Name _____(H)

ENZYMES
2-4

MULTIPLE CHOICE

Circle the letter of the answer(s) that correctly complete the sentence.
THERE MAY BE MORE THAN ONE CORRECT ANSWER.

Reactants in an enzyme catalyzed chemical reaction are called _____

- **A. polymers**
- **B. products**
- **C. substrates**
- **D. organics**

Most macromolecules that can act as enzymes are _____.

- **A. carbohydrates**
- **B. lipids**
- **C. nucleic acids**
- **D. proteins**

Enzymes speed up chemical reactions by _____.

- **A. decreasing the activation energy**
- **B. increasing the activation energy**
- **C. making more hydrogen bonds**
- **D. changing the pH of the solution**

Proteins (like enzymes) unwind or _____ when placed in extreme pH or temperature conditions.

- **A. desensitize**
- **B. polymerize**
- **C. depolarize**
- **D. denature**

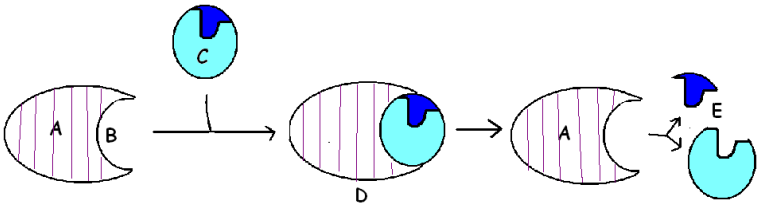
Enzymes are _____

- **A. used up during chemical reactions**
- **B. unchanged during chemical reactions and reusable**

In an enzyme catalyzed reaction the substrate fits the _____ like a "lock fits a key".

- **A. active site**
- **B. products**
- **C. potential energy**
- **D. allosteric site**

MATCH EACH COMPONENT IN THE ENZYME CATALYZED REACTION BELOW WITH ITS NAME BY WRITING THE LETTER ON THE LINE PROVIDED.



_____ PRODUCTS
_____ SUBSTRATE
_____ ACTIVE SITE
_____ ENZYME-SUBSTRATE COMPLEX
_____ ENZYME

* * * * * * * * * * * * * * *

Name two (2) environmental conditions that can cause proteins (enzymes) to change their shape.

_____ _____

DNA polymerase is a molecule found in all cells. Judging by its name, do you think it is an enzyme? YES NO HOW CAN YOU TELL?

_____

Judging by its name, what do you think DNA polymerase does?

_____

THINK ABOUT IT:

Many genetic diseases result from the production of enzymes that are not shaped correctly. How does changing in an enzyme's shape cause it to work poorly or not at all?

_____

"Candy Corn" is a variety of sweet corn enjoyed by many people. These corn plants have been modified by geneticists to produce corn that tastes sweeter than other varieties because Candy Corn cells lack an enzyme that other corn plants have. Use what you learned about macromolecules and how plants store their glucose for later. What do you think is the function of this missing enzyme in corn plants?

_____