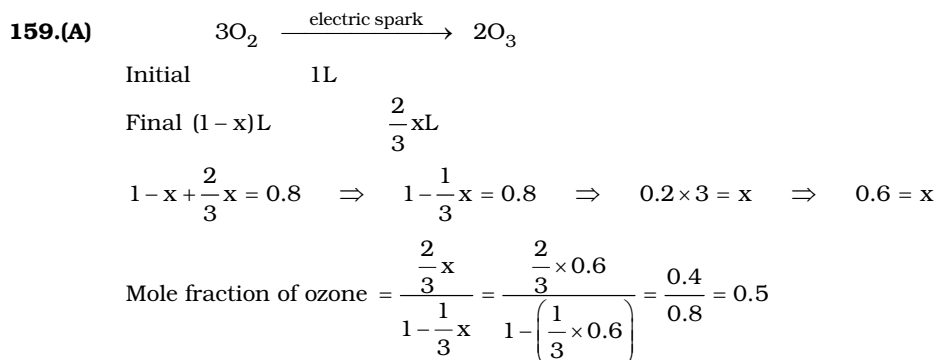


Daily Tutorial Sheet-15

Level-3



160.(B) On treatment with turpentine oil, ozone gets absorbed by it.

\therefore Volume of ozone in 100 mL = 60 mL

Volume of oxygen in 100 mL = 40 mL

On heating, $2\text{O}_3(\text{g}) \longrightarrow 3\text{O}_2(\text{g})$

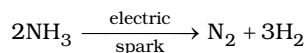
60 mL of ozone will give $\frac{3}{2} \times 60 = 90$ mL of O_2

\therefore Total volume of oxygen = 130 mL

Increase in volume = $130 - 100 = 30$ mL

161.(A) Let there be x mL of NH_3 in the mixture

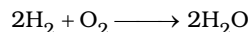
\therefore Volume of H_2 in the mixture = $(50 - x)$ mL



x mL will give $\frac{x}{2}$ mL N_2 and $\frac{3}{2}x$ mL H_2

Total volume of $\text{H}_2 = \frac{3}{2}x + 50 - x = 50 + \frac{x}{2}$

When 40 mL of oxygen was added and the mixture was sparked again, volume of O_2 used = $(40 - 6)$ mL = 34 mL



34 mL O_2 will react with 68 mL H_2

$\therefore 50 + \frac{x}{2} = 68 \Rightarrow x = 36$

% of $\frac{36}{50} \times 100 = 72\%$

162.(A) Real gases show negative deviation ($Z < 1$) from ideal behaviour due to the intermolecular attractive forces.

163.(B) On increasing the temperature, the distribution curve flattens and the peak of the curve decreases.

164.(D) Dalton's law of partial pressures is valid only in case of a mixture of un-reacting gases.