

Name: _____

ID #: _____

Physics 222 - Spring 2019
★ Homework ★
Chapter 21

1) 21.3

2) 21.4

3) 21.6a

4) Calculate the binding energy of ${}_{17}^{34}\text{Cl}$, using the liquid drop (semi-empirical) model. Compare it to the true measured value of 285.57 MeV.

5) The binding energies of ${}_{17}^{34}\text{Cl}$, ${}_{17}^{33}\text{Cl}$, and ${}_{16}^{33}\text{S}$ are 285.57 MeV, 274.06 MeV and 280.43 MeV, respectively.

a) Calculate the energy needed to remove one neutron from the isotope, ${}_{17}^{34}\text{Cl}$.

b) Calculate the energy needed to remove one proton from the isotope, ${}_{17}^{34}\text{Cl}$.

c) Why do your answer in a) and b) differ?