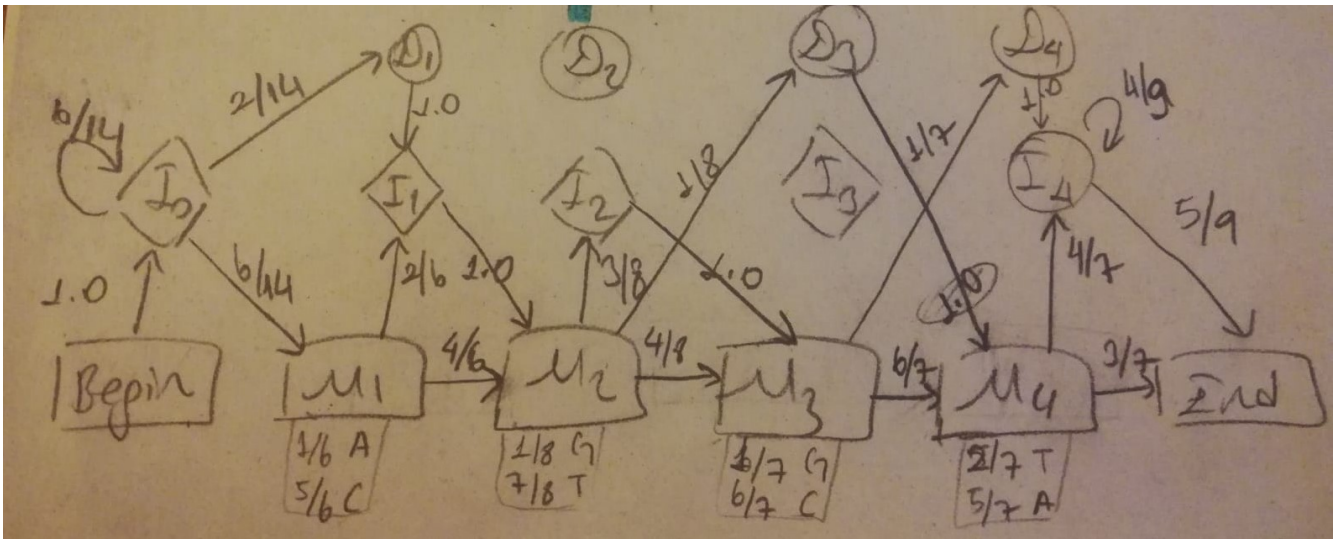
Part A)



Part B)

	''	'C'	'T'	'C'	'T'	'G'	'A'
BEGIN	1.0	0.0	0.0	0.0	0.0	0.0	0.0
I_0	0.0	0.25	2.68E-2	2.87E-3	3.08E-4	3.30E-5	3.54E-6
I_1	0.0	0.0	8.93E-3	9.55E-4	7.95E-4	1.1E-5	1.17E-6
I_2	0.0	0.0	0.0	0.0	0.0	5.21E-4	9.32E-5
I_4	0.0	0.0	0.0	0.0	0.0	0.0	1.41E-5
D_1	0.0	3.57E-2	3.82E-3	4.10E-4	4.40E-5	4.71E-6	5.06E-7
D_3	0.0	0.0	0.0	0.0	6.95E-4	1.24E-5	0.0
D_4	0.0	0.0	0.0	0.0	0.0	5.67E-5	0.0
M_1	0.0	0.0	0.0	9.55E-3	0.0	0.0	2.36E-6
M_2	0.0	0.0	0.0	0.0	5.56E-3	9.94E-4	0.0
M_3	0.0	0.0	0.0	0.0	0.0	3.97E-4	0.0
M_4	0.0	0.0	0.0	0.0	0.0	0.0	2.43-E4
END	0.0	0.0	0.0	0.0	0.0	0.0	1.04E-4

The best path (the most probable path) has probability 1.04E-4, which is the V(END, A) box of the table. Tracing back, one can find that this path is:

Begin – I_0 - I_0 - M_1 – M_2– M_3 – M_4 - END