**Lesson 2 – Enzymes**

**1. Property of inorganic catalysts and enzymes.**

Fill in the table

|  |  |  |
| --- | --- | --- |
| Property | Inorganic catalysts | Enzymes |
| Chemical nature |  |  |
| Molecular weight |  |  |
| How they effect on activation energy |  |  |
| How they effect on the equilibrium of a reversible reaction |  |  |
| Will they change during the reaction? |  |  |
| Efficiency / reaction rate |  |  |
| Specificity |  |  |
| Optimum conditions (pH, temperature, pressure) |  |  |
| Are they regulated? |  |  |

**2. Enzyme structure.**

Name the numbered structures of the enzyme.



What is an active site of enzyme? What is a structure of active site?

What is a cofactor? What are the types of cofactor? What are some examples of these types?

What is the difference between a prosthetic group and a coenzyme?

 **3. Mechanism of the enzymatic reaction.**

Describe what happens at each stage of an enzymatic reaction.



**4. Optimum conditions for enzyme activity.**

Explain the graphs. Why does the enzyme activity change?





**5. Enzyme classification.**

What are the 6 classes of enzymes? What is the basis of classification of enzymes?

Name the classes of enzymes that catalyze the following reactions:



