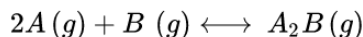


Quiz for Video 1 – Equilibrium

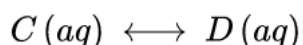
1. What is meant by the term "reversible reaction"?
 - a. A reaction that can proceed in both directions
 - b. A reaction that will have some product and reactant when it stops
 - c. A reaction with a double-sided arrow
 - d. All of the above
2. Which of the following is an example of a non-reversible phenomenon?
 - a. Inflating a bike tire
 - b. Breaking an egg on the floor
 - c. Charging a computer battery
3. When at equilibrium, what is true about the rates of forward and reverse reaction?
 - a. The rates are equal and non-zero
 - b. The rates are both zero
 - c. Only the forward reaction occurs
 - d. Only the reverse reaction occurs

4. Which of the following is the correct equilibrium constant for the following chemical reaction:



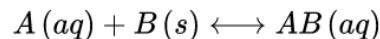
- a. $K_c = \frac{[A][B]}{[A_2B]}$
- b. $K_c = \frac{[A_2B]}{[2A][B]}$
- c. $K_c = \frac{[A_2B]}{[A]^2[B]}$
- d. $K_c = \frac{[A_2B][B]}{[A]^2}$

5. If we have the following equilibrium reaction with both C and D present in a reaction flask:



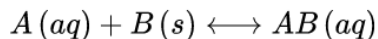
In accordance with Le'Chatelier's principle, how will the reaction respond if we should increase the concentration of D in the reaction?

- a. The reaction will proceed in reverse (shift left)
 - b. The reaction will proceed forward (shift right)
 - c. No change will occur
6. Why should we NOT include solids and liquids in the equilibrium expression?
 - a. Because solids/liquids do not behave like gas/aqueous phases
 - b. We should
 - c. Because solids are heavier
 - d. Because liquids are insoluble
 7. For the reaction below initially at equilibrium, what happens to A if we INCREASE the amount of AB that is present, once equilibrium is re-established?



- a. The amount of A will increase
- b. The amount of A will decrease
- c. The amount of A will not change

8. For the reaction below initially at equilibrium, what happens to AB if we INCREASE the amount of B that is present, once equilibrium is re-established?



- a. The amount of AB will increase
- b. The amount of AB will decrease
- c. The amount of AB will not change