

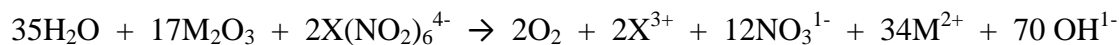
CHEM 1210

Quiz 1

January 23rd, 2014

Name: _____

1) For the following balanced oxidation-reduction reaction:



a) Identify the oxidizing agent:

b) How many electrons are transferred in the overall reaction?

c) If the molar mass of M_2O_3 is Z, what is the equivalent mass (in terms of Z)

2) Choose the correct statement about a container in which the following equilibrium is established:



A – a decrease in amount of O_2 will decrease the amount of SO_2 present

B – a decrease in volume will decrease the amount of SO_2 present

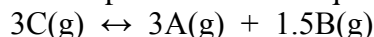
C – a decrease in temperature will increase the amount of SO_2 present

D – a decrease in the amount of SO_3 present will increase the amount of SO_2 present

E – an increase in the amount of O_2 will increase the amount of SO_2 present _____

3) Consider the following equilibrium reaction: $2\text{A}(\text{g}) + \text{B}(\text{g}) \leftrightarrow 2\text{C}(\text{g}) \quad K_c = 20$

Determine K_c at the same temperature for the equilibrium:



A – 30

B – 0.075

C – 0.050

D – 0.033

E – 0.011 _____

4) Consider the reaction: $2\text{NO}_2(\text{g}) \leftrightarrow 2\text{NO}(\text{g}) + \text{O}_2(\text{g})$, a sample of pure NO_2 is placed in a sealed container and allowed to reach equilibrium. The partial pressure of O_2 at equilibrium is found to be 0.3500 atm and the total pressure to be 1.0866 atm. Determine K_p for the reaction.

A – 2.86

B – 66.9

C – 128

D – 182

E – none of these _____