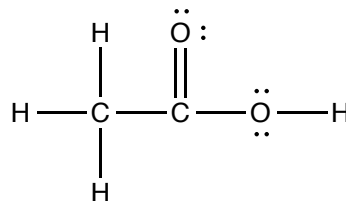
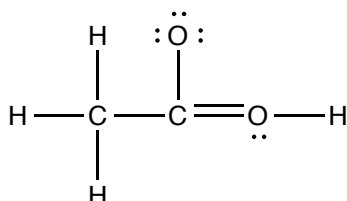


LECTURE 10

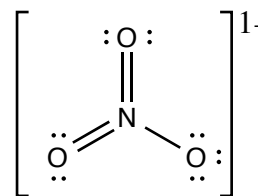
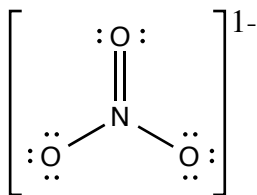
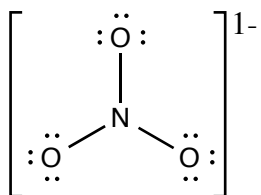
- Write the Lewis Structure for the following compounds:
 (a) CH_3F (b) NBr_3
- Determine the formal charge on each atom and label all non-zero formal charges in the following molecules. Identify most stable (lowest energy) structure for each case.

(a) acetic acid:

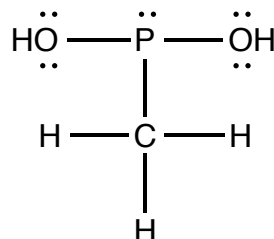
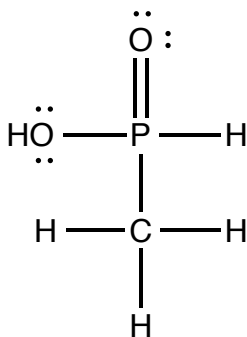


(b) nitrate ion:

rate ion:



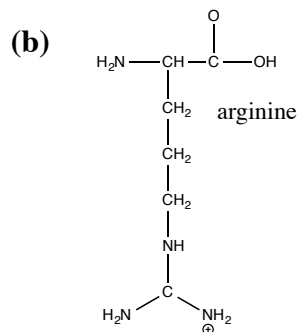
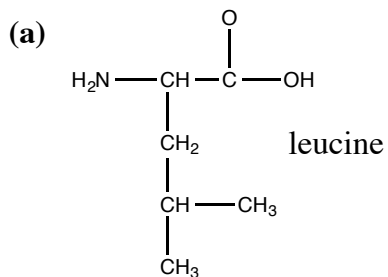
- Are the molecules below a pair of resonance structures? Briefly explain.



- Write the Lewis structure for the guanadinium ion, $\text{C}(\text{NH}_2)_3^+$, and include all relevant resonance forms. (Note that the C is bonded to three N atoms.) *Note that you do not need to indicate FC for this problem, but you should always consider FC when writing Lewis structures.*

LECTURE 10

5. The **skeletal structures** of two amino acids, **leucine** and **arginine**, are drawn below. Non-zero formal charges are indicated. Provide the **Lewis structure(s), including double bonds and lone pairs**, for each of these molecules. If there are equivalent resonance forms (which may include moving the formal charge on N), include them.



MIT OpenCourseWare
<https://ocw.mit.edu>

5.111 Principles of Chemical Science
Fall 2014

For information about citing these materials or our Terms of Use, visit: <https://ocw.mit.edu/terms>.