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Q1: The probability of "time flies quickly" over all tag sequences is .0007. Only some transitions involving # have zero probabilities, so there are 27 sequences that are contributing to this probability (though we can see from the Viterbi answer that one path is contributing a large part of the whole).

Q2: The best tag sequence for "tfq" is #->N->V->R->#. The noun 'time' does the action of flying in a manner that is quick. Presumably it is the metaphorical meaning in which the concept of time, that ever-marching of irretrievability, makes itself so faster than expected, but since we are only POS tagging, and that doesn't necessarily correspond to meaning, this sentence could mean something else...

Q3: The probability of 'q t f' over all tags is .0006 (quite close to 't f q', surprisingly). I would guess this is because there are more main interpretations of the sentence, even though each one is much less than the highest 'tfq' sequence: perhaps two of the largest main ones are 1. where it is the same sentence as 't f q', just with an adverb movement to the front of the sentence [This is the highest Viterbi prob for 'qtf'] and 2. where flies (the noun) are being timed (in a race or whatnot) [. In order to get 'q t f' to be more likely than 't f q', we could do various things, like change the emission probability of N producing flies to be higher than it is. (If one adds just .04 probability to N->flies, and subtract that from N->time, this 'q t f' sentence is more probable than the 't f q' sentence, though the 't f q' sentence is also more probable than before in this scenario...) Or increase the transitional probability of R->N. (do this by .10 and decrease R->V by the same and the sentences are equally probable ('qtf' is ~.0007 and 'tfq' stays right around .0007)).

Q4: I set V->'swat' to 0.4, taking that .4 from time and flies; I also increased the probability that N->flies from 0.055 to 0.155.

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('R', {'flies': 0.01, 'quickly': 0.98, '#': 0.0, 'time': 0.01})
('V', {'swat': 0.4, 'flies': 0.24, 'quickly': 0.03, '#': 0.0, 'time': 0.13})
('#', {'flies': 0.0, 'quickly': 0.0, '#': 1.0, 'time': 0.0})
('N', {'flies': 0.155, 'quickly': 0.005, '#': 0.0, 'time': 0.84})
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[Don't understand why the screenshot is blurry, sorry…]

Q5: The only parameter that is relevant to this question is the emission probability of V->'swat' and V->'time', since once 'Verb' is the tag, all that matters is the emission probability. Regarding which has a higher probability, the VNR version of 'sfq' is going to be more likely than 'tfq', since I reduced the probability of 'time' as a verb in order to insert 'swat' in there. This answer also determines the answer to a question about P('N V', 'flies time') vs. P('N V', 'flies swat') because the only difference (and therefore the only relevant parameter) is the emission probability from V-> x, because this is not a complicated enough algorithm to take other relationships into account, i.e. the emission probabilities are independent from the conditional ones.