Chem12 Acids : Quiz 1b-130

1) Give 4 properties of an acid.

2) What color does a base turn litmus into?

3) Give the Bronsted-Lowry definition of a base.

4) Give the Arrhenius definition of an acid.

5) Write the dissociation equation for H_2SO_4.

6) Write the balanced neutralization reaction : $HClO_4 + Sr(OH)_2$ ->

7) Write the dissociation equation for $Na_2O(s)$ (two steps)

8) What are the two main substances that soap is made of?

9) a) Give the name of any weak acid.

b) What is the K_a value for this acid?

c) Give the formula of it's conjugate base.

10) What is the definition of an "Electrolyte"?

11) True or false : The stronger an acid is, the weaker it's conjugate base is.

12) What is the numerical value of K_w?

13) Give the equilibrium expression for K_w.

14) At 25°C, pH + pOH = _____

15) a) Find the pOH if $[OH^-] = 3.2x10^{-5}$ M.

b) If pH = 4.1, find $[OH^-]$.

16) What is the pH of the solution resulting from the addition of 25.0 mL of a pH 3.55 solution to 25.0 mL of a pH 11.25 solution?

Answers : 1) Electrolyte, turns litmus red, tastes sour, produces H_2 gas when reacted with certain metals., 2) blue, 3) proton acceptor, 4) H^+ ion producer, 5) $H_2SO_4 \rightarrow H^+ + HSO_4^-$, 6) $2HClO_4 + Sr(OH)_2 \rightarrow Sr(ClO_4)_2 + 2H_2O$, 7) $Na_2O \rightarrow 2Na^+ + O^{2-}$; $O^{2-} + H_2O \rightarrow 2OH^-$, 8) A strong base (like NaOH) plus a fat., 9)a) H_2S, b) $9.1x10^{-8}$, c) HS^-, 10) A substance which will dissolve in water to make it electrically conducting., 11) True, 12) 10^{-14}, 13) $K_w = [OH^-][H_3O^+]$, 14) 14.0, 15)a) 4.5, b) pOH = 9.9, $[OH^-] = 1.3x10^{-10}$, 16) 10.9.