

※ 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。

注意：(1)請依題號順序作答

(2)作答時不需重抄題目

(25分) 1. 計算題

Heartland Agriproducts, Inc., produces agricultural products that were historically marketed through various independent distributors. Recently, Heartland made a strategic decision to integrate the production and marketing of its products. As a first step in this direction, Heartland acquired Nicholas Distribution, Inc. Nicholas previously was the sole distributor of Heartland's "Blusilo" brand grain-storage containers.

Using regional sales data for a recent year, Heartland estimates Blusilo's demand as:

$$P = \$20,000 - \$0.1Q.$$

The accounting department estimates Heartland's total production costs, TC_P , and Nicholas' total distribution costs, TC_D , for Blusilo as:

$$TC_P = \$4,000,000 + \$12,000Q + \$0.3Q^2,$$

$$TC_D = \$1,000,000 + \$4,000Q.$$

- A. Given the preceding data, calculate Heartland's profit-maximizing price and output levels. Calculate Heartland's optimum profit.
- B. If Heartland operates the Nicholas Distribution Division as an independent profit center, what price/output relation would describe Nicholas' "demand" for Blusilo?

(25分) 2. 繪圖說明及數學推導證明題

(1)何謂消費者剩餘？請繪圖說明之。

(2)何謂生產者剩餘？請繪圖說明之。

(3)請繪圖說明為何獨占與完全競爭相較下會造成社會福利較多的無謂損失(deadweight loss)？

(4)請以數學推導證明： $MR = P[1 - \frac{1}{E^D}]$

令 E^D ：需求之價格彈性(已取絕對值)

MR：邊際收益

P：價格

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(5)請以數學推導證明：當一個利潤極大化的獨占廠商面對兩個擁有不同需求彈性的市場，要使總利潤達最大，便需由該廠商對應需求彈性絕對值較小的市場 1 訂定較高的價格，而對需求彈性絕對值較高的市場 2 訂定較低的價格，如此便能使該獨占廠商在這兩個市場的總利潤達到極大。

(25 分) 3. 時事分析題

(1)最近這一年來，國際油價的整體走勢為何？請說明這種走勢的主要原因何在。

(2)請問油價如果重跌至低於 20 美金/桶，你覺得這將會對全球及台灣的重要總體經濟變數產生甚麼影響？原因何在？哪些行業會因此而受到傷害？哪些行業又會因此而獲利？請說明之。

(25 分) 4. 請解釋下列名詞

- (a) balanced budget multiplier
- (b) discretionary fiscal policy
- (c) green GDP
- (d) marginal propensity to consume(MPC)
- (e) money multiplier
- (f) opportunity cost
- (g) pegged exchange rate system
- (h) pure flexible exchange rate system
- (i) The Quantity Theory of Money
- (j) Wealth of Nations