

Exchange of gases :-

Diffusion

Partial pressure of oxygen

At alveolar level

pulmonary artery

Deoxygenated blood

$P_{O_2} = 40 \text{ mmHg}$

$P_{CO_2} = 46 \text{ mmHg}$

$\times 10$
 60 mmHg
 6 mmHg

$P_{O_2} = 100 \text{ mmHg}$

$P_{CO_2} = 40 \text{ mmHg}$

CO_2

$P_{O_2} = 100 \text{ mmHg}$

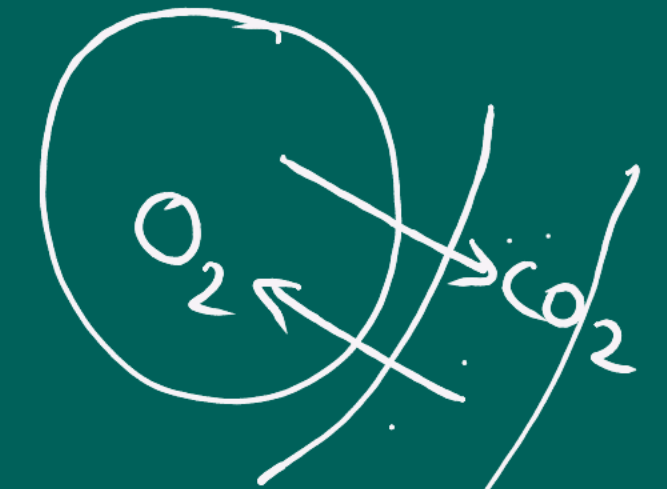
$P_{CO_2} = 40 \text{ mmHg}$

Air



Alveolar level

Cellular level



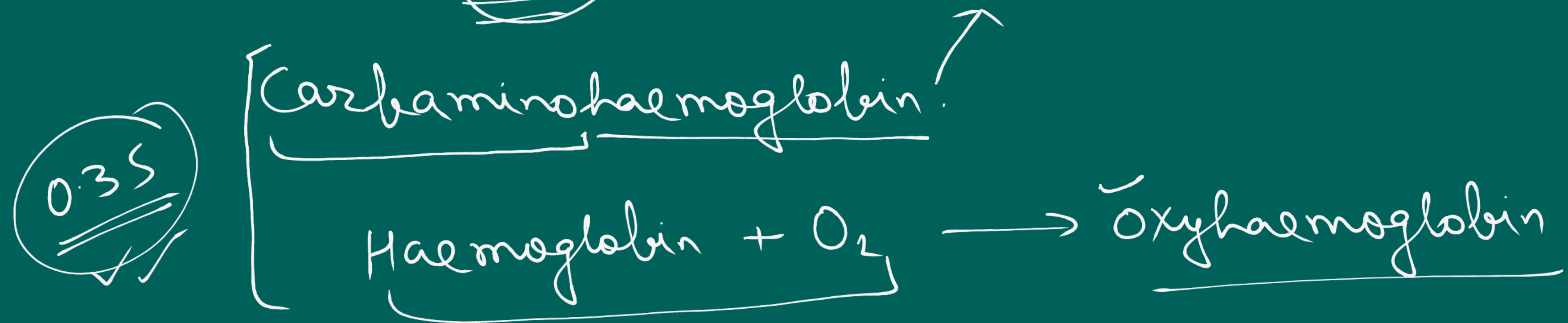
$$D = \frac{\text{solubility}}{\sqrt{\text{mol. wt.}}}$$

$O_2: 32 \text{ amu}$
 $CO_2: 44 \text{ amu}$

Rate of reaction

IS

↳ Rest ✓✓



Transportation of Oxygen :-

19 ml. of O_2 / 100 ml. of oxygenated blood.

→ Oxyhaemoglobin
(R.B.C.)

