

### **NLP Homework solution: 2016 Assignment #3**

#### **Question 1(a)**

Most likely sequence is COW DUCK DUCK

probability on this path is  $0.9 * 0.3 * 0.4 * 0.5 * 0.6 * 0.2 = 0.00648$

#### **Question 1(b)**

alternate sequence is COW COW DUCK

probability on this path is  $0.9 * 0.5 * 0.1 * 0.3 * 0.6 * 0.2 = 0.00162$

total probability of emitting this sentence = 0.0081