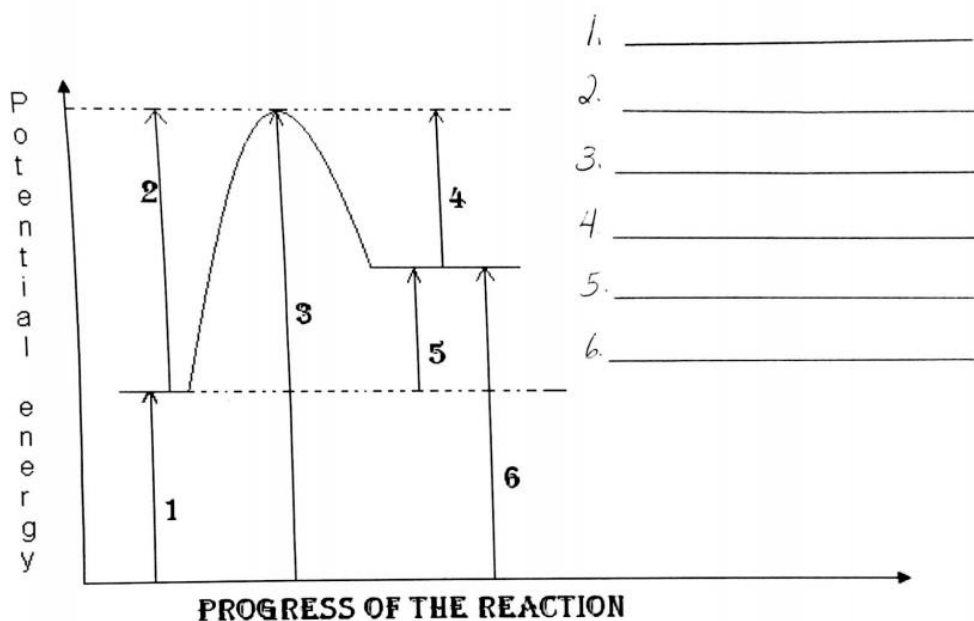


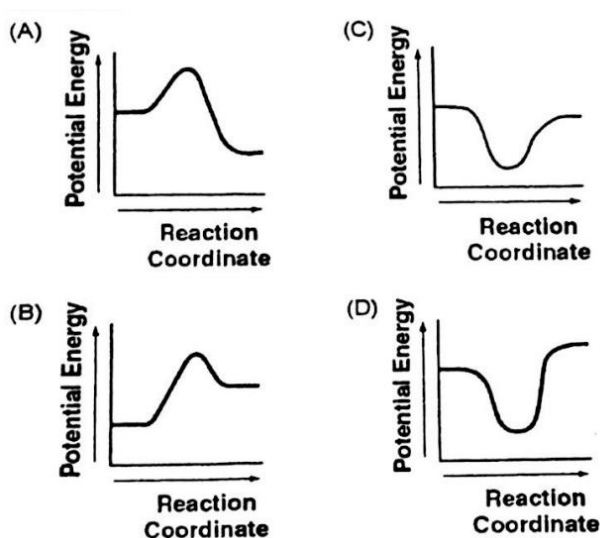
Regents Chemistry Kinetics Quiz Review

1. What is meant by the *rate* of a chemical reaction?
2. How does each of the following factors affect the rate of a chemical reaction?
 - a. Temperature
 - b. Concentration
 - c. Surface Area
 - d. Pressure (for gases)
 - e. Nature of reactants (covalent vs. ionic substances)
3. Does every collision between reacting particles lead to products? Explain.
4. Label the numbered segments on the following potential energy diagram.



5. On the PE diagram above, draw a dashed line to indicate how the reaction pathway would change with the addition of a catalyst.
6. According to the PE diagram above, is the forward reaction endothermic or exothermic? Justify your response.

7. According to Table I, which potential energy diagram best represents the reaction that forms $\text{H}_2\text{O}(l)$ from its elements?



8. The heat of reaction (ΔH) is equal to the
- Heat content of the products minus heat content of the reactants
 - Heat content of the reactants minus heat content of the products
 - Entropy of the products minus entropy of the reactants
 - Entropy of the reactants minus entropy of the products
9. According to Table I, which compound releases the greatest amount of energy per mole when it is formed from its elements?
- Hydrogen iodide
 - Carbon dioxide
 - Ethyne (C_2H_2)
 - Ethene (C_2H_4)
10. Given the reaction: $2\text{H}_2(g) + \text{O}_2(g) \rightarrow 2\text{H}_2\text{O}(l) + 571.6 \text{ kJ}$
- What is the approximate ΔH for the formation of **1 mole** of $\text{H}_2\text{O}(l)$?
- 285.8 kJ
 - +285.8 kJ
 - 571.6 kJ
 - +571.6 kJ