

國立成功大學
110學年度碩士班招生考試試題

編 號： 278

系 所： 藥理學研究所

科 目： 分子生物學

日 期： 0203

節 次： 第 3 節

備 註： 不可使用計算機

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第1頁，共1頁

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. Please describe the functions and the differences between the following processes (i.e. A and B):
 - (1) (A) Homologous recombination and (B) Non-homologous end joining (5 points)
 - (2) (A) Mitosis and (B) Meiosis (5 points)
2. Please draw the 2D structure of tRNA and describe the process of tRNA-charging in details. In addition, please describe the mechanisms which are used by eukaryotic cells to control the correctness of this process. (20 points)
3. Please describe the sequential process involved for protein ubiquitination and the proteasomal protein degradation process in details. (20 points)
4. Please describe apoptosis and how members of the Bcl-2 family regulate apoptosis. (20 points)
5. Please describe autophagy and how members of the ATG family regulate autophagy. (20 points)
6. Please describe the process of protein synthesis in details. (10 points)