

國立嘉義大學 99 學年度
農業科學博士學位學程招生考試試題

科目：分子生物學

1. Please draw a figure of eukaryotic DNA replication. In this figure, please describe the components employed in the DNA replication as precise as possible, for example the strand name, the enzymes used, the replication direction and so on. (25%)
2. What are transposable elements? What is the mechanism of transposable elements moving around in the genome? What is the evolution relationship of transposable elements and genome organization? Make an example of a transposable element in maize. (25%)
3. Please describe how do eukaryotic cells regulate gene transcription levels? (25%)
4. Please describe how Holliday structure is formed in DNA recombination. (25%)