

- 一、「測量」是科學研究的重要步驟，請以一個您較熟知的疾病寫出至少五種測量有無該疾病的方法，並且比較不同測量方法的準確度優劣。(15%)
- 二、「測量」是科學研究的重要步驟，請以一個您較熟知的疾病寫出「操作定義」與「理論定義」的不同。(15%)
- 三、「分類」是科學研究經常使用的思維，請寫出三種分類疾病的架構。(15%)
- 四、「因果推論」是科學研究的重要考量，請寫出「實驗設計」透過哪幾種方法增強因果推論的強度。(15%)
- 五、「因果推論」是科學研究的重要考量，請以某婚宴發生食物中毒事件為例說明如何使用下述 Mill's Methods 找到是哪一道菜造成食物中毒。(40%)

1. Direct Method of agreement

A B C D occur together with w x y z

A E F G occur together with w t u v

Therefore A is the cause of w.**2. Method of difference**

A B C occur together with x y z

B C occur with y z

Therefore A is the cause, or the effect, or a part of the cause of x.**3. Joint method of agreement and difference**

A B C occur together with x y z

A D E occur together with x y w also B C occur with y z

Therefore A is the cause, or the effect, or a part of the cause of x.**4. Method of residues**

A B C occur together with x y z

B is known to be the cause of y

C is known to be the cause of z

Therefore A is the cause x.**5. Method of concomitant variations**

A B C occur together with x y z

A ↑ B C results in x ↑ y z.

Therefore A and x are causally connected