

臺北醫學大學九十學年度研究所博士班招生考試題目卷

九十學年度博士班
藥學研究所 生物化學

考試時間：90 分鐘

題目試卷共 / 張，本試卷為第 / 張

1. What are some possible reasons for DNA being the storehouse of genetic information rather than RNA or protein? (6%)
2. What is the molecular basis of separation in each of the following chromatographic techniques? (12%)
 - a. Ion-exchange chromatography
 - b. Affinity chromatography
 - c. Gel filtration chromatography
3. When a protein is denatured, it becomes less water soluble and often precipitates from solution. Explain. (6%)
4. Why is it logical for the first step in a metabolic sequence of reactions to be the major regulatory step? (6%)
5. Give a brief explanation for how AZT (3'-azido-2',3'-dideoxythymidine) and DDC (2',3'-dideoxycytidine) function in inhibiting the growth of the HIV. (6%)
6. Explain the possible link between telomerase activity and cancer. (6%)
7. Individuals who have low concentrations of carnitine in their muscles have increased levels of triacylglycerol. Explain. (6%)
8. Is attenuation likely to be involved in eukaryotic gene regulation? Brief explain your answer. (6%)
9. Give an example to explain dominant-negative mutation. (10%)
10. Explain the biochemical basis for the fact that one can synchronize cell populations by treating them with deoxythymidine. (6%)
11. Explain the following: (30%)
 - a. Shine-Dalgarno sequence
 - b. Open reading frame
 - c. Polycistronic mRNA
 - d. *Taq* polymerase
 - e. Western blotting