

慈濟大學 102 學年度
研究所碩士班招生考試命題紙

科目：生物化學

共1頁

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1. Briefly describe the “Nucleosomes”. (10%)
 2. (1) Briefly define the primary, secondary and tertiary structure of a protein. (2) Briefly describe the methods used to determine the primary, secondary and tertiary structure of a protein, respectively. (10%)
 3. Answer for following questions:
 - (a) Which amino acids in a polypeptide are phosphorylated by protein kinase? (6%)
 - (b) Which amino acid contributed to formation of disulfide bond? (2%)
 - (c) Which amino acids contributed to strong absorbance of light by most proteins at a wavelength of 280 nm? (2%)
 4. Briefly describe the microRNA. (10%)
 5. In a mixture of the five proteins listed below, write down the elute order in gel- filtration (size-exclusion) chromatography? Why? (10 %)
Protein A; $M_r = 95$ KDa
Protein B; $M_r = 150$ KDa
Protein C; $M_r = 18$ KDa
Protein D; $M_r = 200$ KDa
Protein E; $M_r = 43$ KDa
 6. Briefly describe the different types of mutation. (10%)
 7. What is cDNA and its importance in molecular biology research? (10%)
 8. Briefly describe the basic principle of DNA sequencing. (10%)
 9. What is a point mutation? What is SNP? What is the difference between SNP and mutation? (10%)
 10. Briefly describe the basic structure of a gene in mammalian system. (10%)