

Date: _____

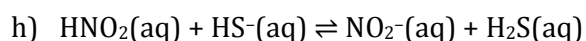
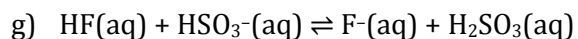
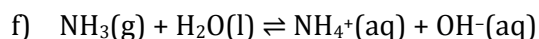
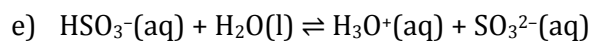
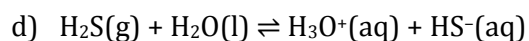
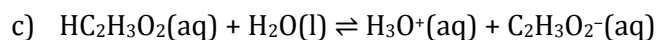
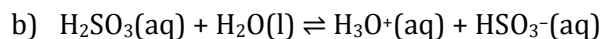
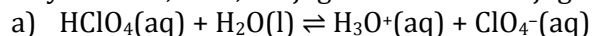
Name: _____

Due Date: _____

Period: _____

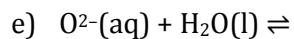
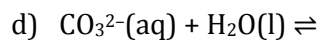
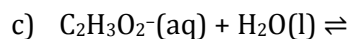
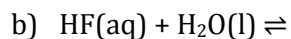
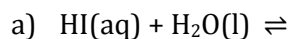
Conjugate Pairs Practice Questions

1. Identify the acid, base, conjugate acid and conjugate base for each of the following.



2. Complete the equation for the reaction of each of the following with water. Then:

- i. Indicate whether the ion or molecule is an acid or base; and,
- ii. Indicate whether each reaction is explained by Arrhenius, Brønsted-Lowry, or both.



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Answer Key

a.



b.



c.



d.



e.



f.



g.



h.



2.

- $\text{HI}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons \text{I}^-(\text{aq}) + \text{H}_3\text{O}^+(\text{aq})$
Bronsted-Lowry and Arrhenius acid
- $\text{HF}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons \text{F}^-(\text{aq}) + \text{H}_3\text{O}^+(\text{aq})$
Bronsted-Lowry and Arrhenius acid
- $\text{C}_2\text{H}_3\text{O}_2^-(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons \text{HC}_2\text{H}_3\text{O}_2(\text{aq}) + \text{OH}^-(\text{aq})$
Bronsted-Lowry base only
- $\text{CO}_3^{2-}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons \text{HCO}_3^-(\text{aq}) + \text{OH}^-(\text{aq})$
Bronsted-Lowry base only
- $\text{O}^{2-}(\text{aq}) + \text{H}_2\text{O}(\text{l}) \rightleftharpoons 2\text{OH}^-(\text{aq})$
Bronsted-Lowry base only