

## Exothermic Reactions Quiz PDF

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**What is the sign of the enthalpy change ( $\Delta H$ ) for an exothermic reaction?**

- Positive
- Negative
- Zero
- Undefined

**Which of the following is an example of an exothermic reaction?**

- Melting ice
- Photosynthesis
- CombustION of propane
- Electrolysis of water

**Which of the following best describes an exothermic reaction?**

- Absorbs heat from the surroundings
- Releases heat to the surroundings
- Has no change in temperature
- Requires constant heating to proceed

**What happens to the temperature of the surroundings during an exothermic reaction?**

- It decreases
- It remains constant
- It increases
- It fluctuates

**What is typically required to initiate an exothermic reaction?**

- Catalyst
- Activation energy

- Endothermic reaction
- Equilibrium state

**Which of the following reactions is exothermic?**

- Boiling water
- Neutralization of HCl and NaOH
- Sublimation of dry ice
- Decomposition of water

**In an exothermic reaction, the energy of the products is:**

- Higher than the reactants
- Lower than the reactants
- Equal to the reactants
- Unrelated to the reactants

**In an exothermic reaction, which of the following statements are true?**

- Products have higher energy than reactants
- Heat is absorbed from the surroundings
- Heat is released to the surroundings
- Products have lower energy than reactants

**Which processes involve exothermic reactions?**

- Formation of rust
- Dissolving sugar in water
- BurnING wood
- Cooking an egg

**Explain why the combustion of fossil fuels is considered an exothermic reaction.**

**Describe how calorimetry can be used to measure the heat released in an exothermic reaction.**

**Discuss the environmental impact of exothermic reactions, particularly in the context of fossil fuel combustion.**

**Explain the role of activation energy in exothermic reactions and how it affects the reaction rate.**

**Describe a real-world application of an exothermic reaction and explain its significance.**

**Explain how exothermic reactions contribute to the spontaneity of a chemical process.**

**Which process is exothermic?**

- Evaporation of water
- Dissolving ammonium nitrate in water
- Freezing of water
- Photosynthesis

**Which of the following are examples of exothermic reactions?**

- CombustION of gasoline
- Photosynthesis
- Respiration in cells
- Melting of ice

**Which of the following safety considerations are important for exothermic reactions?**

- Proper ventilation
- Use of fire retardants
- Monitoring temperature
- Increasing pressure

**What are the implications of exothermic reactions in industrial applications?**

- Energy efficiency
- Increased pollution
- Cost savings
- Requirement for cooling systems

**Which of the following are characteristics of exothermic reactions?**

- Energy is absorbed
- $\Delta H$  is negative
- Energy is released
- Temperature of surroundings decreases