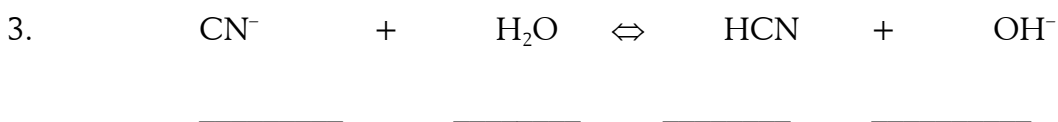
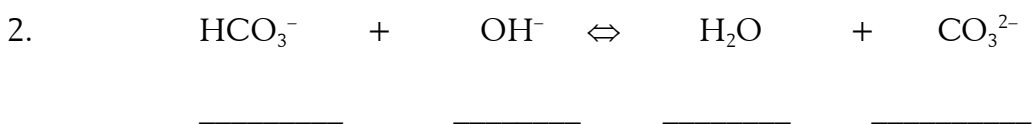
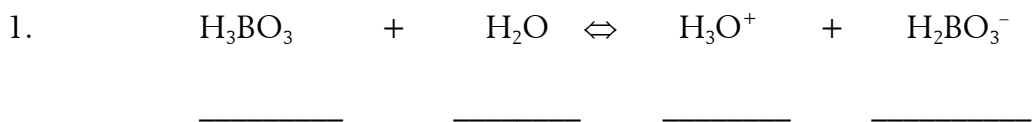


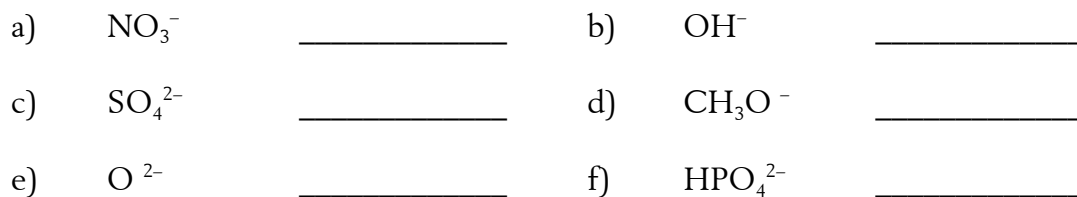
REVIEW QUESTIONS

## Chapter 15

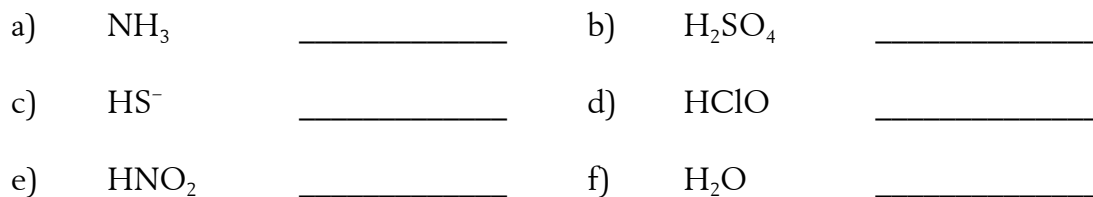
For each reaction shown below, determine the Brønsted-Lowry acid and base and their conjugates:



4. Identify the Brønsted-Lowry acid for each base shown below:



5. Identify the Brønsted-Lowry base for each acid shown below:



6. Complete the missing information in the table below:

$[\text{H}_3\text{O}^+]$	$[\text{OH}^-]$	Acidic/Basic
$1.0 \times 10^{-12}$		
$3.8 \times 10^{-4}$		
	$4.2 \times 10^{-4}$	
	$1.0 \times 10^{-9}$	
$6.5 \times 10^{-8}$		

7. Identify each of the substances below as **strong electrolyte**, **weak electrolyte** or **non-electrolyte**:

a) KCl \_\_\_\_\_

b)  $\text{HNO}_3$  \_\_\_\_\_

c)  $\text{CH}_3\text{OH}$  \_\_\_\_\_

d) HF \_\_\_\_\_

e)  $\text{H}_3\text{PO}_4$  \_\_\_\_\_

8. What are the  $[\text{H}_3\text{O}^+]$  and  $[\text{OH}^-]$  for a solution with a pH of 4.10.

9. If 30.0 mL of 0.400 M  $\text{H}_2\text{SO}_4$  is required to neutralize 15.0 mL of a NaOH solution, what is the molarity of NaOH?

10. Determine the molarity of a solution of  $\text{H}_3\text{PO}_4$  if 25.0 mL of the acid is titrated with 14.0 mL of 0.250 M NaOH to the end point.

11. Complete and balance the equations below for reactions of acids:

