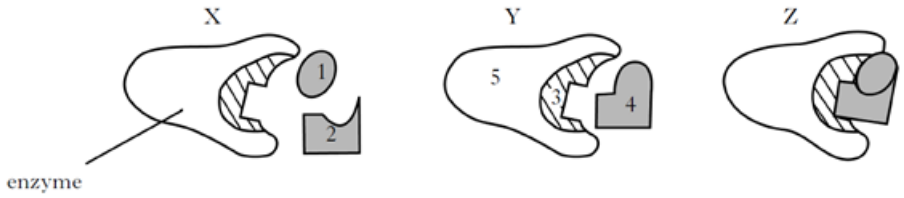
Key area 1.4 Proteins and Enzymes Homework

1. All proteins are composed of
    a. Genes
    b. DNA
    c. Amino acids
    d. Bases

2. Enzymes act as catalyst because they
    a. Are composed of protein
    b. Act on all substrates
    c. Raise the energy input
    d. Lower the energy input

3. The active site of an enzyme is complementary to
    a. One type of substrate molecule
    b. All types of substrate molecule
    c. One type of product molecule
    d. All types of product molecule

Q4. The diagram below shows three stages X, Y and Z that occur when an enzyme converts its substrate to a product.



a. This enzyme promotes the breakdown of a complex molecule into simpler molecules. Put the stages into the correct order to show this degradation reaction

_____ → _____ → _____ 1

b. Which number in the diagram represents the active site

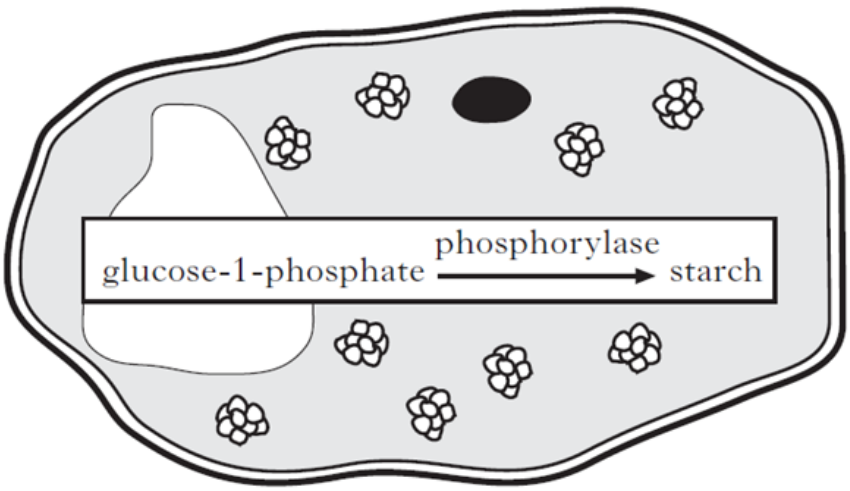
_____ 1

c. Describe what happens when an enzyme is denatured

_____

_____ 1

Q5. The diagram below shows the action of the enzyme phosphorylase in a potato cell



a. Underline the option in the bracket to make the sentence correct.

The action of the enzyme phosphorylase catalyses the (degradation / synthesis) of starch. 1

b. State the effect of phosphorylase on the rate of this reaction. 1

_____

c. Explain why lipase could not produce starch in this reaction. 1

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