國立臺北大學114學年度碩士班一般入學考試試題

系（所）組別：企業管理學系甲組

科　　　目：經濟學

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I. Multiple Choice Questions (Please choose **the most appropriate** option for each question. 3 points each, 30 points in total)

1. A bubble tea shop in Taipei analyzes its operations and finds that when producing 500 cups per day with marginal revenue is NT$60, marginal cost NT$45, and average variable cost NT$50. Which one of the following statements is correct?
   (A) The shop should shut down immediately as it is operating below efficient scale.
   (B) The shop should continue operating but should increase its daily production of bubble tea.
   (C) The shop should maintain its current production level as it's covering all its fixed costs.
   (D) The shop should reduce its daily production to minimize losses.

2. A freelance graphic designer earns $12,000 in revenue monthly from running her own studio. Her explicit costs including software subscriptions, utilities, and assistant's salary total $5,000 per month. She works from her home office, so she pays no rent. She could work for a design agency and earn $8,000 per month. Her business profit and economic profit are:
   (A) $7,000, -$1,000　(B) $12,000, $7,000　(C) $7,000, $7,000　(D) $5,000, -$1,000

3. The CEO of Netflix, Ted Sarandos, announced during a shareholder meeting in December 2023 that the company plans to implement further subscription price increases in 2024. Despite previous price hikes, Netflix reported higher revenue and subscriber growth, leading the company to revise its annual revenue forecast upward for the third consecutive quarter. Based on this information, the price elasticity of demand that Netflix faces is most likely:
   (A) less than 1　(B) greater than 1　(C) equal to 1　(D) None of the above

4. NVIDIA's CUDA platform has these characteristics:
   - Proprietary software development toolkit
   - Over 3 million developers using the platform
   - 15+ years of development and optimization
   - Used in 14 of top 15 AI software frameworks
   - Thousands of pre-built AI applications
   - Optimized algorithms and libraries

   From a microeconomic perspective, CUDA's market dominance is primarily due to:
   (A) Energy efficiency in its AI applications　(B) Consumer lock-in effects
   (C) Economies of scale in production　(D) Patent protection advantages

5. In Taiwan's bubble tea market, research shows the following monthly demand function for a specific bubble tea shop chain:
   $P = 100 - Q + 0.4P_c + 0.2I$
   Where:
   - P is the price of bubble tea (in NT$)
   - Q is the quantity of bubble tea sold (in thousands)
   - Pc is the price of coffee (in NT$)
   - I is the average household income (in thousand NT$)

   Which of the following statements is FALSE about this bubble tea chain's market?
   (A) Coffee is a complement for bubble tea in this market.
   (B) When coffee prices rise, bubble tea demand increases.
   (C) When household income increases, people buy more bubble tea.
   (D) Bubble tea is considered as normal good in this market.

6. A startup with 70% success probability (industry average 30%) should signal its superior quality as a potential investment target through:
(A) Extensive marketing campaigns
(B) Maximum initial funding raise
(C) Lower founder salaries and personal investment
(D) Minimum viable product only

7. If the certainty equivalent for a gamble is \$80, and the expected monetary value of the gamble is \$100, which of the following must be true?
(A) The individual is risk-neutral. (B) The individual is risk-averse.
(C) The individual is risk-seeking. (D) The individual's utility function is $U = W$

8. A monopolist faces a linear, downward-sloping demand curve given by $P=40-3Q$. What is the marginal revenue from selling the **5th unit** of output?
(A) \$10 (B) \$15 (C) \$25 (D) \$0

9. In a game where two firms are competing in a market, each firm can choose either "High Price" or "Low Price."
- If both choose High Price, they each earn \$500.
- If one chooses Low Price while the other chooses High Price, the one with Low Price earns \$800, and the other earns \$200.
- If both choose Low Price, they each earn \$300.

What is the Nash Equilibrium?
(A) One firm chooses High Price, and the other chooses Low Price. (B) There is no Nash Equilibrium in this game.
(C) Both firms choose High Price. (D) Both firms choose Low Price.

