 1.66×10^{-24} g (2) 1.66×10^{-27} g
(3) 1.66×10^{24} g (4) 1.66×10^{27} g

Answer Key

1. (4)
2. (3)
3. (4)
4. (4)
5. (4)
6. (4)
7. (2)
8. (1)
9. (1)
- 10.(1)