A. Rank the basicity of the following sets: Multiple Variable Problems

1. CH₃MgBr

CH₃NHNa 2

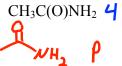
CH₃NH₂

(CH₃)₂NH 3

 CH_3NH_2 2

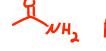
3.

5. CH₃NHNa



 $(CH_3)_3N$ 2









- 6. (CH₃)₃N
- pyridine ?
- CH₃NH₂

- 7. $(CH_3)_3N$
- PhCO₂Na 4
- CH₃NH₂
- PhCH₂ONa
- water <

- 8. (CH₃)₃N
- 4-methylaniline 2 Methyl donor makes more basic

aniline ?

pyrrole 4 Aromaticity lost

- 9. methylamine
- 4-ethanoylaniline 4
- aniline 3
- pyridine

Carbonyl withdrawer makes less basic

- 10. CH₃NH₂ 2
- CH₃CH₂ONa
- PhCO₂Na 3
- methanol 4

B. Rank the acidity of the following sets: Multiple Variable Problems

11.
$$OH_{\mathcal{U}} \longrightarrow OH_{\mathcal{U}} \longrightarrow$$

19. For the following structures:

- a. Which will extract from ether into neutral water?
- b. Which will extract from ether into basic (NaOH) water?
- c. Which will extract from ether into acid (HCl) water?



None

$$D$$
 NH_2