

## **CHEMISTRY**

**BOOKS - PSEB** 

## **Atoms and Molecules**

Exercise

**1.** A 0.24 g of coumpound of oxgen and boron was found by analysis to contain 0.096 g of born and 0.144g of oxygen. Calculate the

percentage composition of the compound by weight.

2. What are polyatomic ions? Give examples.





**3.** Write the chemical formula of the following :Magnesium chloride



**4.** Write the chemical formula of the following :Calcium oxide



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**5.** Write the chemical formula of the following :Copper nitrate



**6.** Write the chemical formula of the following

:Aluminium chloride



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7. Write the chemical formula of the following

:Calcium carbonate



**8.** Give the names of the elements present in the following compounds: Quick lime



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**9.** Give the names of the elements present in the following compounds: Hydrogen bromide



**10.** Give the names of the elements present in the following compounds: Baking powder



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11. .Give the names of the elements present in the following compounds :Potassium sulphate



**12.** Calculate the molar mass of the following substances : Ethyne $C_2H_2$ 



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**13.** Calculate the molar mass of the following substances :Sulphur moleule, $S_8$ 



**14.** Calculate the molar mass of the following substances :Phosphorus molecule, $P_4$  (Atomic mass of phosphorus is 31)



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**15.** Calculate the molar mass of the following substances: Hydrochloric acid, HCl



**16.** Calculate the molar mass of the following substances : Nitiric acid,  $HNO_3$ .



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**17.** What is the mass of : 1 mole of nitrogen atoms ?



**18.** What is the mass of :) 4 moles of aluminium atoms (Atomic mass of aluminium = 27)?



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19. What is the mass of: 10 moles of sodium sulphite  $(Na_2SO_3)$ ?



20. Convert into moles: 12g of oxygen gas



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21. Convert into moles: 20g of water



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22. Convert into moles: 22g of carbon dioxide



23. What is the mass of: 0.2 mole of oxyen atoms?



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24. What is the mass of: 0.5 mole of water molecules?



**25.** Calculate the number of molecules of sulphur  $(S_8)$  present in 16g of solid sulphur.



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**26.** Calculate the number of aluminium ions present in 0.051 g of aluminium oxide

