CHEMISTRY 3202 · NEWFOUNDLAND AND LABRADOR

Chemistry 3202

Practice Test

Unit C: Thermochemistry

25 Questions

Original practice test based on the Newfoundland and Labrador curriculum. Work through each question, then check your answers at the end.

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.

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Question 1

An exothermic reaction releases energy mainly as

A) light only to the products

B) heat to the surroundings

C) mass to the surroundings

D) electricity only

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Question 2

An endothermic reaction absorbs energy from the

A) products only

B) surroundings

C) catalyst

D) container only

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Question 3

Enthalpy change is measured at constant

A) volume only

B) mass only

C) pressure

D) temperature only

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Question 4

In a calorimetry experiment, the heat absorbed by water is calculated from mass, specific heat capacity and

A) volume change

B) pressure change

C) density change

D) temperature change

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Question 5

Hess law states that overall enthalpy change depends only on the

A) initial and final states

B) path taken

C) catalyst used

D) reaction rate

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Question 6

Breaking chemical bonds is an

A) exothermic process

B) endothermic process

C) spontaneous process only

D) neutral process

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Question 7

Forming chemical bonds is an

A) endothermic process

B) neutral process

C) exothermic process

D) catalytic process

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Question 8

Entropy is a measure of the

A) heat of a system only

B) pressure of a system

C) mass of a system

D) disorder of a system

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Question 9

A reaction with a negative Gibbs free energy change is

A) spontaneous

B) nonspontaneous

C) at equilibrium only

D) endothermic only

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Question 10

The standard enthalpy of formation of an element in its standard state is

A) always positive

B) zero

C) always negative

D) equal to its mass

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Question 11

In a bomb calorimeter, the volume is held constant, so the heat measured relates most directly to change in

A) entropy

B) pressure

C) internal energy

D) mass

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Question 12

Combustion of a fuel in oxygen is an example of an

A) endothermic reaction

B) neutralization only

C) precipitation only

D) exothermic reaction

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Question 13

Dissolving ammonium nitrate in water cools the solution, so the process is

A) endothermic

B) exothermic

C) neutral

D) catalytic

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Question 14

A reaction that increases the number of gas particles usually increases the

A) enthalpy only

B) entropy

C) mass

D) density

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Question 15

Molar enthalpy is the enthalpy change per

A) gram of water

B) litre of solution

C) mole of substance

D) second of reaction

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Question 16

Water mass 200 grams, specific heat capacity 4.19 joules per gram degree, temperature rise 5 degrees. The heat in joules is

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Question 17

Water mass 100 grams, specific heat capacity 4.19, temperature rise 10 degrees. The heat in joules is

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Question 18

A reaction releases 5000 joules for 0.5 moles. The molar enthalpy magnitude in joules per mole is

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Question 19

A reaction absorbs 12000 joules for 2 moles. The molar enthalpy magnitude in joules per mole is

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Question 20

Enthalpy of products is 200 kilojoules and reactants is 500 kilojoules. The enthalpy change in kilojoules is

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Question 21

Bond energies give energy absorbed 800 kilojoules and energy released 1100 kilojoules. The enthalpy change in kilojoules is

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Question 22

A calorimeter absorbs 2500 joules and water absorbs 1500 joules. The total heat in joules is

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Question 23

A fuel releases 40000 joules per gram. The heat from 3 grams in joules is

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Question 24

Temperature rises from 20 degrees to 35 degrees. The temperature change in degrees is

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Question 25

Temperature falls from 30 degrees to 22 degrees. The temperature change magnitude in degrees is

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ANSWER KEY

1.	B	**10.**	B	**18.**	10000
2.	B	**11.**	C	**19.**	6000
3.	C	**12.**	D	**20.**	-300
4.	D	**13.**	A	**21.**	-300
5.	A	**14.**	B	**22.**	4000
6.	B	**15.**	C	**23.**	120000
7.	C	**16.**	4190.000000000001	**24.**	15
8.	D	**17.**	4190.000000000001	**25.**	8
9.	A				

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