16. $V = ?$

$m_{CO_2} = 28.3\,g$ $\bigg\}$ STP.

$M_{CO_2} = 1 \times M_C + 2 \times M_O$
$= 1 \times 12.01 + 2 \times 16.00$
$= 44.01\ g/mol$

$n_{CO_2} = \dfrac{m}{M} = \dfrac{28.3\,g}{44.01\ g/mol} = 0.643\ mol$

$V_{CO_2} = n \times MV = 0.643\ mol \times 22.4\ L/mol = 14.4\ L$

17. $m_{N_2} = ?$

$V_{N_2} = 68.4\ L$ $\bigg\}$ STP.

$M_{N_2} = 2 \times M_N$
$= 2 \times 14.01$
$= 28.02\ g/mol$

$n_{N_2} = \dfrac{V}{MV} = \dfrac{68.4\ L}{22.4\ L/mol} = 3.05\,④\ mol$

$m_{N_2} = n \times M = 3.05\,④\ mol \times 28.02\ g/mol = 85.6\ L$

18. $m = 0.502\,g$

$V = 134\ mL = 0.134\ L$ $\bigg\}$ STP.

$n = \dfrac{V}{MV} = \dfrac{0.134\ L}{22.4\ L/mol} = 0.00598\,②\ mol$

$M = \dfrac{m}{n} = \dfrac{0.502\,g}{0.00598\,②\ mol} = 83.9\ g/mol$ $\leftarrow$ Krypton

19. part $= ?$

$V = 1.50\ L$ $\bigg\}$ STP

$n_{Ne} = \dfrac{V}{MV} = \dfrac{1.50\ L}{22.4\ \frac{L}{mol}} = 0.0669\,⑥\ mol$

part $_{Ne} = n \times N_A = 0.0669\,⑥\ mol \times 6.022 \times 10^{23}\ \dfrac{atoms}{mol} = 4.03 \times 10^{22}\ atoms$