



Silent Bells



ഫസ്റ്റ്ബെൽ - അനുബന്ധ പഠനസഹായകസാമഗ്രി

Std :10


Subject : Chemistry


WorkSheet : Online class 12

Lesson & LO: Gas Laws and Mole concept – Questions Analysis

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1. Some informations about **Gram Molecular Mass** is given in the table. Find out the values of (a),(b),(c),(d), (e),(f) in the table

Given Sample	1 Gram Molecular Mass (GMM)	Number of GMM in the sample	Number of Molecules in the sample
72g H ₂ O	18g	$72 / 18 = 4$	$4 \times 6.022 \times 10^{23}$
300g CaCO ₃	100g	....(a)....	.....(b)....
22g CO ₂	44g	.....(c)....	.....(d)....
64g Oxygen	32g	.....(e).....	.....(f).....

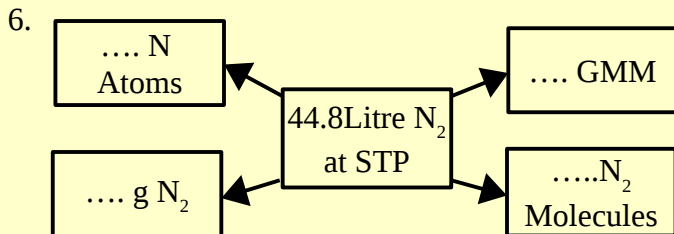
2. Some informations about **Gram Atomic Mass** is given in the table. Find out the values of (a),(b),(c),(d)

Given Sample	1 Gram Atomic Mass (GAM)	Number of GAM in the sample	Number of Atoms in the sample
60g Carbon	12g	$60/12 = 5$	$5 \times 6.022 \times 10^{23}$
64g Oxygen	16g	....(a)....	.....(b)....
142g Cl	35.5g	.....(c).....	.....(d)....

3. A given Sample contain 128g of SO₂. (Atomic mass: S=32, O=16), then
- Calculate the molecular mass of SO₂.
 - How many GMM is there in the sample?
 - How many SO₂ molecules are present in the sample?
 - what is the total number of atoms in the sample?

4. Which of the following is equal to the volume of 34g of ammonia at STP?
(112Litre, 44.8Litre, 22.4Litre)

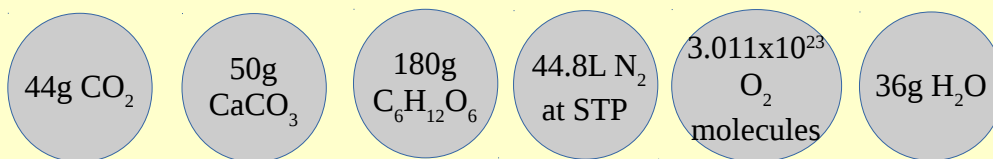
5. Find out the number of molecules present in each of the following.
(Atomic mass:Na=23, O=16,H=1,N=14)
(a) 80g NaOH
(b) 9g water (H₂O)
(c) 112 nitrogen gas at STP .



7. Arrange the following in the ascending(increasing) order of the number of moles present in them.
(Atomic mass : C=12, Ca=40, O=16, H=1)
(a) 56Litre of CO₂ at STP
(b) 350g CaCO₃
(c) 6g H₂
(d) 60.22 x 10²³ Oxygen molecules

8. Atomic mass of some elements are given below.
(Na=23, C=12, O=16, N=14, H=1)
Calculate the following.
(a) Number of molecules present in 318g Na₂CO₃.
(b) Number of moles present in 85g NH₃ .

9. Match those which have equal number of molecules.(Atomic mass: C=12, Ca=40, O=16, H=1)



10. x Litre of He(Helium) gas at STP has 16g of mass. Then find out the mass of 2x Litre of CO₂ at STP.