

※ 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 briefly describe the following terms. (30%)
 - (1) Transcriptome (5%)
 - (2) Autophagy (5%)
 - (3) iPS cells (5%)
 - (4) SNP (5%)
 - (5) Wobble hypothesis (5%)
 - (6) Translational medicine (5%)

2. Please briefly describe the following methods. (30%)
 - (1) Next generation sequencing (5%)
 - (2) Pyrosequencing (5%)
 - (3) CRISPR (5%)
 - (4) Super resolution microscopy (5%)
 - (5) Chromatin immunoprecipitation assay (5%)
 - (6) Electrophoretic mobility shift assay (5%)

3. What is microRNA? (5%)
How do microRNAs regulate gene expression? (5%)

4. What is alternative splicing? (5%)
What is the difference between cis-splicing and trans-splicing? (5%)

5. What is epigenetic regulation? (5%)
Please describe its correlation with disease. (5%)

6. What is precision medicine? (5%)
Please describe its importance and application in medicine. (5%)