

本試題是否可以使用計算機：可使用，不可使用（請命題老師勾選）

1. Please give examples to explain what they are and what is the importance of coenzyme and cofactor, respectively? (10%)
2. Please describe the difference between prokaryotic and eukaryotic cells in detail. (10%)
3. What is the structure of mitochondria and describe its function in the cell (10%)
4. Self is distinguished from nonself by the display of peptide on cell surfaces, please express it in detail (10%)
5. Please describe the primary, secondary, tertiary and quaternary structures of a protein in detail. (10%)
6. Hemoglobin and myoglobin are oxygen-binding proteins, please describe their roles and the cooperation in our body. (10 %)
7. What are the chemical characteristics and biological importance of buffer system in the internal environment of a living organism? Please also brief describe the significance of the two most important buffer systems in our bodies. (10%)
8. Please describe how cells obtain energy from food in detail. (10%)
9. Please describe the following analytical techniques. (10%)
  - (1) High performance liquid chromatography
  - (2) Capillary electrophoresis
10. Enzyme activity can be affected by some factors, please describe them and explain the reasons. (10%)