ROSEDALE ACADEMY

Acid and Base Worksheet

1) Using your knowledge of the Brønsted-Lowry theory of acids and bases, write equations for the following acid-base reactions and indicate each conjugate acid-base pair:

a) $HNO_3 + OH^- \rightarrow$

b) $CH_3NH_2 + H_2O \rightarrow$

c) $OH^- + HPO_4^{-2} \rightarrow$

2) The compound NaOH is a base by different theories of acids & bases. However, each of the theories describes what a base is in different terms. Use your knowledge of these theories to describe NaOH as an Arrhenius base and a Brønsted-Lowry base.

3) Write an equation for the reaction of potassium metal with hydrochloric acid.

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4) Borane (BH_3) is a basic compound, but doesn't conduct electricity when you dissolve it in water. Explain this, based on the definitions of acids and bases that you know.

5) Write the names for the following acids and bases:

a) KOH _____

b) H_2Se _____

c) $C_2H_3O_2H$ _____

d) $Fe(OH)_2$ _____

e) HCN _____

6) Write the formulas for the following chemical compounds:

a) ammonium sulfate _____

b) cobalt (III) nitride _____

c) carbon disulfide _____

d) aluminum carbonate _____

e) chlorine _____