

## 2006 AP<sup>®</sup> CHEMISTRY FREE-RESPONSE QUESTIONS

(d) Consider the four reaction-energy profile diagrams shown below.

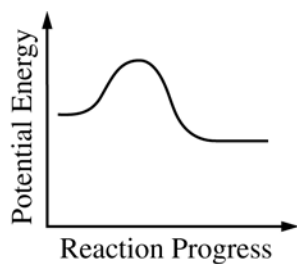


Diagram 1

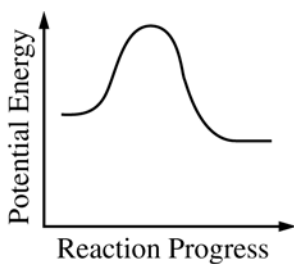


Diagram 2

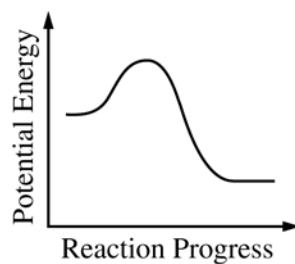


Diagram 3

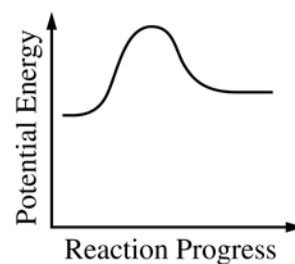


Diagram 4

- (i) Identify the two diagrams that could represent a catalyzed and an uncatalyzed reaction pathway for the same reaction. Indicate which of the two diagrams represents the catalyzed reaction pathway for the reaction.
- (ii) Indicate whether you agree or disagree with the statement in the box below. Support your answer with a short explanation.

Adding a catalyst to a reaction mixture adds energy that causes the reaction to proceed more quickly.