

※ 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。

A. 解釋名詞，共 30%

- (1) Please define Innate Immunity (5%)
- (2) Please define Next Generation Sequencing (NGS) (5%)
- (3) Please define Autophagy (5%)
- (4) What is siRNA? What is shRNA? What is microRNA? (15%)

B. 問答題：共 70%

- (1) 何謂「轉譯醫學」?試舉您所認識在臨床上成功的「轉譯醫學」的例子，說明其在醫療上的重要性。(10%)
- (2) “幹細胞醫學”是近年來相當熱門的科研題目.試舉出三種與幹細胞醫學有關的基因或者蛋白質名稱，並簡述它們目前已知的功能。(10%)
- (3) 舉實例說明近兩三年來全世界或台灣“新興感染症”的種類以及在公共衛生上的重要性。(10%)
- (4) Please briefly describe how transcription is regulated in mammalian cell (10%).
- (5) Please describe how mammalian cell cycle progression is regulated in details. (distinct phases, driving force, quality control, monitoring, initiation and termination)(10%)
- (6) Please briefly describe how human genetic mutation(s) can cause a human disease.(10%)
- (7) Please define the term” post-translational modification “. How is protein function affected by post-translational modification? (10%)