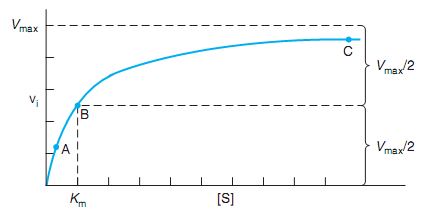
**COMBINATION OF QUESTIONS FOR 1. WEEK OF LECTURE**

**INTRODUCTION TO BIOCHEMISTRY; ENZYMOLOGY**

1. **Combination**
2. What is the basic monomeric unit that builds proteins? Specify which primary chemical bonds exist, in general.
3. Explain the allosteric modulation of enzyme activity
4. **Combination**
5. Enzymes are divided into classes according to the type of reaction they catalyze. List all classes/groups of enzymes.
6. Which group of biomolecules do starch and glycogen belong to and state the basic monomeric structural unit in these compounds and by what types of bonds they are connected.
7. **Combination**
8. State and explain the four basic structures of proteins at the molecular level.
9. Based on the graph, explain whether and how we can speed up the chemical reaction at point B.



1. **Combination**
2. What type of biomolecules are phospholipids? Explain their structure and role in the human body
3. List the factors that affect enzyme activity
4. **Combination**
5. Explain how the concentration of substrate affects enzyme activity and what are the kinetic parameters that characterize the kinetics of the enzyme-catalyzed reaction according to Michaelis - Menten.
6. Explain the chemical structure of nucleic acids (from which monomer units are they built and which functional groups are part of those monomers?).
7. **Combination**
8. Explain how the enzyme binds the substrate, at what specific place and what are these bonds called? Define the term cosubstrate and prosthetic group.
9. Explain what are triacylglycerols, and what monomers builds them.
10. **Combination**
11. Explain hydrogen bonds
12. Explain the terms homotropic and heterotropic effectors
13. **Combination**
14. Explain the secondary and tertiary structures of proteins and the roles of proteins in the body
15. Explain and define Km in enzyme kinetics
16. **Combination**

a)What are enzymes and how do they function in the human body?

b) What are the four major biomolecules present in the human body?

1. **Combination**
2. What are carbohydrates, how are they divided and what is their role in body?
3. Define apoenzyme, holoenzyme and coenzyme