NEBRASKA CHEMISTRY · UNIT 4

# Gases, Thermodynamics, and Equilibrium — Practice Test

**Nebraska Chemistry • 10 questions**

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 **A gas mixture has total pressure 400 kPa, and one gas has partial pressure 100 kPa. The partial pressure, in kilopascals, of the other gas is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Hess law states that the total enthalpy change of a reaction is**

A always zero

B dependent on the path taken

C changed by a catalyst

D the sum of the enthalpy changes of its steps

Understand It with Pulse | Flag a mistake

3 **Using c = 4.2 J per gram per degree Celsius, the heat, in joules, absorbed by 200 g of water warmed by 10 degrees Celsius is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The equilibrium constant of a reaction changes when**

A temperature changes

B pressure changes only

C a catalyst is added

D concentration changes

Understand It with Pulse | Flag a mistake

5 **A gas at 200 kPa and 400 K is cooled to 200 K at constant volume. Its new pressure, in kilopascals, is _____**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Removing a product from a system at equilibrium shifts equilibrium toward the**

- A reactants
- B products
- C catalyst
- D neither side

Understand It with Pulse | Flag a mistake

7 **At standard temperature and pressure, the volume, in liters, of 0.5 mol of gas is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Breaking chemical bonds is an**

A exothermic process only

B exothermic process in gases

C endothermic process

D process with no energy change

Understand It with Pulse | Flag a mistake

9 **A gas at 100 kPa occupies 12 L at 300 K. At 200 kPa and 600 K, its volume, in liters, is ____**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **Entropy increases when**

A a gas condenses to a liquid

B a liquid freezes

C a solid dissolves in water

D a gas is compressed

Understand It with Pulse | Flag a mistake

# ANSWER KEY

| | | | | | |
|---|---|---|---|---|---|
| **1.** | 300 | **5.** | 100 | **9.** | 12 |
| **2.** | D | **6.** | B | **10.** | C |
| **3.** | 8400 | **7.** | 11.2 | | |
| **4.** | A | **8.** | C | | |

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