$$
\begin{aligned}
p(\mathbf{z}_n|\mathbf{z}_{n-1}) &= \mathcal{N}(\mathbf{z}_n|\mathbf{A}\mathbf{z}_{n-1}, \mathbf{\Gamma}) \\
p(\mathbf{x}_n|\mathbf{z}_n) &= \mathcal{N}(\mathbf{x}_n|\mathbf{C}\mathbf{z}_n, \mathbf{\Sigma}).
\end{aligned}
$$