

Bott Gabriel Rum

H/Eny 07/008

Cv

Answer

$$C_1 = (1.5 \times 10^{-3}) \times 4 \\ = 6 \times 10^{-3} \text{ kg mol/m}^3$$

$$C_2 = (1.5 \times 10^{-3}) \times 1 \\ = 1.5 \times 10^{-3} \text{ kg mol/m}^3$$

Considering plane wall condition

$$R = \frac{L}{DA} = \frac{0.0005}{8.7 \times 10^{-8} \times 1}$$

$$= 5747.126$$

Then mole flux = $\frac{(6 - 1.5) \times 10^{-3}}{5747.126}$

$$= 7.83 \times 10^{-7} \text{ kg mol/m}^2 \text{ s}$$

Mass flux = $2 \times (7.83 \times 10^{-7})$

$$= 1.566 \times 10^{-6} \text{ kg/m}^2 \text{ s}$$