

國立嘉義大學 99 學年度
生物農業科技學系碩士班招生考試試題

科目：專業英文

一、請將英文句子，翻譯成中文。

1. For certain, the choice of appropriate research organisms was important for advancing the knowledge base of molecular biology. Especially advantageous was the fact that, despite the vast array of bacteria, viruses, and animal cells that were potentially available for laboratory experimentation, a consensus among researchers quickly emerged. A limited selection, which included *E. coli*, its bacteriophages, and only a small number of animal cell lines, were chosen as focal points. Thus, during the early years, researchers were able to conveniently exchange information and collaborate on achieving common goals, such as preparing genetic maps and understanding metabolic regulation. (25%)
2. Owing to their specificity, restriction endonucleases were the first nucleases found to cleave DNA at specific sequences, and have proven useful in genetic analyses from the oligonucleotide to the chromosomal levels. At the oligonucleotide level, they are used to provide specific fragments for cloning, sequencing, and custom-made mutations. Segments of DNA thought to contain regions that control gene expression can, if desired, be cut away selectively, and the effect of their loss on gene expression can be monitored. (25%)
3. A large number of the world's most widespread and problematic pathogens evade host immune responses by inducing strain-specific immunity to antigens with high mutation rates capable of altering antigenic profiles. The immune system appears to be decoyed into reacting to these antigens that offer little cross protection between subtypes. (25%)

二、請將下列中文句子，翻譯成英文。

將 125 mM 的 EDTA 與無菌水以 1:2 比例混合，取出 15 微升，加入 65 微升的 100% 酒精，混合均勻。在 4 °C 中以 16,100 g 的轉速離心 20 分鐘。(25%)