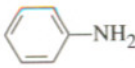
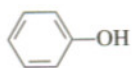
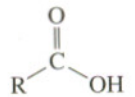
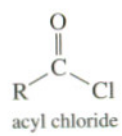
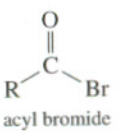
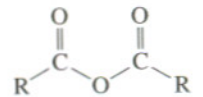
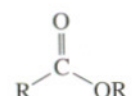

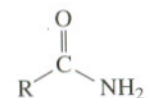


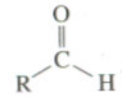
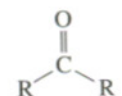


Common Functional Groups

Alkane	RCH_3	Aniline	
Alkene	$\begin{array}{c} \diagup \\ \text{C}=\text{C} \\ \diagdown \end{array}$ internal \quad $\begin{array}{c} \diagdown \\ \text{C}=\text{CH}_2 \\ \diagup \end{array}$ terminal	Phenol	
Alkyne	$\text{RC}\equiv\text{CR}$ internal \quad $\text{RC}\equiv\text{CH}$ terminal	Carboxylic acid	
Nitrile	$\text{RC}\equiv\text{N}$	Acyl halide	 acyl chloride \quad  acyl bromide
Nitroalkane	RNO_2	Acid anhydride	
Ether	$\text{R}-\text{O}-\text{R}$	Ester	
Epoxide		Amide	  
Thiol	$\text{R}-\text{SH}$	Aldehyde	
Sulfide	$\text{R}-\text{S}-\text{R}$	Ketone	
Disulfide	$\text{R}-\text{S}-\text{S}-\text{R}$		
Sulfonium salt	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{S}^+-\text{R} \\ \\ \text{R} \end{array} \text{X}^-$		
Quaternary ammonium salt	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{N}^+-\text{R} \\ \\ \text{R} \end{array} \text{X}^-$		

	<u>primary</u>	<u>secondary</u>	<u>tertiary</u>
Alkyl halide	$\text{R}-\text{CH}_2-\text{X}$ $\text{X} = \text{F, Cl, Br, or I}$	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{CH}-\text{X} \end{array}$	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{C}-\text{X} \\ \\ \text{R} \end{array}$
Alcohol	$\text{R}-\text{CH}_2-\text{OH}$	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{CH}-\text{OH} \end{array}$	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{C}-\text{OH} \\ \\ \text{R} \end{array}$
Amine	$\text{R}-\text{NH}_2$	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{NH} \end{array}$	$\begin{array}{c} \text{R} \\ \\ \text{R}-\text{N} \\ \\ \text{R} \end{array}$