

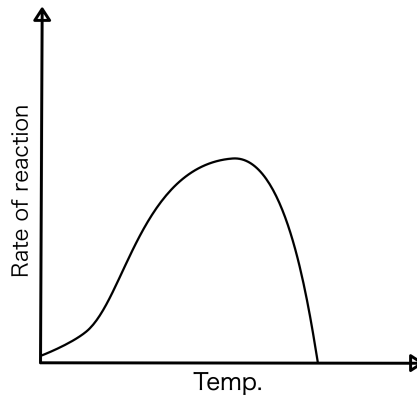


Factors Affecting Enzyme Action

1 Consider the graph below:

Label the optimum temperature for the enzyme as 'A'

Label the point at which the enzyme has been completely denatured as B



[2 marks]

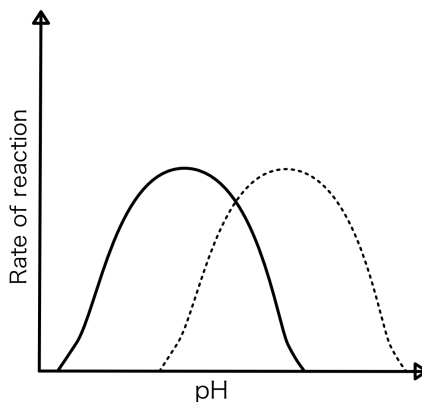
2 Explain why the rate of reaction initially increases with temperature

.....

.....

[2 marks]

3 The graph below shows rate of reaction data for 2 different enzymes. One of these enzymes are found in the stomach, the other is found in the mouth.



a) Which of these lines is more likely to indicate the enzyme found in the stomach? Explain your answer.

.....

.....

[2 marks]

b) Both these enzymes have the same optimum pH, TRUE or FALSE?

.....

[1 marks]

4 Explain, in terms of bonding, why the rate of reaction gradually falls once the pH increases above the optimum rather than denaturing straight away

.....

.....

[3 marks]

5 An enzyme controlled reaction was carries out at 36°C. After 3 minutes, 240 cm³ of product had been produced. Calculate the rate of reaction is cm³/s

Rate of reaction = cm³/s

[2 marks]

[Total 12 marks]