

Questions of the Day Set #10

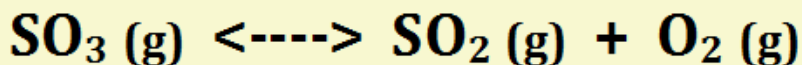
#110

When 20. milliliters of 1.0 M HCl is diluted to a total volume of 60. milliliters, the concentration of the resulting solution is

- (A) 3.0 M (B) 0.50 M (C) 0.33 M (D) 0.25 M

#112

Use the following reaction to answer both questions of the day.



If the $[\text{O}_2]$ was decreased, equilibrium would shift to the ___ and the $[\text{SO}_3]$ would ___.

- (A) left; decrease (B) left; increase
(C) right; decrease (D) right; increase

#114

Given the reaction at equilibrium: $\text{N}_2 (\text{g}) + \text{O}_2 (\text{g}) \rightleftharpoons \text{NO}_2 (\text{g})$

If the pressure on the system decreases, the equilibrium will shift to the ___ and the $[\text{NO}_2]$ will ___.

- (A) left; increase (B) left; decrease
(C) right; increase (D) right; decrease

#116

What is the conjugate base of NH_3 ?

- (A) NH_4^{+1} (B) NH_2^{-1}
(C) NO_3^{-1} (D) NO_2^{-1}

#118

Which substance can be classified as an Arrhenius acid?

- (A) HCl (B) NaCl (C) LiOH (D) KOH**

#120

An aqueous solution that has a hydrogen ion concentration of 1.0×10^{-9} M has a pH of

- (A) 5, which is basic (B) 5, which is acidic
(C) 9, which is basic (D) 9, which is acidic**