→ Physical solution

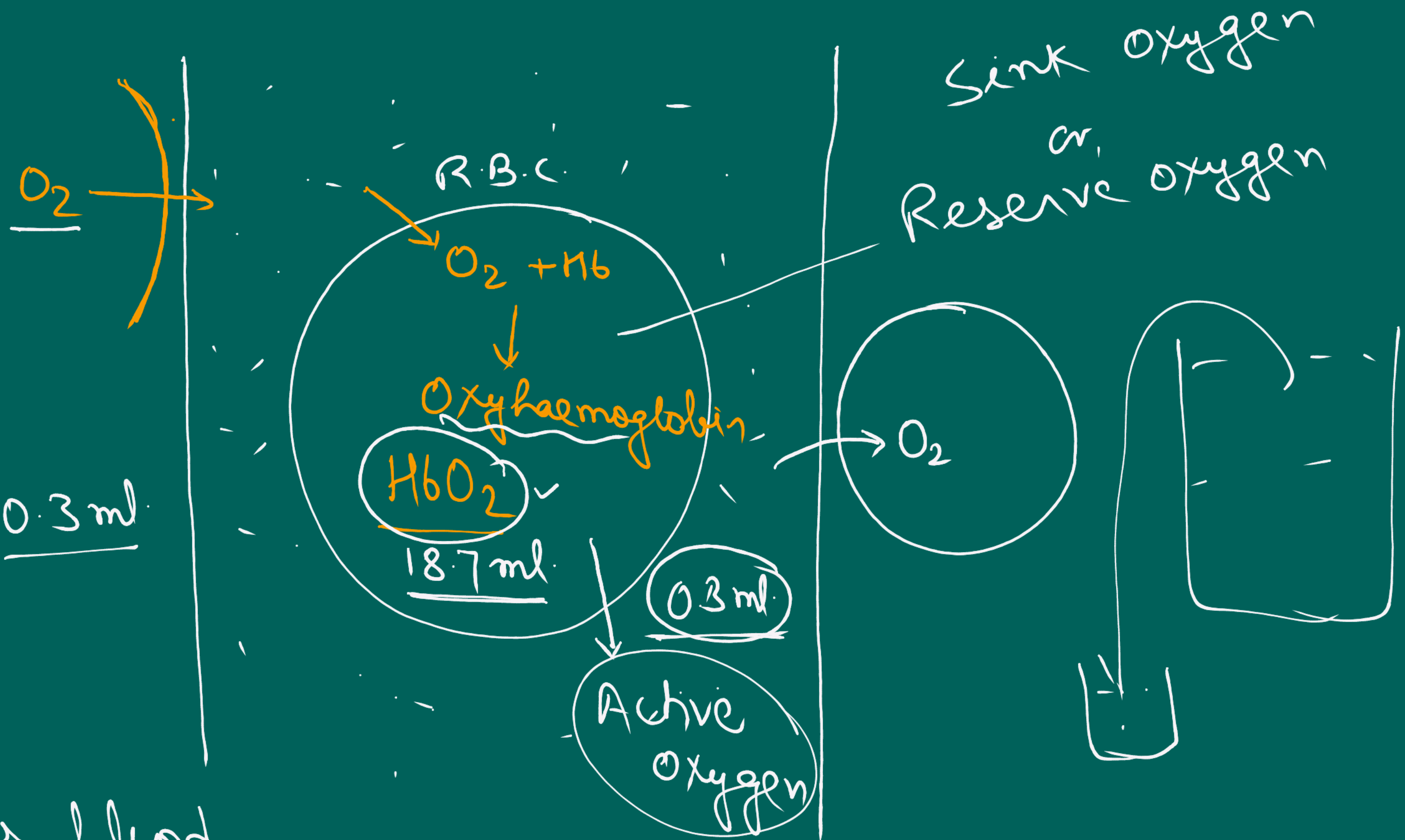
Plasma = 0.3 ml.

5 ml.

Venous blood

(Deoxygenated blood)

14 ml. of O_2 / 100 ml. of blood.



Exchange of gases at cellular level