10. In a country where unemployment benefits are very generous, which of the following is most likely to occur?
(A) Positive externality, because unemployed workers receiving benefits might improve their skills and contribute more to the economy when they re-enter the workforce.
(B) The unemployment rate will decrease.
(C) Pecuniary externalities will cause unemployment benefits to rise.
(D) Moral hazard may reduce job search efforts among unemployed workers.

II. Multiple Choice Question **with Multiple Answers** (Select **ALL answers** that apply for each question. Each question may have MORE THAN ONE correct answers. 5 points each, 20 points in total)

Explanation:
All correct choices selected: 5 points
One incorrect choice: 3 points
Two or more incorrect choices: 0 points

Example: Which of the following are primary colors? (Select ALL that apply)
(A) Red (B) Green (C) Blue (D) Purple (E) Orange

Correct answers are (A), (B), and (C).
- If you select a, b, c → 5 points
- If you select a, c → 3 points
- If you select a, b, c, d → 3 points
- If you select a, c, d → 0 points
- If you select a, b, c, d, e → 0 points

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1. Bubble tea and sodas are substitutes in Taiwan's beverage market. If there is a severe tapioca pearl shortage due to supply chain disruptions, which of the following effects would occur? (Select ALL that apply)
(A) Consumer surplus in the bubble tea market would decrease because of higher prices and reduced consumption.
(B) Producer surplus in the soda market would increase as consumers switch to this alternative.
(C) Consumer surplus in the bubble tea market would increase as shops offer more diverse toppings.
(D) Producer surplus in the bubble tea market would decrease due to higher input costs.
(E) Consumer surplus in the soda market would increase as more varieties become available to meet higher demand.

2. Which characteristics are shared by both monopolistic competition and monopoly? (Select ALL that apply)
(A) Downward-sloping demand curve
(B) Price exceeds marginal cost at the profit-maximizing output
(C) Zero economic profits in the long run
(D) Freedom to set prices
(E) Single seller in the market

3. A large convenience store chain and many small independent stores sell milk tea in Taiwan. Market research shows the daily demand function is $Q = 85 - P$ (in hundreds of cups), where P is the price in NT$. The chain's cost function is $C(Q) = 10Q$, while small stores are price-takers with a *combined* supply function of $Q = 5 + P$. (Hint: The market consists of the convenience store chain **and** other smaller stores that sells exactly the same milk tea.)
Which of the following statements are correct? (Select ALL that apply)
(A) The chain's profit-maximizing output is 45 hundred cups per day
(B) The market equilibrium price is NT$50
(C) In equilibrium, the chain's marginal revenue is 10
(D) Small stores collectively sell 30 hundred cups per day
(E) The total market quantity is 45 hundred cups per day

4. Alex spends all of her weekly income ($10/week) on coffees and bubble teas. Alex currently buys 2 coffees at $3 each and 1 bubble tea at $4 each. Next week, the price of coffee is expected to drop to $2, and the price of bubble tea is expected to rise to $6.
Which of the following statements best reflects Alex's preferences and the changes Alex might make in response to the price changes? (Select ALL that apply)
(A) The substitution effect will lead Alex to buy more coffees and fewer bubble teas because coffees are relatively cheaper.
(B) Alex can still afford her original bundle of coffees and bubble teas under the new price combination.
(C) The higher price of bubble teas may lead Alex to reduce her consumption of bubble teas, even if they value bubble teas more than coffees.
(D) If Alex values coffees significantly more than bubble teas, the new price combination is likely to be preferred.
(E) Alex's purchasing power is unaffected by the price changes because her weekly income remains the same.

III. 選擇題（3 points each, 30 points in total）

1. When the inflation rate ends up being lower than expected,
(A) everyone benefits because money is cheaper
(B) everyone benefits because prices do not increase
(C) lenders of fixed-rate mortgages generally benefit because they will make higher profits than they had calculated
(D) borrowers with fixed-rate loans will benefit because their purchasing power will not decline as much
(E) no one benefits because everyone made financial calculations based on the projected interest rate

