HOMEWORK # 4

BIOL/CHEM 5312

due Monday, March 2, 2015

van Holde et al., Chapter 4, p.209-211, problems 4.1, 4.3, 4.7, 4.8, 4.11, &

Extra problem:

4.0: Look at Figure 4.17 (p.206 in the text). Write the partition function by summing over the three states, using the degeneracies given in the lecture notes, and the energies in terms of ε .

- in **4.1**, the answer should be 1024 for noncooperative
- in **4.3**, decide which of the 3 models to use: zipper, noncooperative, or all-or-none
- in **4.8**, do not calculate the end-to-end distance for the circular forms (it is zero!)

in **4.11**, there are two stabilized forms and seven denatured forms, after fixing the first two units. (or 4 times that, if not fixing the second unit) Answer to part **c** depends on the degeneracies of the two states. In part **d**, write the Δ H and Δ S of folding, and then the Δ G of folding.