

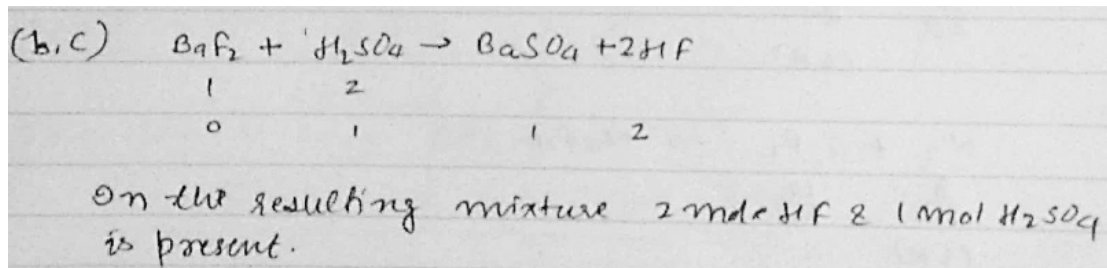
1.

(a,c) molar mass of H_2 & CO is less than that of CO_2 so rate of diffusion out of the balloon will be greater

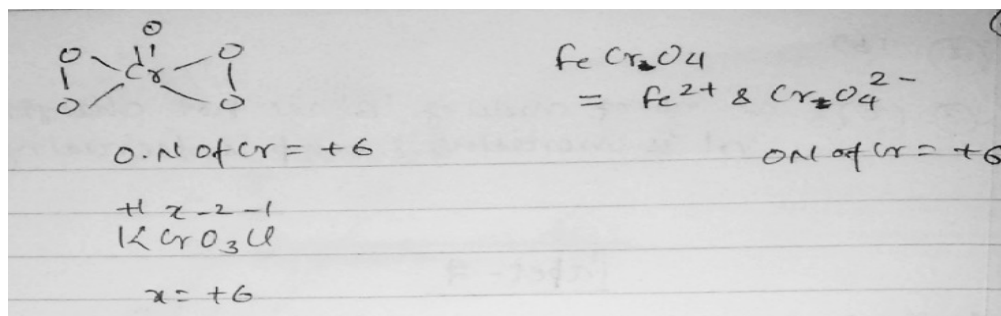
2.

(a,b)
$$\text{moles} = \frac{448}{22400} = 0.02$$
$$\text{mass} = 2 \text{ g}$$
$$\Rightarrow \text{molar mass} = \frac{2}{0.02} = 100$$
$$\Rightarrow 3 \times \text{At. mass} = 100 \Rightarrow \text{At. mass} = 33.33 \text{ u}$$
$$\text{or} = 33.33 \times 1.6 \times 10^{-24} \text{ g}$$

3.



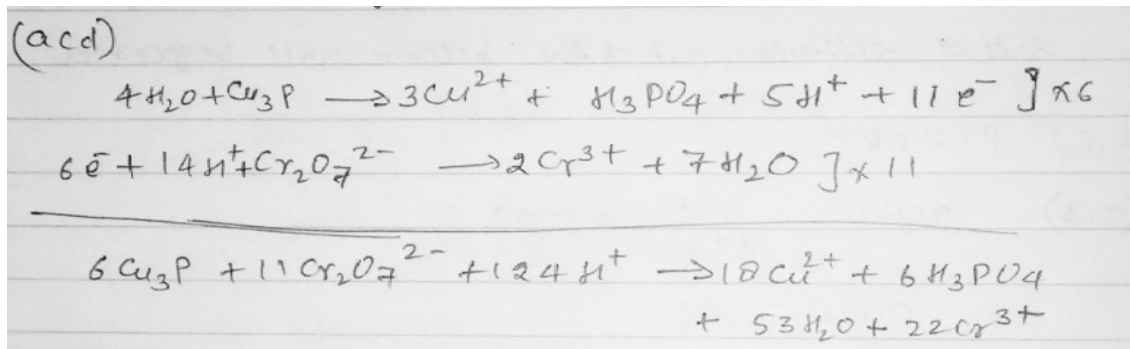
4.



5.

no change in ON of any element.

6.



7.

a) $\text{S}_2\text{O}_3^{2-}$ gets oxidised to $\text{S}_4\text{O}_6^{2-}$

c) I_2 gets reduced to I^-

Here, $\text{S}_2\text{O}_3^{2-}$ gets oxidised to $\text{S}_4\text{O}_6^{2-}$ while I_2 is reduced to I^- ions.

