

國立成功大學

112學年度碩士班招生考試試題

編 號：268

系 所：微生物及免疫學研究所

科 目：免疫學

日 期：0207

節 次：第 3 節

備 註：不可使用計算機

※ 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 and compare the features of innate immunity and adaptive immunity. (20%)
2. What is the mechanism of vaccination in our body? (15%) What is the function of an adjuvant in vaccination? (5%)
3. SARS-CoV-2 has caused the COVID-19 pandemic worldwide over the past three years. Please describe how the human body detects SARS-CoV-2 virus infection to trigger antiviral immune responses. (20%)
4. The human genome contains around 25,000 gene numbers. However, the human immune system can generate more than billions of different antibodies. Please describe the molecular mechanisms of how the human immune system generates many different antibodies in the body. (20%)
5. Immune checkpoint blockade has been successfully used to treat melanoma and other cancers. Please describe the underlying mechanisms of how these therapies work. (20%)