2019 - B

B2-1 1) $3 \times 0.2 = \underline{0.6}\ m^3$

2) (b) $c \times \frac{24 \times 10^3 g}{64 g/mol} = 375c\ mol = \underline{0.375c\ kmol}$

(c) $V = \frac{nRT}{p} = \underline{9.02c\ m^3}$

3) $\frac{p}{101.3} = \frac{V}{3.0 - 9.02c}$

又 $V = \frac{p}{101.3} \times (3.0 - 9.02c)$

$0.6 - 9.02c = \frac{p}{101.3} \times (3.0 - 9.02c)$

$p = 101.3 \times \frac{0.6 - 9.02c}{3 - 9.02c} = 101.3 \times \left(\frac{1 - 15c}{5 - 15c}\right)$

4) $\begin{cases} P = 706c + 4443c^2 \\ P = 101.3 \times \left(\frac{1 - 15c}{5 - 15c}\right) \end{cases}$

又) $c = 0.369,\ 0.0193,\ -0.214$

$0 \le c \le 0.0249$ 又)

$c = \underline{0.0193}$

初期有相中 $n_{SO_2} = \frac{PV}{RT} = 24.9\ mol$