8.

a) HNO_2

b) SO_2

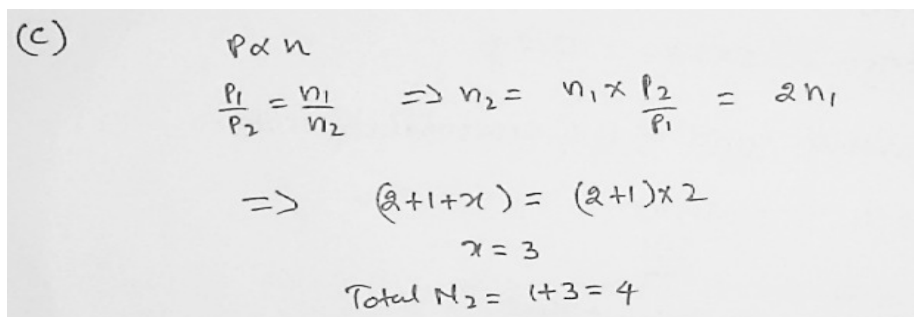
c) H_2O_2

HNO_2 , SO_2 and H_2O_2 act both as oxidising as well as reducing agents.

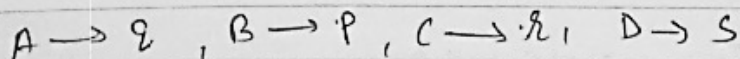
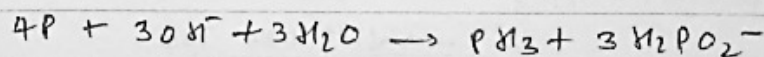
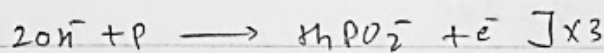
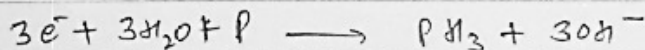
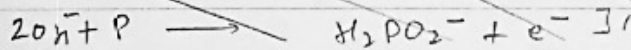
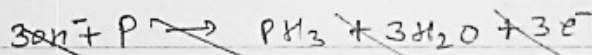
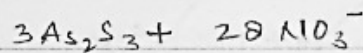
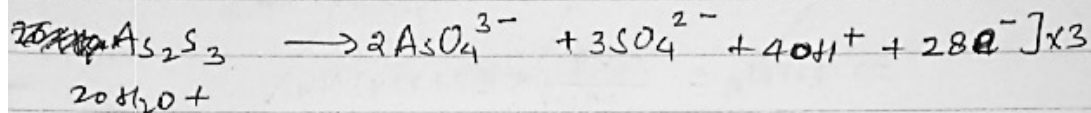
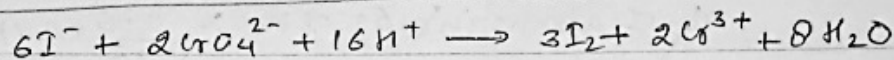
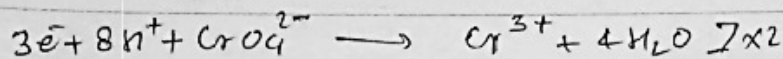
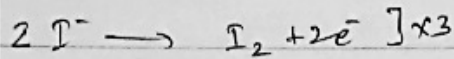
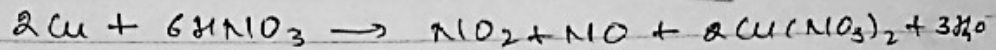
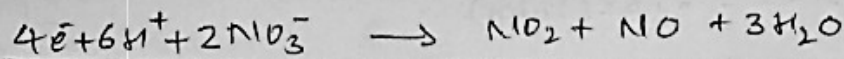
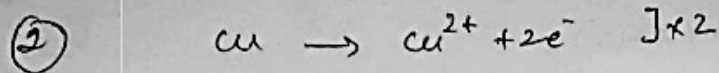
9.



