Name _____ Date _____ Period _____

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Enzymes

Biology

Answer in complete sentences. Show your setup for calculations.

1. Write the term that matches each definition. Choose from catalyst, substrate, and active site.

Definition	Term
The molecule an enzyme acts on	
The pocket on an enzyme where the substrate fits	
A substance that speeds up a reaction and is not used up	

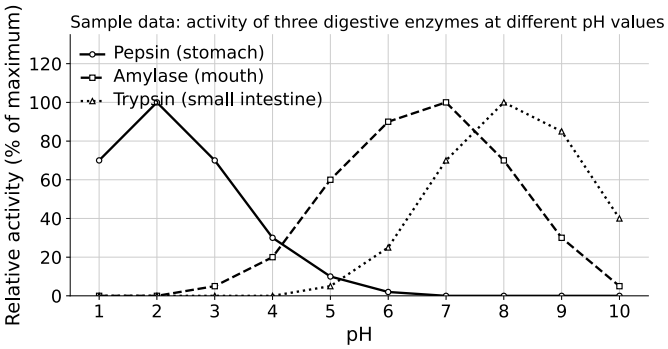
2. An enzyme produces 30 mL of product in 5 minutes.

(a) What is the rate of the reaction? Show your setup.

(b) At this rate, how many mL of product would be made in 8 minutes?

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3. The graph shows the activity of three digestive enzymes at different pH values (sample data).

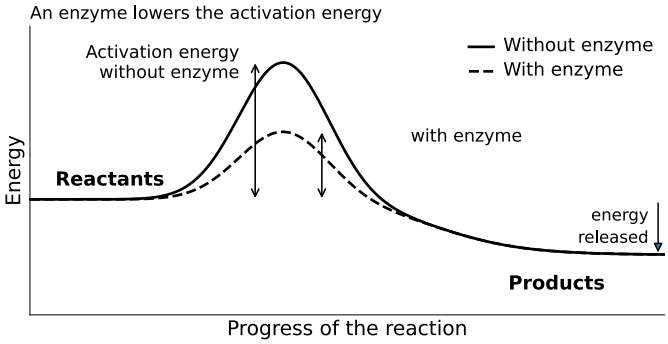


(a) What is the optimum pH of trypsin?

(b) Which enzyme works best in the stomach, at pH 2?

(c) Explain why amylase stops working in the stomach.

4. The energy diagram shows a reaction with and without an enzyme.



(a) Which curve shows the reaction with the enzyme?

(b) Explain how the enzyme speeds up the reaction.

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