Dr. Laurie S. Starkey

2. (26 pts) Predict the major product expected for each of the following reactions. You may assume each reagent is available in excess, unless otherwise noted. For multi-step transformations, drawing intermediate products may help you earn partial credit. If no reaction is expected, write NR.

a)
$$CH_3CH_2OH$$
TsOH

b) OH
$$\frac{\begin{array}{c} O & O \\ II & II \\ CH_3-C-O-C-CH_3 \end{array}}{\begin{array}{c} pyridine \end{array}}$$

d)
$$CH_2$$
-O-C-Ph $1)$ LiAlH₄ $2)$ H₃O⁺ (show all products)

e)
$$\frac{\text{H}_3\text{O}^+}{\text{(show all products)}}$$

Br
$$\frac{\text{NaCN}}{\text{(excess)}}$$
 $\frac{\text{H}_3\text{O}^+}{\text{heat}}$ $\frac{\text{H}_2\text{SO}_4}{\text{heat}}$