

系所組別： 生物科技研究所甲、乙組

考試科目： 分子生物學

考試日期：0220，節次：1

※ 考生請注意：本試題 可 不可 使用計算機

Essay Questions (Ten points for each question) 問答題共 10 題，每題 10 分

1. Please explain how do mitochondria replicated its DNA and segregate?
2. What is "gene duplication" and how to affect genome evolution?
3. Please explain the control mechanism of transcription termination? And how to anti-termination.
4. Please explain how to control the replicon just fire once in each cell cycle?
5. What is "wobble hypothesis"? Please explain and give a simple example?
6. Please explain the mechanism of protein localization?
7. Please explain how retroviruses replicate in the host? And how we using retrovirus as a vector to induction a foreign gene into host cells?
8. What is "two hybrid assay" and how do they detect protein-protein interactions?
9. What is "zinc finger"? Please draw the structure and explain how they can bind with DNA?
10. Please explain the immune diversity of the immunoglobulin genes in vertebrate animal ?