

THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

**CWX2
(3)**

CHAPTER 2 MODULE 3

**CHEMISTRY
STANDARD X
ANSWER KEY**

- 128 gm O_2 = ...4....GMM (Atomic mass of oxygen=16)
- Find the molecular mass of the following compounds (Atomic mass of the elements are Na - 23, O- 16, H- 1, Ca- 40, C- 12, N- 14)
 - $NH_3 = 14 + 3 = 17$
 - $CaCO_3 = 40 + 12 + (3 \times 16) = 100$
 - $NaOH = 23 + 16 + 1 = 40$
- Find the pair (Atomic mass O-16, H-1, Ca-40, C-12)

36 gm H_2O

2 Mole

132 gm CO_2

3 GMM

50 gm $CaCO_3$

3.011×10^{23} molecules

- Complete the Table

$$1 \text{ GMM} = 1 \text{ Mole} = 6.022 \times 10^{23} \text{ molecules}$$

Element/ Compound	Gram Molecular Mass	Mass in gram	No. of moles	No.of molecules
Hydrogen	2	6	3	$3 \times 6.022 \times 10^{23}$
Carbon di Oxide	44	88	2	$2 \times 6.022 \times 10^{23}$
Sulphuric acid	98	490	5	$5 \times 6.022 \times 10^{23}$
Calcium Carbonate	100	500	5	$5 \times 6.022 \times 10^{23}$

5. Volume of 1 mole of any gas at STP = 22.4 L

Gas at STP	Gram Molecular Mass	Mass in gram	Moles	Volume at STP
CO ₂	44	220	5	$5 \times 22.4\text{L}$
H ₂	2	12	6	$6 \times 22.4\text{L}$
NH ₃	17	170	10	$10 \times 22.4\text{L}$
N ₂	28	112	4	$4 \times 22.4\text{L}$

6 Complete the DIAGRAM