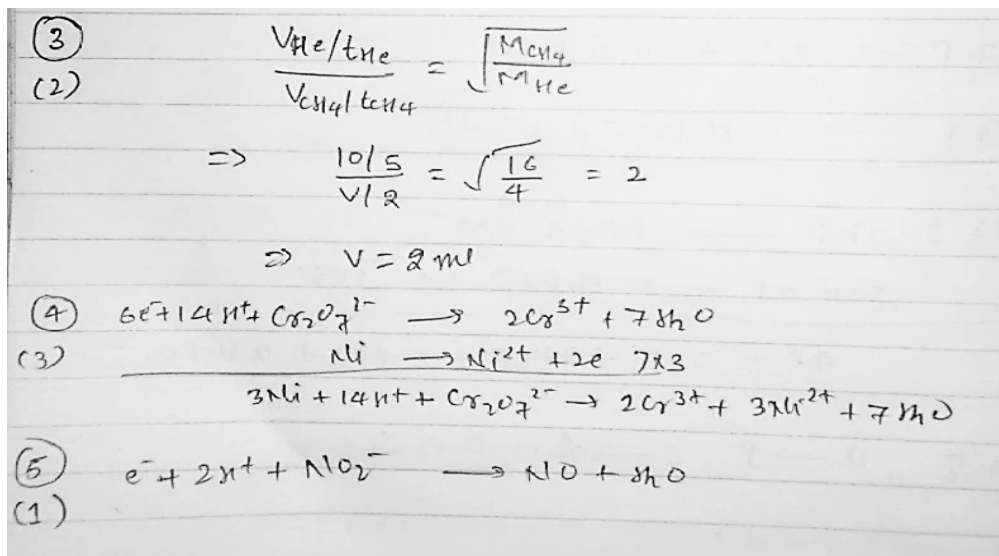
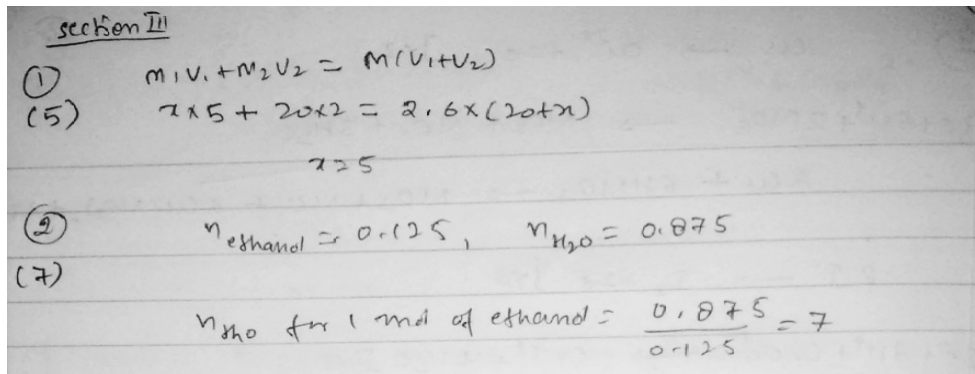
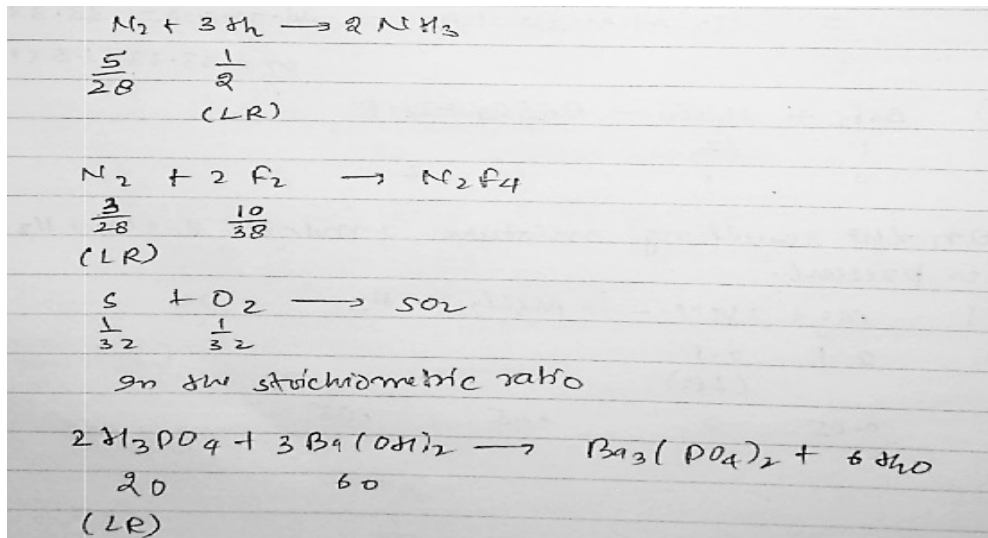
10.

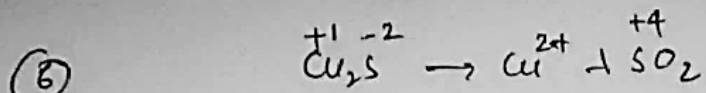


1.



2.





(L)
$$vt = 2(2-1) + 4(-2)$$

$$= 8$$

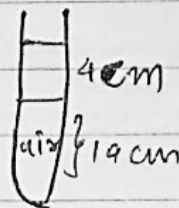
eq of $\text{KMnO}_4 = \text{eq of } \text{Cu}_2\text{S}$

$$\text{mole} \times 5 = 1.25 \times 8$$

$$\text{mole} = 2$$

⑦
$$P_{\text{air}} = P_{\text{atm}} + P_{\text{Hg}}$$

$$= 76 + 4 = 80$$



$$P_1 V_1 = P_2 V_2$$

$$76 \times (20 \times A) = 80 \times (19 \times A)$$

$$\Rightarrow l = 20$$

$$\text{decrease in length} = 20 - 19 = 1 \text{ cm}$$

⑧ $P \propto T \Rightarrow \frac{P_1}{T_1} = \frac{P_2}{T_2} \Rightarrow P_2 = \frac{T_2}{T_1} \times P_1 = \frac{109}{100} \times P_1$

$$\Rightarrow \frac{P_2 - P_1}{P_1} = \frac{9}{100}$$

% increase = 9%