

國立中山大學 108 學年度 碩士暨碩士專班招生考試試題

科目名稱：個體經濟學【經濟所碩士班】

—作答注意事項—

考試時間：100 分鐘

- 考試開始響前不得翻閱試題，並不得書寫、劃記、作答。請先檢查答案卷（卡）之應考證號碼、桌角號碼、應試科目是否正確，如有不同立即請監試人員處理。
- 答案卷限用藍、黑色筆(含鉛筆)書寫、繪圖或標示，可攜帶橡皮擦、無色透明無文字墊板、尺規、修正液（帶）、手錶(未附計算器者)。每人每節限使用一份答案卷，不得另攜帶紙張，請衡酌作答。
- 答案卡請以 2B 鉛筆劃記，不可使用修正液（帶）塗改，未使用 2B 鉛筆、劃記太輕或污損致光學閱讀機無法辨識答案者，其後果由考生自行負擔。
- 答案卷（卡）應保持清潔完整，不得折疊、破壞或塗改應考證號碼及條碼，亦不得書寫考生姓名、應考證號碼或與答案無關之任何文字或符號。
- 可否使用計算機請依試題資訊內標註為準，如「可以」使用，廠牌、功能不拘，唯不得攜帶具有通訊、記憶或收發等功能或其他有礙試場安寧、考試公平之各類器材、物品（如鬧鈴、行動電話、電子字典等）入場。
- 試題及答案卷（卡）請務必繳回，未繳回者該科成績以零分計算。
- 試題採雙面列印，考生應注意試題頁數確實作答。
- 違規者依本校招生考試試場規則及違規處理辦法處理。

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題號：403002

※本科目依簡章規定「不可以」使用計算機(問答申論題)

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1. (15 pts) Wang is a college student with the utility function, $u(x, y) = xy$. Wang receives a monthly support of \$100, i.e. $m = 100$, from a scholarship which is the sole income source. The price vector of goods, (p_x, p_y) , is $(2, 4)$ initially.
 - a) (5 pts) What is the optimal consumption bundle for Wang?
 - b) (10 pts) The price vector of goods increased recently, from $(2, 4)$ to $(2.5, 7.2)$. What is the minimum additional income subsidy required per month to maintain Wang's utility level as before?
2. (20 pts) An individual has the expected utility function $u(w) = \sqrt{w}$ where w is initial wealth. Let lottery L offer a payoff of 16 with probability $\frac{1}{2}$ and a payoff of 9 with probability $\frac{1}{2}$.
 - a) (5 pts) What is the expected value of the lottery?
 - b) (10 pts) If the individual owns only the lottery, what is the minimum price, \underline{p} , that he would sell it for?
 - c) (5 pts) If he does not own the lottery but $w = 100$ initially, what is the maximum price, \bar{p} , he would be willing to pay for it? (*Hint*: In this case, simply write down the equation involving \bar{p} .)
3. (25 pts) The production of x creates negative externalities for a community, which cost $e(x)$. The private cost function in the production of x is $c_x(x)$ with $c'_x(x) > 0$. Denote the other production activity as y , which causes no externalities. The cost function in the production of y is $c_y(y)$. Assume that both x and y are sold at competitive prices, p_x and p_y .
 - a) (10 pts) Write down the condition of Pareto efficiency.
 - b) (10 pts) How does market mechanism solve this issue in terms of adjustments in property rights?
 - c) (5 pts) Use this example to discuss the essence of the Coase theorem.
4. (10 pts) Find the equilibrium of the extensive-form game below.

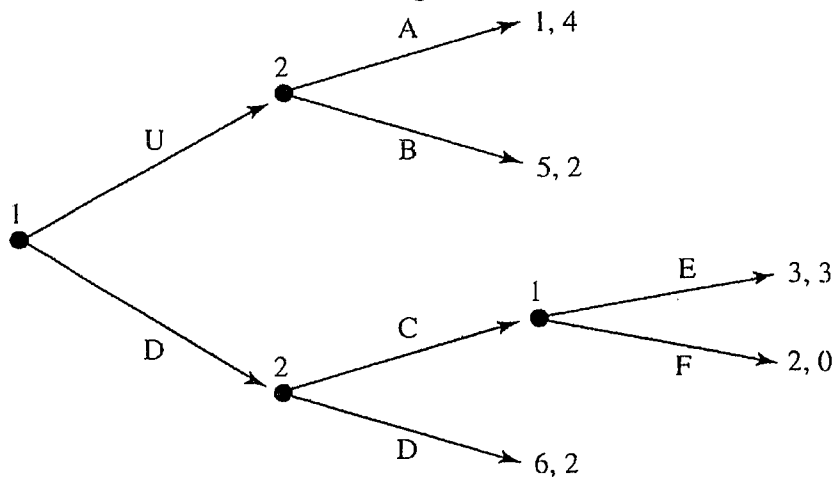


Figure 1

5. (10 pts) Explain the following terms and give an example for each: (2 pts for each) transaction cost, opportunity cost, sunk cost, reservation price, and shadow price.
6. (10 pts) A firm prefers price with fluctuations to constant price. True or false, and comment please. (For Questions 6 and 7 below, answers without comments will score zero.)
7. (10 pts) Second-degree Price Discrimination is an application of hidden action or moral hazard issues. True or false, and comment please.