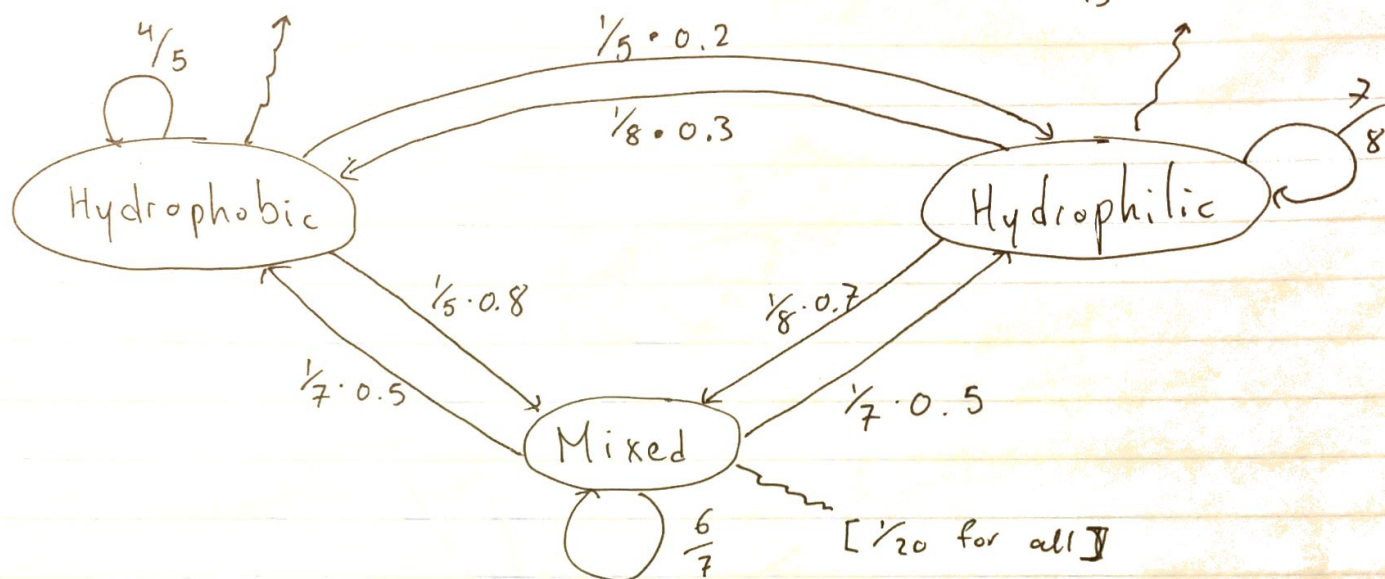


1. a) $\begin{matrix} \text{AVILMFYW} & / \text{otherwise} \\ \left[\begin{matrix} 3/40 & 1/30 \end{matrix} \right] \end{matrix}$

$\begin{matrix} \text{RHKDESTQNCA} & / \text{otherwise} \\ \left[\begin{matrix} 1/15 & 1/40 \end{matrix} \right] \end{matrix}$



Initial State Probability:

	HYDROPHOBIC	HYDROPHILIC	MIXED
	$1/3$	$1/3$	$1/3$