



Class 11 Physics | Units And Measurements

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Which pair has identical dimensions?

- A. Impulse and energy
- B. Work and torque
- C. Pressure and force
- D. Power and momentum

2. The SI unit of impulse is:

- A. N s B. J/s C. $\text{kg m}^2/\text{s}^2$ D. N/s

3. How many significant figures are in 0.004060?

- A. 3 B. 6 C. 2 D. 4

4. Round 6.374 to three significant figures.

- A. 6.38 B. 6.40 C. 6.37 D. 6.3

5. The dimensions of gravitational constant G are:

- A. $\text{M}^{-1}\text{L}^2\text{T}^{-2}$ B. $\text{M}^{-1}\text{L}^3\text{T}^{-2}$ C. ML^{-3}T^2 D. ML^3T^{-2}

6. If $x=at+bt^2$, the dimensions of b are:

- A. T^{-2} B. LT^{-2} C. LT^{-1} D. L^2T^{-2}

7. Which is a dimensionless quantity?

- A. Dynamic viscosity B. Stress
- C. Surface tension D. Strain

8. For a pendulum $T=kL^a g^b$, dimensional analysis gives:

- A. $a=1/2, b=-1/2$ B. $a=-1/2, b=1/2$
- C. $a=1, b=-1$ D. $a=1/2, b=1/2$

9. The value of 3.2×2.15 , with correct significant figures, is:

- A. 6.880 B. 7 C. 6.9 D. 6.88

10. Which is an SI base unit?

- A. Kelvin B. Joule C. Newton D. Pascal

11. The dimensions of Planck's constant are:

- A. MLT^{-1} B. ML^2T^{-1} C. MT^{-1} D. ML^2T^{-2}

12. A formula is dimensionally correct. It is:

- A. Always numerically exact
- B. Independent of all constants
- C. Not necessarily physically correct
- D. Always physically correct

13. Which addition is dimensionally allowed?

- A. Force + pressure
- B. Speed + acceleration
- C. Mass + density
- D. Energy + work

14. The correctly rounded sum $12.11+0.3$ is:

- A. 12.41 B. 12.410 C. 12 D. 12.4

15. If force, length and time are base quantities, mass has dimensions:

- A. FL^{-1}T^2 B. FLT^{-2} C. FL^2T^{-1} D. F^{-1}LT^2

ANSWER KEY — check after completing all 15 questions

1.B 2.A 3.D 4.C 5.B 6.B 7.D 8.A 9.C 10.A 11.B 12.C 13.D 14.D 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper