734001G

Part I: Choice: Choose the BEST Answer. Three Points for Each Question.

1. *United Steel Co.* faces the following demand curve for his product: P = 100 - 2Q. The cost function is estimated to be $C = 0.5Q^2 + 10$. Which of the following answer is correct?
   a. The profit-maximizing output level is 15 units
   b. The optimal price charged is $60
   c. The optimal profit is $900
   d. None of the above.

2. Following question 1, if the government decides to levy tax on steel industry, and is considering two alternatives: lump-sum tax or profit tax. A lump-sum tax system will tax firms a fixed amount of money each period; while the amount of tax in the profit tax system is proportional to firms' profit level. How will the optimal level of output (Q*) be changed under different tax systems?
   a. Q* decreases under both lump-sum and profit tax systems.
   b. Q* decreases in profit tax system, but not in lump-sum tax system.
   c. Q* remains the same under both lump-sum and profit tax systems.
   d. Q* decreases in lump-sum tax system, but not in profit tax system.

3. About the long-run and short-run cost curves, which statement is true?
   a. The long-run cost curve is the horizontal sum of the short-run cost curves.
   b. The long-run cost curve is always more elastic than the short-run ones.
   c. The short-run cost curve is the average cost curve above the minimum point of average variable cost curve.
   d. It is possible for the long-run cost to be greater than the short-run cost.

4. The long-run equilibrium price level in monopolistic competition is usually higher than that in perfect competitive markets. It is mainly due to
   a. product differentiation.
   b. smaller number of producers.
   c. smaller market size.
   d. interaction between competitors.

(背面仍有題目,請繼續作答)

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5. Assuming that flour is the main input in the production of bread, the imposition of a minimum price for flour (i.e., a price above the competitive equilibrium level) is likely to result in which of the following change in the markets?

   a. The demand for flour increases.

   b. The supply for bread increases.

   c. The demand for bread decreases.

   d. The demand of flour remains the same.

6. For efficient production firms must choose its inputs combination so that

   a. The marginal products of all inputs are the same.

   b. The marginal rates of technological substitution of all inputs are the same.

   c. The dollar worth of marginal products of all inputs is the same.

   d. Marginal revenue is equal to marginal cost.

7. Which of the following statements are true

   a. If income rises, with no change in the relative prices of goods, a rational consumer will increase the consumption of all the goods he had previously consumed by the same proportion.

   b. Rational behavior is incompatible with the possibility that all goods consumed by a given consumer would be inferior goods.

   c. Rational investors should never make mistakes in the markets.

   d. None of the above.

8. Which one of the following factor will cause the demand curve of coffee, a normal good, to shift to the left?

   a. The increase in coffee prices.

   b. The decrease in disposablen income.

   c. The increase in the price of tea, a substitute of coffee.

   d. A hurricane that swept most of the coffee trees in Columbia.

Part II   Your grade on the following questions depends on the quality of your reasoning, not conclusions. Please clearly show how the answers are derived.

1. (6 pts) The old people who depend on government security payment as the major income source are usually hurt by high rate of inflation. In order to compensate for their loss, two proposals are raised. Proposal 1 argues that the old people should be compensated to the level that they are able to maintain the original consumption level; while proposal 2 suggests that the old should be compensated to the level that they are able to maintain the original utility level. Which proposal benefits more to the old? Use utility graph to back up your answer.

2. (15 pts) Suppose there is rationing of goods. A person consuming only two goods, X and Y, receives $200 and 56 coupons per week. The money prices of the two goods are $5 each, but a unit of X costs 1 coupon whereas a unit of Y costs 2 coupons. To obtain each good, the consumer must pay both the money and the coupons prices

   a. Draw the consumer's outerboundary of consumption opportunities. If he spend all the income and coupons at this command, what would be the quantities of X and Y he would have consumed?

   b. Initially there is no trade in coupons. The person then chooses to consume 30 units of X and 10 units of Y per week. If the government decides to increase the number of coupons distributed to individuals without changing the coupons' prices of the goods, how would our consumer change his consumption pattern?

   c. If both money income and the allotment of coupons remain at their initial level but the government decides to allow a trade in coupons among different consumers, would our consumer be willing to sell or buy coupons for money? Would his welfare, then, increase, decrease or remain constant. State your answer rigorously.

3. (5 pts) Currently there is a great debate about the "New" versus "Old" Economy.
   a. What is the "New Economy" the press is referring to?
   b. In the 1920s, the introduction of electricity into industrial production brought up huge boost on plant productivity. Most people believed then that the world was entering a new era, just like the current widely holding belief that the New Economy is going to lead us into another world. The consequence of the productivity boost in 1920s was consistent price decline caused by huge excess supply, which is one of the important factors contributing to the later Great Depression. In your opinion, is the New Economy just a bubble that exists only for a while, or it is going to change the way we live this world? Please defend your answer rigorously.

Part III:　　　　總體經濟學部份

A1. Consider an economy characterized by the following relationships:

Consumption	$C = 20 + 0.8(Y - T)$
Investment	$I = 620 - 4000r$　(r=interest rate)
Government Expenditure	$G_o = 400$
Taxes	$T = 0.25Y - 100$
Money demand	$M^d = P(25 + 0.2Y - 1000r)$
Money Supply	$M^s = 345$
Nominal wage	$W_o = 10$
Production Function	$Y = 200\sqrt{n}$

   (a) Derive the IS and LM equations and demonstrate that each has the "proper" slope. (5分)
   (b) Derive the aggregate demand equation and demonstrate that it has the "proper" slope. (5分)
   (c) Derive the aggregate supply equation and demonstrate that it has the "proper" slope. (5分)

A2. Governments have a variety of means of raising revenue. For examples, the Central Bank can raise seignorage revenues, S, through inflation (π). The Treasury can raise income tax revenue, T, by imposing an income tax rate, t. Total government revenue, R, therefore, is $R = S + T$. Both inflation and income taxes affect income. Assume that the equation for actual income is

$$Y = X - ct + g\pi$$

where X is potential income.
   (a) Seignorage is the product of the inflation rate and the level of real balances (M/P). Assume that

$$M/P = -a\pi + bY,$$

so that

$$S = \pi(-a\pi + bY).$$

   Taking into account the effect of inflation on income, find the level of inflation that maximizes seignorage revenue. (5分)
   (b) Income tax revenue equals the tax rate times the level of income as follows.

$$T = tY = t(X - ct + g\pi)$$

   Given the inflation rate, find the tax rate that maximizes income tax revenues. (5分)
   (c) If the Cental Bank and the Treasury act as a single decision-maker and jointly set the inflation rate and the tax rate in order to maximize R, would they choose the same rates as they would when acting independently? Are π and t higher or lower when there is cooperation between the two? Is R higher or lower when there is cooperation? (5分)

A3. What are the policy debates between monetarists and New Keynesians? Please discuss the economic thought behind the two schools, the contents of their debates, and your comment. (10分)

A4. (a) Please briefly describe the distinction between short-run and long-run Philips curves. (5分)
    (b) Please briefly describe the distinction between short-run and long-run aggregate supply curves. (5分)