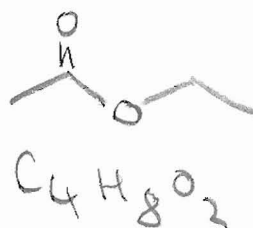
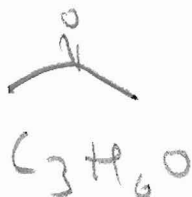


1. Show valid structural and molecular formulas for acetone and ethyl acetate (4 pts).



2. Why do you stir the content of your distilling flask? (2 pts)

to assure even boiling

3. Indicate which statements are correct: A The boiling point of a binary mixture can be higher than the boiling point of either component. B In contrast to minimum boiling azeotropes, maximum boiling azeotropes can be separated into their components by repeated distillation. C A liquid boils when its vapor pressure exceeds the surrounding pressure. D The vapor pressure of a liquid increases with increasing temperature (4 pts)

4. If a compound boils at 80° at normal pressure, where does it boil at $\frac{1}{2}$ of atmospheric pressure? Select the best answer! (3 pts)

- a. at 40°
- b. at 160°
- c. still at 80°
- d. lower, but the exact temperature needs to be determined experimentally
- e. who knows, maybe higher, maybe lower than 80°

5. Why should you never let a distillation run "dry" (no fluid left in heated flask)? (2 pts)

you will crack the flask