Complete the following reactions. Circle the most favored products.

$$2. \quad \stackrel{\mathsf{OH}}{\longleftarrow} \quad \stackrel{[\mathsf{o}]}{\longrightarrow} \quad$$

5. 
$$+$$
 HCI  $ZnCl_2$ 

7. 
$$\downarrow$$
 OH  $+$  OH  $\underline{[-H_2O]}$ 

$$9.$$
  $\bigcirc$  CI  $+$  NaOH  $\longrightarrow$ 

12. 
$$\xrightarrow{\text{OH}} \xrightarrow{\frac{\left[K_2 C r_2 O_7 / H_2 S O_4\right]}{\Delta}}$$

13. 
$$OH \xrightarrow{[-H_2O]}$$

14. —OH + OH [-
$$H_2$$
O]

$$16.$$
 OH + HCI [ZnCl<sub>2</sub>]

$$20. \quad \xrightarrow{\text{OH}} \quad \xrightarrow{\text{[-H_2O]}}$$

21. 
$$OH$$
  $[-H_2O]$ 

$$23. \quad \xrightarrow{\text{OH}} \quad \xrightarrow{[\text{K}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4]} \Delta$$

24. 
$$\downarrow$$
 OH + OH  $\sqsubseteq$  H<sub>2</sub>O]

Question 1: 
$$+ H_2O$$

Question 2: No Reaction

Question 3: 
$$\downarrow$$
  $\downarrow$   $\downarrow$   $+$   $H_2O$  Rate: Slow

Question 4: 
$$+ H_2O$$

Question 5: 
$$+ H_2O$$
 Rate: Very Slow

Question 7: 
$$+ H_2O$$

Question 8: 
$$+ H_2O$$
 Rate: Fast

## Question 10: No Reaction

Question 12: 
$$+ H_2O$$
 Visible Change: orange-red  $\longrightarrow$  green-blue

## $\mathrm{CHE}102$ - Extra Practice - $\mathrm{C22}$ - Alcohols and Ethers - $\mathrm{S18}$ - $\mathrm{Ver.}$ 6

- Question 16:  $+ H_2O$  Rate: Very Slow
- Question 17:  $+ H_2O$
- Question 18:  $+ H_2O$  Rate: Slow
- Question 19:  $+ H_2O$
- Question 21: + H<sub>2</sub>O
- Question 22:  $+ H_2O$  Rate: Fast
- Question 23: No Reaction
- Question 24: +  $H_2O$
- Question 25:  $+ H_2O$