

# Units and Measurements

## Multiple Choice Questions (MCQs)

1. What is the SI unit of mass?

- a) Gram
- b) Kilogram
- c) Milligram
- d) Pound

2. Which of the following instruments is commonly used to measure the mass of an object in a laboratory?

- a) Spring scale
- b) Vernier calipers
- c) Balance scale
- d) Micrometer

3. The mass of a proton is approximately:

- a)  $1.67 \times 10^{-27}$  kg
- b)  $9.11 \times 10^{-31}$  kg
- c)  $1.67 \times 10^{-30}$  kg
- d)  $1.67 \times 10^{-24}$  kg

4. Which of the following represents the mass of an electron?

- a)  $1.67 \times 10^{-27}$  kg
- b)  $9.11 \times 10^{-31}$  kg
- c)  $1.67 \times 10^{-30}$  kg
- d)  $9.11 \times 10^{-27}$  kg

5. The unified atomic mass unit (u) is defined as:

- a)  $\frac{1}{12}$  of the mass of a carbon-12 atom
- b)  $\frac{1}{14}$  of the mass of a nitrogen-14 atom
- c)  $\frac{1}{16}$  of the mass of an oxygen-16 atom
- d)  $\frac{1}{1}$  of the mass of a hydrogen-1 atom

6. The mass of a red blood cell is approximately:

- a)  $10^{-15}$  kg
- b)  $10^{-12}$  kg
- c)  $10^{-9}$  kg

- d)  $10^{-6}$  kg

7. Which of the following masses is closest to that of an average human?

- a)  $10^0$  kg
- b)  $10^1$  kg
- c)  $10^2$  kg
- d)  $10^3$  kg

8. The mass of the Earth is approximately:

- a)  $5.97 \times 10^{22}$  kg
- b)  $5.97 \times 10^{24}$  kg
- c)  $5.97 \times 10^{26}$  kg
- d)  $5.97 \times 10^{28}$  kg

9. The mass of the Sun is approximately:

- a)  $1.99 \times 10^{28}$  kg
- b)  $1.99 \times 10^{29}$  kg
- c)  $1.99 \times 10^{30}$  kg
- d)  $1.99 \times 10^{31}$  kg

10. Which of the following instruments is best suited for measuring the mass of a grain of sand?

- a) Balance scale
- b) Electronic scale
- c) Spring scale
- d) Analytical balance

11. The mass of the Milky Way Galaxy is approximately:

- a)  $1.5 \times 10^{38}$  kg
- b)  $1.5 \times 10^{40}$  kg
- c)  $1.5 \times 10^{42}$  kg
- d)  $1.5 \times 10^{44}$  kg

12. What is the typical mass of a virus?

- a)  $10^{-10}$  kg
- b)  $10^{-12}$  kg
- c)  $10^{-18}$  kg
- d)  $10^{-20}$  kg

13. A building's mass is approximately:

- a)  $10^3$  kg
- b)  $10^6$  kg
- c)  $10^9$  kg
- d)  $10^{12}$  kg

14. The unit commonly used for atomic and molecular masses is:

- a) Kilogram
- b) Gram
- c) Unified atomic mass unit (u)
- d) Pound

15. The mass of the observable universe is approximately:

- a)  $10^{50}$  kg
  - b)  $10^{52}$  kg
  - c)  $10^{53}$  kg
  - d)  $10^{55}$  kg
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## Key

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