BRITISH COLUMBIA CHEMISTRY 12 (MCH--12) · UNIT B · 5 QUESTIONS

Chemical Equilibrium — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The graph shows the concentration of a product against time. Points are (0, 0), (1, 2), (3, 4), and (5, 4). Equilibrium is first reached at about**

A 1 minute

B 3 minutes

C 5 minutes

D 0 minutes

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2 **The equilibrium law expression for $CO(g) + H_2O(g) \rightleftharpoons CO_2(g) + H_2(g)$ is**

- **A** $K_eq = \frac{[CO][H_2O]}{[CO_2][H_2]}$
- **B** $K_eq = \frac{[CO_2]}{[CO]}$
- **C** $K_eq = \frac{[CO_2][H_2]}{[CO][H_2O]}$
- **D** $K_eq = [CO_2][H_2]$

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3 **For $PCl_5(g) \rightleftharpoons PCl_3(g) + Cl_2(g)$, the equilibrium expression is**

- **A** $K_eq = \frac{[PCl_5]}{[PCl_3][Cl_2]}$
- **B** $K_eq = [PCl_3][Cl_2]$
- **C** $K_eq = \frac{[PCl_3]}{[PCl_5]}$
- **D** $K_eq = \frac{[PCl_3][Cl_2]}{[PCl_5]}$

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4

At equilibrium, [A] = 0.40, [B] = 0.20, and [C] = 0.80, all in mol/L, for A + B ⇌ C. K_eq is

A 10

B 2

C 5

D 20

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5 **Red apple falling from a branch. For X ⇌ Y, with [X] falling from 0.90 to 0.60 mol/L, and [Y] starting at 0, the equilibrium [Y], in mol/L, is**



A 0.10

B 0.60

C 0.90

D 0.30

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ANSWER KEY

1. B
2. C
3. D
4. A
5. D

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