

國立彰化師範大學 101 學年度碩士班招生考試試題

系所：生物學系

組別：乙組

科目：分子生物學

☆☆請在答案卷上作答☆☆

共 1 頁，第 1 頁

一、名詞解釋 (每小題 4%)

1. *in vitro* fertilization
2. Spliceosome
3. Receptor tyrosine kinase
4. DNA microarray
5. Proteomics
6. Ribozymes
7. Telomerase
8. Capping of mRNA in eukaryotes
9. Topoisomerases
10. Attenuator of *trp* operon in *E. coli*

二、簡答題

1. Outline and describe the major steps of translation. (15%)
2. Describe in general how Ca^{++} functions as an intracellular signaling messenger? (10%)
Give a specific example in which? (5%)
3. Outline and describe the replication steps of lagging strands of DNA in *E. coli*. (15%)
4. Describe the theory and application of GAL4/UAS system from *Drosophila*. (15%)