

淡江大學八十九學年度日間部轉學生招生考試試題

系別：財務金融學系三年級

科目：經濟學(總經與個經)

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88 學年度日間部轉學生招生考試
財務金融學系三年級

經濟學 (總經與個經)

1. A monopolist's total cost (TC) and total revenue (TR) functions are assumed to be
- $$TC = 4Q,$$
- $$TR = 20Q - 2Q^2,$$
- respectively, where Q denotes the output quantity. The government is going to impose a tax of t dollars per unit quantity on the commodity produced by the firm. The government wants to maximize $T=tQ$, the total revenue it realizes from the tax. However, the government does not know what tax rate t will accomplish that end. Find the tax rate t that maximizes total tax revenue T for the government and the equilibrium quantity Q for which the firm's profit is maximized after taxation. (20 points)

2. Find the Marshallian (ordinary) demand functions for the following utility functions:
- (a) $U(x,y) = \min [\alpha x, \beta y]$, $\alpha, \beta > 0$.
- (b) $U(x,y) = A(x-\alpha)^a(y-\beta)^b$, where A, a, b, α and β are parameters. The prices of the two goods, x and y , and income are denoted by P_x, P_y , and I , respectively. (20 points)

3. Robin Crusoe lives for two periods and his diet consists solely of fish. His utility function is given by $U = C_0 C_1$, where C_0 denotes consumption of fish in period 0 and C_1 denotes consumption of fish in period 1. The current stock of fish is 300. The growth rate of the fish is 100% (i.e., foregoing consumption of one fish in period 0 means Robin can consume 2 fish in period 1.)
- (a) Determine Robin Crusoe's optimal production/consumption pattern. (10 points)

Suppose a capital market opens, which allows Robin to borrow or lend with the April Crusoe on the other islands. The borrowing and lending rate is $r = 0.2$.

- (b) What is the present value of Robin's wealth assuming he uses the optimal production plan? (5 points)
- (c) Determine Robin's optimal consumption pattern. (5 points)

P. 1

本試題雙面印製

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P.2

4. 試以 IS 和 LM 兩曲線，分析下列政策改變對均衡所得及利率的影響方向。

(15 分)

- (1) 在公開市場買入政府債券。
- (2) 降低所得稅稅率。
- (3) 信用卡發卡銀行降低(或免)年費，大量推廣信用卡的使用。

5. 假設有一總體經濟模型：

$$\text{IS: } y = c(y) + I + G,$$

$$\text{LM: } \frac{\bar{M}}{P} = L(i) + ky,$$

$$\text{生產函數: } y = F(N),$$

$$\text{勞動需求函數: } \frac{\bar{W}}{P} = F_N(N).$$

式中 y, P, N, W, i 及 M 分別代表所得、物價水準、就業量、名目工資率、利率和貨幣供給量。 $F_N(N)$ 為生產函數對 N 的一階導數。假設此經濟體名目工資率完全僵固，致勞動市場成為由需求面決定(demand-determined)，則貨幣供給 (M) 增加後，對內生變數 y, P 及 i 的影響為何？(25 分)