DIMENSIONAL FORMULA

Multiple Choice Questions (MCQs) on Dimensional Formula

1. The dimensional formula of force is:

   - a) $[MLT^{-1}]$
   - b) $[MLT^{-2}]$
   - c) $[ML^2T^{-2}]$
   - d) $[ML^2T^{-1}]$

2. Which of the following has the dimensional formula $[ML^2T^{-2}]$?

   - a) Power
   - b) Work
   - c) Velocity
   - d) Acceleration

3. The dimensional formula for pressure is:

   - a) $[ML^{-1}T^{-2}]$
   - b) $[ML^2T^{-3}]$
   - c) $[ML^{-2}T^{-1}]$
   - d) $[ML^{-1}T^{-1}]$

4. What is the dimensional formula for energy?

   - a) $[MLT^{-2}]$
   - b) $[ML^2T^{-2}]$
   - c) $[ML^2T^{-3}]$
   - d) $[MLT^{-1}]$

5. The dimensional formula for electric charge is:

   - a) $[IT]$
   - b) $[ML^2T^{-2}]$
   - c) $[MTI^{-2}]$
   - d) $[L^2I^{-2}T^{-3}]$

6. Which of the following quantities has the dimensional formula $[MLT^{-2}]$?

   - a) Force
   - b) Power
   - c) Work
   - d) Momentum

7. The dimensional formula for velocity is:

   - a) $[LT^{-1}]$
   - b) $[LT^{-2}]$
   - c) $[MLT^{-1}]$
   - d) $[L^2T^{-2}]$

8. What is the dimensional formula for momentum?

   - a) $[MLT^{-1}]$
   - b) $[MLT^{-2}]$
   - c) $[ML^2T^{-1}]$
   - d) $[M^2LT^{-1}]$

9. The dimensional formula of power is:

   - a) $[ML^2T^{-3}]$
   - b) $[ML^2T^{-2}]$
   - c) $[MLT^{-3}]$
   - d) $[ML^{-1}T^{-3}]$

10. Which of the following has the dimensional formula $[ML^{-2}T^{-3}I^{-2}]$?

    - a) Electric potential
    - b) Electric resistance
    - c) Capacitance
    - d) Magnetic flux

11. The dimensional formula for electric field is:

    - a) $[MLT^{-2}I^{-1}]$
    - b) $[ML^2T^{-2}I^{-1}]$
    - c) $[MLT^{-3}I^{-1}]$
    - d) $[ML^2T^{-3}I^{-1}]$

12. What is the dimensional formula for frequency?

    - a) $[T^{-1}]$
    - b) $[T]$
    - c) $[T^2]$
    - d) $[T^{-2}]$

13. The dimensional formula for magnetic flux is:

    - a) $[ML^2T^{-2}I^{-1}]$
    - b) $[ML^2T^{-3}I^{-1}]$
    - c) $[MLT^{-2}I^{-1}]$
    - d) $[MLT^{-1}I^{-1}]$

14. The dimensional formula for capacitance is:

- a) $[M^{-1}L^{-2}T^{4}I^{2}]$
- b) $[ML^{-2}T^{4}I^{2}]$
- c) $[M^{-1}L^{2}T^{-4}I^{-2}]$
- d) $[ML^{2}T^{-4}I^{-2}]$

15. What is the dimensional formula for inductance?

- a) $[ML^{2}T^{-2}I^{-2}]$
- b) $[ML^{2}T^{-3}I^{-2}]$
- c) $[ML^{2}T^{-1}I^{-2}]$
- d) $[ML^{2}T^{-2}I^{-1}]$

Key

1. b
2. b
3. a
4. b
5. a
6. a
7. a
8. a
9. a
10. b
11. a
12. a
13. a
14. a
15. a