

## Atoms and Molecules

### Multiple Choice Questions

Question 1.

Who coined the term 'Parmanu' for the smallest indivisible particles?

- (a) Leucippus
- (b) L. Lavoisier
- (c) Kanad
- (d) None of them

▼ [Answer](#)

Answer: (c) Kanad

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Question 2.

The radius of a hydrogen atom is:

- (a)  $10^{-2}$
- (b)  $10^{-4}$
- (c)  $10^{-9}$
- (d)  $10^{-10}$

▼ [Answer](#)

Answer: (d)  $10^{-10}$

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Question 3.

The most remarkable concept that Dalton's atomic theory proposed was that of the:

- (a) atomic weight
- (b) atomic mass
- (c) molar mass
- (d) none of them

▼ [Answer](#)

Answer: (b) atomic mass

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Question 4.

The atomic mass of carbon is:

- (a) 12
- (b) 14
- (c) 16
- (d) 23

▼ [Answer](#)

Answer: (a) 12

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Question 5.

Compounds composed of metals and non-metals contain:

- (a) non-charged species
- (b) charged species
- (c) both of them
- (d) none of them

▼ [Answer](#)

Answer: (b) charged species

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Question 6.

The formula of ammonium sulphate is:

- (a)  $\text{NH}\text{SO}_4$
- (b)  $\text{NH}_4\text{SO}_2$
- (c)  $\text{NH}\text{SO}_3$
- (d)  $(\text{NH}_4)_2\text{SO}_4$

▼ [Answer](#)

Answer: (d)  $(\text{NH}_4)_2\text{SO}_4$

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Question 7.

The word "mole" was introduced around 1896 by:

- (a) Wilhelm Ostwald
- (b) John Dalton
- (c) Avogadro
- (d) Vergilius

▼ [Answer](#)

Answer: (a) Wilhem Ostwald

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Question 8.

The chemical symbol for sodium is:

- (a) So
- (b) Sd
- (c) NA
- (d) Na

▼ [Answer](#)

Answer: (d) Na

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Question 9.

Which of the following has a maximum number of atoms?

- (a) 18 g of  $\text{H}_2\text{O}$
- (b) 18 g of  $\text{O}_2$
- (c) 18 g of  $\text{CO}_2$
- (d) 18 g of  $\text{CH}_4$

▼ [Answer](#)

Answer: (d) 18 g of  $\text{CH}_4$

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Question 10.

Which of the following contains a maximum number of molecules?

- (a) 1g  $\text{CO}_2$
- (b) 1g  $\text{N}_2$
- (c) 1g  $\text{H}_2$
- (d) 1g  $\text{CH}_4$

▼ [Answer](#)

Answer: (c) 1g  $\text{H}_2$

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[Fill in the Blanks.](#)

Question 11.

In a compound such as water, the ratio of the mass of hydrogen to the mass of oxygen is always \_\_\_\_\_

▼ [Answer](#)

Answer: 1 : 8

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Question 12.

Atomic radius is measured in \_\_\_\_\_

▼ [Answer](#)

Answer: nanometre

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Question 13.

The symbol of iron is Fe from its Latin name \_\_\_\_\_

▼ [Answer](#)

Answer: Ferrum

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Question 14.

One atomic mass unit is a mass unit equal to exactly \_\_\_\_\_ the mass of one atom of carbon-12.

▼ Answer

Answer: th

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Question 15.

The formula unit mass of a substance is a sum of the atomic \_\_\_\_\_ of all its constituent atoms.

▼ Answer

Answer: masses

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Question 16.

Avogadro number is represented by \_\_\_\_\_

▼ Answer

Answer:  $N_0$

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Question 17.

The relative mass of atoms of all elements is obtained by comparing them with the mass of a \_\_\_\_\_ atom.

▼ Answer

Answer: Carbon-12

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Question 18.

The Avogadro constant  $6.022 \times 10^{23}$  is defined as the number of atoms in exactly \_\_\_\_\_ of carbon-12.

▼ Answer

Answer: 12 g

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True/False.

Question 19.

An atom is the smallest particle of the element that cannot usually exist independently and retains all its chemical properties.

▼ Answer

Answer: True

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Question 20.

The Law of conservation of mass states that mass can neither be created nor destroyed in

a chemical reaction.

▼ [Answer](#)

Answer: True

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Question 21.

The mass of 1 mole of a substance is equal to its relative atomic or molecular mass in grams.

▼ [Answer](#)

Answer: True

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Question 22.

16u oxygen has 16 atoms of oxygen.

▼ [Answer](#)

Answer: False

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Question 23.

The atomic mass of calcium is 40.

▼ [Answer](#)

Answer: True

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Question 24.

Aluminium is diatomic.

▼ [Answer](#)

Answer: False

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[Match the Column.](#)

Question 25.

A	B
1. 1 mole of carbon atoms	(i) 1 g of H atoms
2. 1 mole of molecules	(ii) Molecular mass in gram
3. 1 mole of hydrogen atoms	(iii) Relative mass of those particles in gram

4. 1 mole of any particle (atoms, molecules, ions)	(iv) 12-gram carbon atoms
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▼ [Answer](#)

Answer:

A	B
1. 1 mole of carbon atoms	(iv) 12-gram carbon atoms
2. 1 mole of molecules	(ii) Molecular mass in gram
3. 1 mole of hydrogen atoms	(i) 1 g of H atoms
4. 1 mole of any particle (atoms, molecules, ions)	(iii) Relative mass of those particles in gram

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[Answer in one Word/Sentence.](#)

Question 26.

What is the value of the Avogadro number?

▼ [Answer](#)

Answer:  $6.022 \times 10^{23}$

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Question 27.

How many atoms of hydrogen are there in 1g of hydrogen?

▼ [Answer](#)

Answer:  $6.022 \times 10^{23}$

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Question 28.

What name is given to a group of atoms carrying a charge?

▼ [Answer](#)

Answer: Polyatomic ions

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Question 29.

What term is given to the mass of one-mole atoms of a substance?

▼ [Answer](#)

Answer: Molar mass

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Question 30.

Write the chemical formula of calcium hydroxide.

▼ [Answer](#)

Answer:  $\text{Ca}(\text{OH})_2$

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Question 31.

Write the chemical formula of sulphuric acid?

▼ [Answer](#)

Answer:  $\text{H}_2\text{SO}_4$

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