7. (10 pts) The compound below, found in olive oil, has the same anti-inflammatory activity as ibuprofen. **Circle** all the functional groups in the structure below and clearly name them. Ignore the benzene ring and any alkane portions, as shown below.

\[ \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{Br} \]

alkyl halide

8. (15 pts) Creatine is a food supplement used by some athletes. Assuming that nitrogens are the most basic atoms in Creatine, **draw all three possible conjugate acids** of Creatine, **circle** the conjugate acid which is actually formed, and **explain (with additional structures and a sentence or two)** why only one of the three is formed.

\[ \text{H}_2\text{N}\text{C} = \text{N} - \text{C} - \text{C} - \text{O} - \text{O} - \text{H} \rightarrow \text{HCl} \]

Creatine

END OF EXAM