

簡答下列問題，每題十分。所有考題務必在答案卷上作答。

1. Describe two functions of polysaccharides.
2. What are considered “weak” interactions in proteins?
3. Define the specific activity of an enzyme.
4. What is the effect of 2,3-bisphosphoglycerate (BPG) on the binding of oxygen to hemoglobin?
5. Chymotrypsin belongs to a group of proteolytic enzymes called the “serine proteases”. Briefly describe what amino acids work together to execute its enzymatic function.
6. Describe the structure and biological functions of proteoglycans.
7. Give the sequence of a deoxyoligonucleotide which will hybridize with a DNA containing the sequence (5')ATACTCGTC(3')?
8. List the essential components of the PCR reaction mixture.
9. Describe the enzymes, cofactors, and products of the pyruvate dehydrogenase complex.
10. Describe the reactions and the role of the glucose-alanine cycle.