

本試題是否可以使用計算機：可使用，不可使用（請命題老師勾選）

1. The market demand schedule for cassettes is:

| Price (dollars per cassette) | Quantity demanded (thousands of cassettes per week) |
|---------------------------------|--|
| 3.65 | 500 |
| 5.20 | 450 |
| 6.80 | 400 |
| 8.40 | 350 |
| 10.00 | 300 |
| 11.60 | 250 |
| 13.20 | 200 |
| 14.80 | 150 |

The market is perfectly competitive, and each firm has the following cost structure:

| Output (cassettes per week) | Marginal cost (dollars per additional cassette) | Average variable cost (dollars per cassette) | Average total cost |
|-----------------------------------|---|--|-----------------------|
| 150 | 6.00 | 8.80 | 15.47 |
| 200 | 4.60 | 7.80 | 12.80 |
| 250 | 7.00 | 7.00 | 11.00 |
| 300 | 7.65 | 7.10 | 10.43 |
| 350 | 8.40 | 7.20 | 10.06 |
| 400 | 10.00 | 7.50 | 10.00 |
| 450 | 12.40 | 8.00 | 10.22 |
| 500 | 20.70 | 9.00 | 11.00 |

There are 1,000 firms in the industry.

- What is the market price? 【3%】
- What is the industry's output? 【3%】
- What is the output produced by each firm? 【3%】
- What is the economic profit made by each firm? 【3%】
- Do firms enter or exit the industry? 【3%】
- What is the number of firms in the long run? 【5%】

（背面仍有題目，請繼續作答）

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2. Suppose the government is trying to decide how many miles of a very scenic river it should preserve. There are 100 people in the community, each of whom, has an identical inverse demand function given by $P = 10 - q$, where q is the number of miles preserved and P is the per-mile price he or she is willing to pay for q miles of preserved river. (a) If the marginal cost of preservation is \$500 per mile, how many miles would be preserved in an efficient allocation? 【5%】 (b) How large are the net benefits? 【5%】

3. The price-cost margin (sometimes called "markup") m for an imperfectly competitive firm is defined as $m = \frac{P - MC}{P}$ (P : price, MC : marginal cost). Find the relationship between the elasticity of the firm's demand curve ε and the profit-maximizing m . 【5%】

4. Peter has the following utility function:

$U(X, Y) = \sqrt{X} + \sqrt{Y}$ where X is his consumption of candy bars, with price $P_x = \$1$, and Y is his consumption of espressos, with $P_y = \$3$. (a) Derive Peter's demand function for candy bars and espresso. 【5%】 (b) Assume that his income $I = \$100$. How many candy bars and how many espressos will Peter consume? 【5%】 (c) What is the marginal utility of income? 【5%】

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5. Compare the new classical and monetarist positions concerning the effectiveness of aggregate demand management policy to stabilize output. 【15%】
6. (1) Compare the real business cycle theorists' view of the cause of fluctuations of output and employment with the view of new classical economists. (2) Explain the real business cycle theorists' view on the proper conduct of monetary and fiscal policy. 【20%】
7. Suppose that the level of the required reserve ratio on checkable deposits was 0.10. Also assume that the public's holdings of currency were constant, as were banks' desired excess reserves. Analyze the effects on the money supply of a \$2,000 open-market sale of securities by the central bank. In your answer, explain the role of the banking system in adjusting to this monetary policy action. 【9%】
8. Suppose an economy described by the Solow model is in a steady state with population growth n of 1.0% per year and technological progress rate 2.0% per year. Suppose further that the capital share of output is 0.3. If you used the growth-accounting equation to divide output growth into three sources, namely, capital, labor, and total factor productivity, how much would you attribute to each source? 【6%】