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| Biology Cornell Notes: Enzyme Notes Date: | |
| Study Questions/ Vocabulary:  1. What are the two functions of enzymes?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  2. Define catalyst. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_3. Do enzymes raise or lower the energy needed to activate a reaction?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  4. List three things that can affect an enzymes function  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **What are enzymes?**   * Most enzymes are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * They act as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to accelerate (speed up) a reaction * Enzymes are \_\_\_\_ \_\_\_\_\_\_\_\_\_\_ changed in the process   **Two functions of enzymes**   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ : to build (synthesis) a polymer you must first remove some water (Dehydrate) 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: to break (lysis) a polymer you must add water (Hydro)   **Dehydration synthesis**   * Metabolism & Enzymes ppt downloadDehydration synthesis: Removal of \_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_ a bond * This is how you make muscles in your body. Muscles are made by combining two amino acids together to make protein. Proteins make up your muscles.   **Hydrolysis**   * Hydrolysis: Addition of \_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_ a bond * This is how you digest your food. The polymers are broken down into their monomer groups. Thick of the cracker   **Enzymes**   * Enzymes are specific for what they \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * They are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * All enzyme names end in \_\_\_\_\_\_\_\_\_\_\_ ( Sucrase, Lactase, Maltase)   **How do enzymes work?**   * Enzymes work by \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which \_\_\_\_\_\_\_\_ activation energy   Active site - Wikipedia**Active Site**   * The active site is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an enzyme molecule where the substrate binds   **Enzyme substrate complex**   * The enzyme substrate complex is a \_\_\_\_\_\_\_\_\_\_\_\_\_ molecule formed when an enzyme comes into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with its substrate   **What affects enzymes activity?**   * Three different factors  1. Temperature 2. pH 3. Enzyme Inhibitors 4. Temperature  * Extreme \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the most dangerous * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ may denature the enzyme * When an enzyme is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ its active site is \_\_\_\_\_\_\_\_\_\_\_\_\_\_  1. pH  * Changes in \_\_\_\_\_\_\_\_ also \_\_\_\_\_\_\_\_\_\_\_ the shape of an enzyme’s \_\_\_\_\_\_\_\_\_\_\_ site * Each enzyme works best at a specific pH value  1. Enzyme inhibitors  * Enzyme inhibitors: are chemicals that \_\_\_\_\_\_\_\_\_\_ an enzyme’s normal substrate and \_\_\_\_\_\_\_\_\_\_\_\_\_ with it for the active site   + - If it fits….it sits… |
| SUMMARY : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |