

Solutions to HMM Problems

1.

	Q ₀	Q ₁	Q ₂	Q ₃
$\alpha_0(j)$	0.5	0	0	0
$\alpha_1(j)$	0	0.35	0	0
$\alpha_2(j)$	0	7E-3	1.75E-2	0
$\alpha_3(j)$	0	9.8E-4	9.45E-3	2.52E-3

$$P(O|\lambda) = 0.01295$$

2.

	Q ₀	Q ₁	Q ₂	Q ₃
$\delta_0(j)$	0.5	0	0	0
$\delta_1(j)$	0	0.35	0	0
$\delta_{20}(j)$	0	7E-3	1.75E-2	0
$\delta_3(j)$	0	9.8E-4	6.3E-3	2.1E-3

Optimum states: Q₀ → Q₁ → Q₂ → Q₂