

## 一、單選題 (一題 5 分，共 40 分)

1. In economics, scarcity refers to the situation of which of the following statement?
  - (a) Optimizing with the use of limited information.
  - (b) having more wants than the amount of available resources.
  - (c) rationing of available goods and services by the government.
  - (d) sellers setting the prices of their products too high for people to be able to afford them.
2. If we test whether our competitive equilibrium models match up with real world data, which of the following principle of economics does this imply?
  - (a) Optimization
  - (b) Equilibrium
  - (c) Empiricism
  - (d) Capitalism
3. Which of the following statement about **correlation** and **causation** is true?
  - (a) Correlation implies causation.
  - (b) Correlation occurs only when one thing directly affects another.
  - (c) Causation is only a mutual relationship.
  - (d) We might find the true causation through economic experiments.
4. Which of the following is an example of free riding?
  - (a) A housekeeper cleaning a house
  - (b) A tax evader enjoying national security
  - (c) A consumer paying for pollution control
  - (d) An individual who buys a ticket for a baseball match
5. Which of the following statements is true?
  - (a) Willingness to accept is the lowest price that a seller is willing to get paid to sell an extra unit of good.
  - (b) Increase in price of the good shifts the supply curve right.
  - (c) Quantity supplied falls when the price of the good rise.
  - (d) Willingness to accept is the height of demand curve.
6. Amy consumes two goods: tea and coffee. Her demand for tea is inelastic while her demand for coffee is elastic. If there is an increase in the price of both tea and coffee,
  - (a) Amy's expenditure on both tea and coffee is likely to increase.
  - (b) Amy's expenditure on both tea and coffee is likely to decrease.
  - (c) Amy's expenditure on tea will increase and her expenditure on coffee will decrease.
  - (d) Amy's expenditure on coffee will increase and her expenditure on tea will decrease.

7. Which of the following statements is true about the price elasticity of demand?
- (a) The price elasticity of demand for a good is generally higher in the long run than in the short run.
  - (b) The demand for a good with a price elasticity of demand of zero is highly responsive to price changes.
  - (c) As the number of substitutes for a product increases, the price elasticity of demand for that good decreases.
  - (d) If the budget share of a particular good in a consumer's bundle increases, the price elasticity of demand for that good is likely to decrease.
8. Based on the discussion of McDonald's elasticity, the elasticity of demand for fast-food restaurants is suggested to be around 0.8 (absolute value). Which of the following statements is most likely be true?
- (a) McDonald faces the same elasticity of demand as the whole fast-food industry.
  - (b) McDonald could simply increase its revenue by raising its price.
  - (c) McDonald is likely to face a greater elasticity of demand than the whole fast-food industry.
  - (d) If the elasticity of demand for McDonald is greater than 1 (absolute value), it could increase its revenue by raising prices.

## 二、計算說明題

1. (10%) 盧廣仲即將在小巨蛋開演唱會，門票每張 2,000 元。為了簡單，我們假設此次演唱會的門票僅在現場出售。已知排隊購票須花 2 個小時的時間，A、B、C 三人對演唱會的願付價格分別是 5,500 元、4,500 元、與 3,500 元，而三個人的時間成本分別是每小時 1,500 元、1,000 元、與 800 元。
- (a) (5%) 請問這三人中有哪幾位會前去購票？
  - (b) (5%) 假設有一位 D 願付價格是 5,000 元，每小時的時間成本是 1,400 元。排了 1 個小時之後，有人向他兜售一張黃牛票，要價 3,200 元，購買後馬上就可以進場。請問 D 會買黃牛票還是會繼續排隊呢？
2. (20%) 請簡要回答以下四個問題。
- (a) (7%) 請問垃圾費隨袋徵收為何可以比隨水費徵收更有效減低垃圾量？
  - (b) (6%) 助教在一份問卷中調查了台大學生吸菸習慣與成績表現，假設助教發現學生吸菸量和成績有中度負相關，並據此推論吸菸會導致成績表現下降，請評述助教的說法，並指出助教可能犯了何種錯誤。

- (c) (7%) 假設某年夏天發生乾旱，造成西瓜產量減少，同時人們也因為炎熱乾旱的天氣而口渴，需要消費更多西瓜來解渴。請畫出市場供需上需求、供給的變動並分析均衡價格、均衡數量將分別下降、不變或上升。
3. (20%) 假設你在經濟學原理期中考前有 6 小時可以讀書，讀書總時數與分數的關係如下表，每一分帶給你的效用是 5 單位。每小時若不讀書拿來從事休閒活動的效用是 50 單位。

讀書時數	0	1	2	3	4	5	6
分數	30	46	59	70	79	87	94

- (a) (7%) Optimization in total value. 請列出讀書時數從 0 到 6 分別可以帶來多大的總效用，並最適化讀書時數。(需包含從事休閒活動帶來的效用)
- (b) (7%) Marginal analysis. 請列出讀書時數每多一單位帶來的邊際效用，並最適化讀書時數。(需將用來讀書而無法從事休閒活動的效用減損納入考量)
- (c) (6%) 假設有位同學的讀書時數和分數之間的關係和你相同，每小時不讀書用來從事休閒活動的效用也是 50 單位，但每一分帶給他的效用是 6 單位，請以 marginal analysis 的方式，列表幫這位同學完成最適化。
4. (10%) 請以弧彈性 (arc elasticity) 求解以下題目。
- (a) (5%) 假設市場上只有可不可和五十嵐兩家飲料店，當可不可的紅茶價格從 35 元漲價到 40 元時，五十嵐的奶茶需求量從 200 上升至 300 杯，請問兩款飲品的交叉彈性為多少？依據你計算出的交叉彈性，請問兩款飲品是替代品還是互補品？
- (b) (5%) A 上班族原本的年所得是 100 萬元，而他對五十嵐奶茶的需求是一年 200 杯。假設現在他的年所得上升至 120 萬元，對五十嵐奶茶的需求則變成一年 100 杯，請問 A 上班族的所得彈性是多少，五十嵐奶茶對他來說是何種財貨？