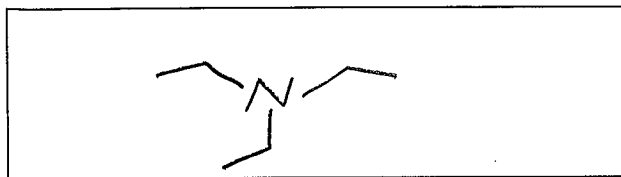
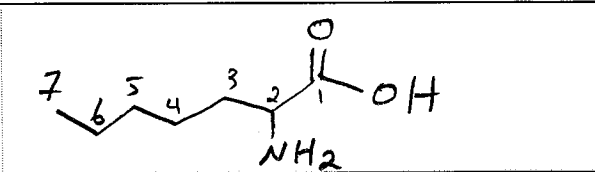


1. (4 Pts, 2 pts each) Provide the structure for the following compounds.

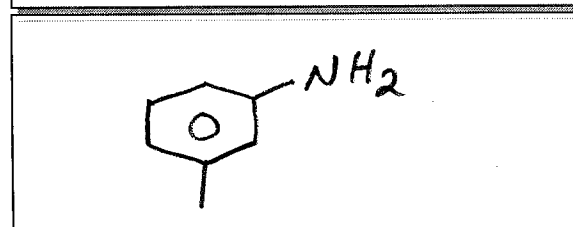
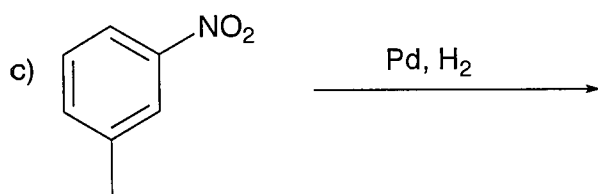
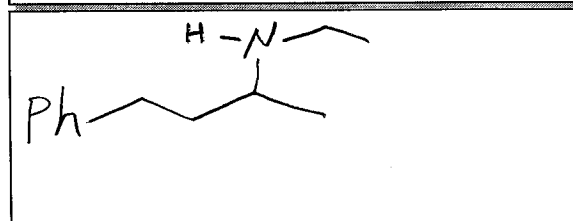
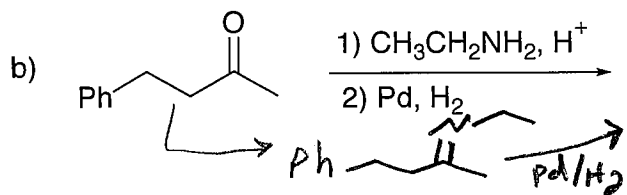
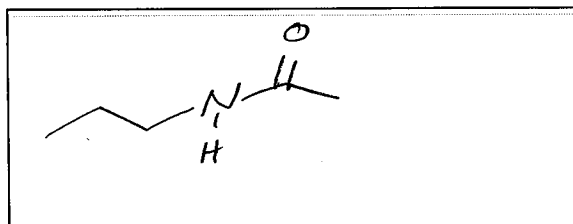
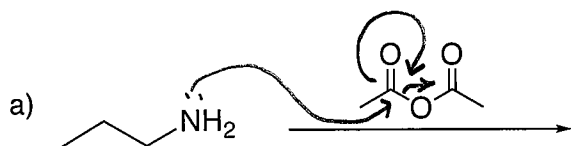
a) Triethylamine



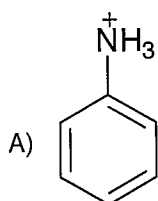
b) 2-Amino-heptanoic acid



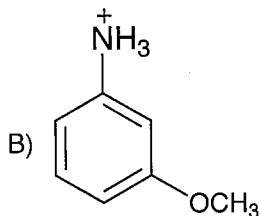
2. (6 Pts, 2 pts each) Complete the following chemical transformations.



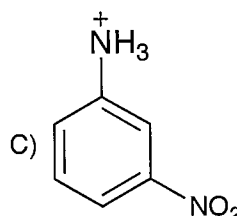
3. (4 Points) Arrange the following compounds based on the strength of their acidity by assigning them numbers 1 thru 4; where 1= strongest acid, 4=weakest acid.



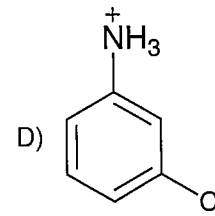
3



4



1



2

*e<sup>-</sup>-withdrawing groups enhance acidity  
e<sup>-</sup>-donating groups retard acidity*

4. (6 Points, 2 each) Complete the following chemical transformation by filling the boxes with the appropriate reagents, or products. For products, only provide the organic ones.

