

CHM 3140 Organic Chemistry I – Dr. Laurie S. Starkey – NMR Problem Set

Name: \_\_\_\_\_

Section (day/time): \_\_\_\_\_

Each of the following  $^1\text{H}$  NMR spectra comes from a compound with the molecular formula  $\text{C}_4\text{H}_8\text{O}_2$ . Propose a structure for each spectrum and label each proton on the structure (a/b/c..) to match the corresponding signal. Calculation of sites of unsaturation is helpful and careful examination of chemical shifts, integration and splitting patterns is required. Be sure to estimate the chemical shifts (using the provided tables) to verify your answer. **Show your work.**

