



CHEMISTRY

BOOKS - VGS PUBLICATION-BRILLIANT

ATOMS AND MOLECULES

Improve Your Learning

1. In a class, a teacher asked students to write the molecular formula of oxygen. Shamita

wrote the formula as O_2 , and Priyanka as O.

Which one is correct? State the reason.



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2. Mohith said " H_2 differs from 2H." Justify.



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3. The formula of water molecule is H_2O . What information do you get from this formula?



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4. How would you write 2 molecules of Oxygen and 5 molecules of Nitrogen ?



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5. The formula of a metal oxide is MO . Then write the formula of its chloride.



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6. Calculate the mass of the following

0.5 mole of N_2 gas



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7. Calculate the mass of the following

0.5 mole of N atoms



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8. Calculate the mass of the following

3.011×10^{23} number of N atoms



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9. Calculate the mass of the following

6.022×10^{23} number of N_2 molecules



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10. Calculate the number of particles in each of the following .

46 g of Na



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11. Calculate the number of particles in each of the following .

8 g of O_2



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12. Calculate the number of particles in each of the following .

0.1 mole of hydrogen



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13. Convert in to moles:

12 g of O_2 gas



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14. Convert in to moles:

20 g of water



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15. Convert in to moles:

22 g of carbon dioxide



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16. Write the valencies of Fe in $FeCl_2$ and $FeCl_3$.



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17. Calculate the molar mass of sulphuric acid (H_2SO_4) and glucose ($C_8H_{12}O_6$).



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18. 15.9 g of copper sulphate and 10.6 g of sodium carbonate react together to give 14.2 g of sodium sulphate and 12.3 g of copper carbonate . Which law of chemical combinations is obeyed ? How?



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Question Given In The Lesson

1. Does the weight of iron rod increase or decrease, on rusting?



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2. Where does the matter charcoal go?



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3. Wet clothes dry after some time - where does the water go?



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4. What happens when magnesium metal is burnt in air?



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5. What happens to sulphur on burning it in air?



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6. Do you think that a chemical reaction has taken place in the flask ? Give reason.



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7. Do the weights of the flask and its contents change during the activity ?



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8. How do we write the symbols for calcium, chlorine, chromium ?



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9. How many molecules are there in 18 grams of water?



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10. How many atoms are there in 12 grams of carbon?



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Previous Summative Assassments Questions 1 Mark

1. What is the difference between $2N$ and N_2 ?



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2. Mohan said " O_2 differs from O," Do you agree? Justify.



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3. The atomic number (Z) of an element is 6.
name the element.



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4. Write any one precautions in doing the experiment chromatography.



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5. In a class, a teacher asked students to write the molecular formula of oxygen. Shamita wrote the formula as O_2 , and Priyanka as O . Which one is correct? State the reason.



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**Essential Material For Examination Purpose 1
Mark**

1. What is an atom?



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2. Is 'Na' an element or compound? Why



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3. Is O_2 an element or compound? Why



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4. What is an Avagadro number? What is its value?



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5. Which instrument is used to calculate the atomic mass exactly?



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6. What is atomic mass?



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7. How molecules are formed?



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8. Why Is it not possible to see an atom with naked eye?



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9. What is a chemical formula?



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10. How many atoms are present in (i) H_2S molecule and (ii) PO_4^{3-} ion.



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Essential Material For Examination Purpose 2
Mark

1. Who is called as the father of modern chemistry? What are his main contributions?



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2. What is the law of conservation ?



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3. State the following

law of constant proportions.



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4. Calculate formula unit weight of ZnO , Na_2O , K_2CO_3 (given atomic weight of $Zn=65u$)



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5. Calculate the number of moles of the following .

52 g of He(finding mole form mass).





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6. Calculate the number of moles of the following .

12.044×10^{23} number of He atoms (finding mole from numbers of particles).



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**Essential Material For Examination Purpose 4
Mark**

1. Explain the following

(a) Valency



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2. Define and explain molar mass.



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Previous Summative Assessments

1. How many molecules are there in 18 grams of water?

A. 6.02×10^{22}

B. 6.02×10^{23}

C. 6.02×10^{32}

D. 6.02×10^{35}

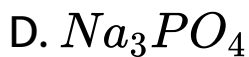
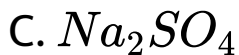
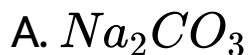
Answer: B



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Objective Type Question

1. Washing soda's the common name of



Answer:



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