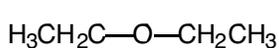
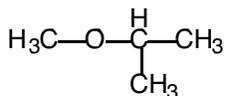


Exam 2 drill sheet answers
 NESA Organic Chemistry
 Spring 2002

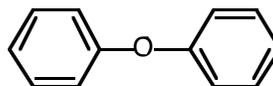
Nomenclature



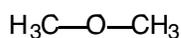
diethyl ether



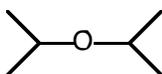
methyl isopropyl ether or
2-methoxypropane



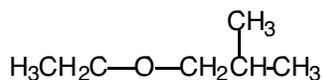
diphenyl ether



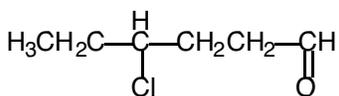
dimethyl ether



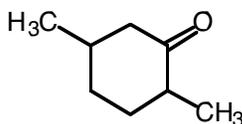
diisopropyl ether



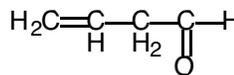
1-ethoxy-2-methylpropane



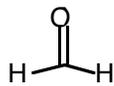
4-chlorohexanal



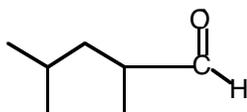
2,5-dimethylcyclohexanone



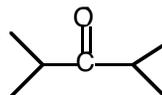
3-butenal



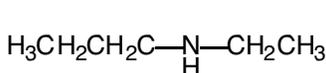
formaldehyde



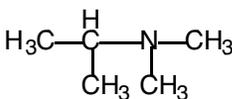
2,4-dimethylpentanal



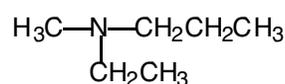
2,4-dimethyl-3-pentanone



N-ethylpropylamine
secondary



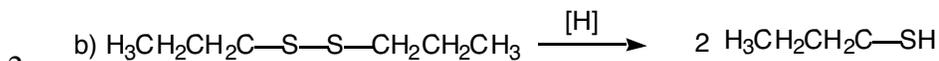
N,N-dimethyl-2-propylamine
tertiary



N-ethyl-*N*-methylpropylamine
tertiary

Problems:

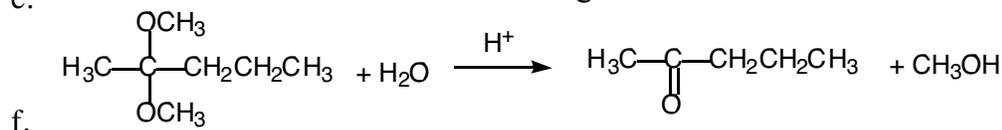
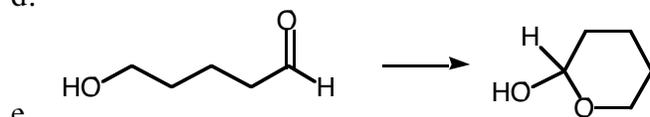
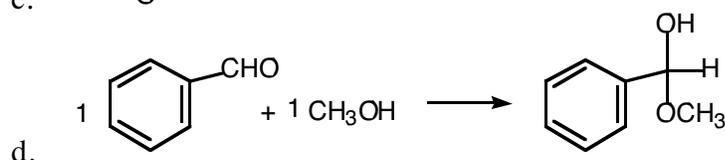
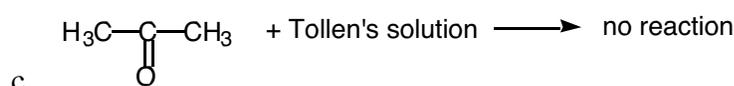
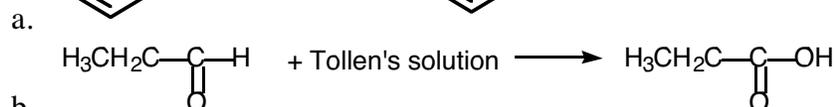
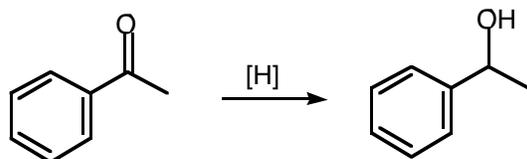
1. diethyl ether, propanethiol, propanol



2.
 3. Oxygen forms stronger hydrogen bonds than sulfur.
 4. Has the higher boiling point

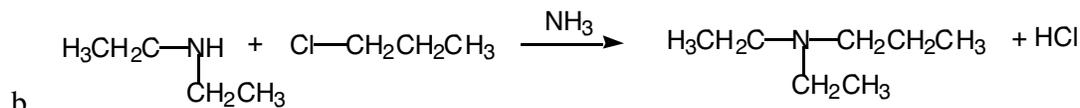
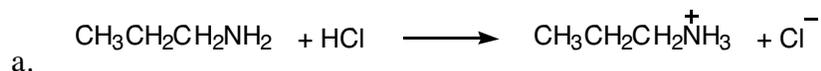
- a. $\text{CH}_3\text{CH}_2\text{OH}$
- b. $\text{H}_3\text{CH}_2\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$
- c. $\text{HO}-\text{CH}_2\text{CH}_2\text{CH}_2-\text{OH}$

5. Full reactions shown.



6. Benedict's or Tollens' reagents will give positive tests with the aldehyde, but not with the ketone.

7. Full reactions shown



8. Trimethylamine is the only one of the three that has no N-H bond, and so cannot form a hydrogen bond with another molecule of itself.

9. ketone < amine < alcohol