1)(5%) a)On a given evening J.P. enjoys the consumption of cigars (C) and brandy (B) according to the function $U(C,B) = 20C - C^2 + 18B - 3B^2$. How many cigars and glasses of brandy does he consume during an evening ? (Cost is no object to J.P.)

b)(5%)Lately, however, J.P. has been advised by his doctors that he should limit the sum of brandy and cigars consumed to 5. How many glasses of brandy and cigars will he consume under these circumstances?

2) A perfectly competitive market has 1000 firms. In the very short run, each of the firms has a fixed supply of 100 units. The market demand is given by $Q = 160000 - 10000P$.

a)(5%)Calculate the equilibrium price in the very short run.

b)(5%)Calculate the demand schedule facing any one firm in this industry.

c)(5%)Calculate what the equilibrium price would be if one of the sellers decided to sell nothing or if one seller decided to sell 200 units.

d)(5%) At the original equilibrium point, calculate the elasticity of the industry demand curve and the elasticity of the demand curve facing any one seller.

3) Suppose that a monopoly market has a demand function in which quantity demanded depends not only on market price (P) but also on the amount of advertising the firm does (A, measured in dollars). The specific form of this function is $Q = (20 - P)(1 + 0.1A - 0.01A^2)$. The monopolistic firm's cost function is given by $TC = 10Q + 15 + A$.

a)(10%) Suppose that there is no advertising $(A = 0)$. What output will the profit-maximizing firm choose? What market price will this yield? What will be the monopoly's profits?

b)(10%) Now let the firm also choose its optimal level of advertising expenditure. In this situation, what output level will be chosen? What price will this yield? What will the level of advertising be? What are the firm's profits in this case? Hint: Part(b) can be worked out most easily by assuming that the monopoly chooses the profit-maximizing price rather than quantity.

淡江大學九十四學年度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(個體與總體)

准帶項目請打「V」

| V | 簡單型計算機 |

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4) Let the equilibrium conditions for national income be

$$S(Y) + T_0 + M_0 = I(Y) + G_0 + X_0 \quad , \text{where } (\frac{dS}{dY}, \frac{dI}{dY} > 0; \frac{dS}{dY} > \frac{dI}{dY})$$

a) (10%) Identify the endogenous and exogenous variables.

b) (10%) Find $\dfrac{\partial \overline{Y}}{\partial T_0}$ and discuss its economic implications.

5) (10%) Interpret the Ando-Modigliani Approach : The Life-Cycle Hypothesis

6) Consider the following national-income model

IS curve: $Y = C(Y - t(Y)) + I(i) + G_0 \quad (0 < C' < 1; \ I' < 0)$

LM curve: $\dfrac{\overline{M}}{P_0} = m = l(i) + k(Y) \, (l' < 0, \ k' > 0 \ )$.

a)(10%) Find the multiplier for changes in $\overline{M}$

b)(10%)Find the multiplier for changes in G_0