2. Given the accelerationist Phillips curve $\triangle\pi = -0.3\ (U - 6) + \rho$, suppose that inflation (π) in the preceding period was 3 percent, unemployment (U) is 6 percent, and there is a price shock (ρ) of 2 percent. The current inflation rate is ________.
(A) 3 percent (B) 0.2 percent (C) 5 percent (D) 1 percent (E) none of the above

3. Why do negative supply shocks present such a difficulty for the Federal Reserve?
(A) the Fed can choose to fight the rising price level, but this will result in lower unemployment.
(B) the Fed can choose to fight the rising unemployment, but this will result in an even lower price level.
(C) the Fed can choose to fight the falling unemployment, but this will result in an even higher price level.
(D) the Fed can choose to fight the rising unemployment, but this will result in an even higher price level.
(E) the Fed can choose to fight the rising unemployment, but this will result in higher taxes.

4. If the actual interest rate is below the equilibrium interest rate, the
(A) Fed must intervene in financial markets to restore the interest rate to its equilibrium value
(B) price of bonds will increase
(C) price of bonds will decrease
(D) money supply will increase until the interest rate rises
(E) money supply will decrease until the interest rate rises

5. If the required reserve ratio is 0.2, and a bank has $100 million in demand deposits and $40 million in property and buildings, it must hold reserves of at least
(A) $28 million (B) $20 million (C) $26 million (D) $12 million (E) $8 million.

6. If the Federal Reserve wishes to increase the money supply by $30,000 and the reserve requirement ratio is 0.4, how big a purchase of bonds will the Fed need to make?
(A) $75,000 (B) $12,000 (C) $1,000 (D) $30,000 (E) $3,000

7. Which of the following would be most likely to increase the quantity of money demanded?
(A) A decrease in real income
(B) An increase in real income
(C) A decrease in the interest rate
(D) An increase in the cost of converting other assets into money
(E) An increase in the price level

8. In the short run, an increase in the money supply will
(A) decrease the interest rate, increase real GDP, and decrease the price level
(B) increase the interest rate, decrease real GDP, and decrease the price level
(C) result in decreases in the interest rate and real GDP, which are then followed by increases in the interest rate which offset some of the change in real GDP
(D) result in decreases in the interest rate and increases in real GDP, which are then followed by increases in the interest rate which offset some of the increase in real GDP
(E) result in an increase in the interest rate and a decrease in real GDP, which are then followed by decreases in the interest rate which offset some of the decrease in real GDP

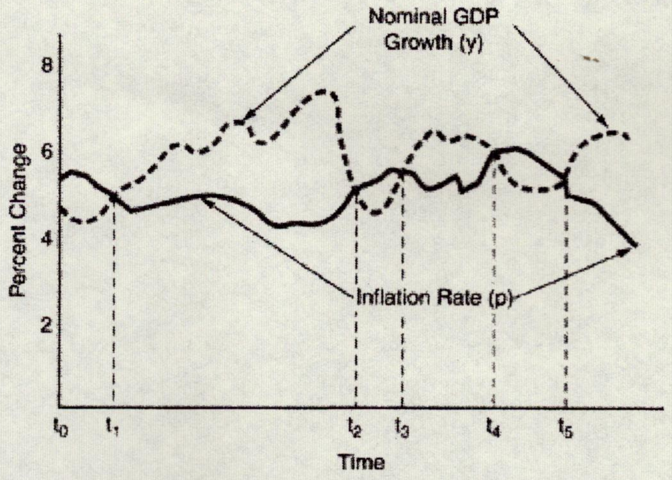

Figure 1

9. Employing **Figure 1** above in the time periods t_0 to t_1, and t_4 to t_5 real GNP is ________; from t_1 to t_2, t_3 to t_4, and beyond t_5 real GNP is ________.
(A) decreasing; decreasing　(B)increasing; decreasing　(C)increasing; increasing　(D)decreasing; increasing

10. Suppose you reserve a hotel room in Madrid for $300 per night. When you check out, you are charged only $285 per night. Assuming that the price of the room in euros had not changed, and that the nominal exchange rate had been 0.8 (euros/$) when the reservation was made, the new nominal exchange rate is ________.
(A) 0.84　(B) 0.76　(C) 0.95　(D) 1.05

IV. 選擇題（4 points each, 20 points in total）

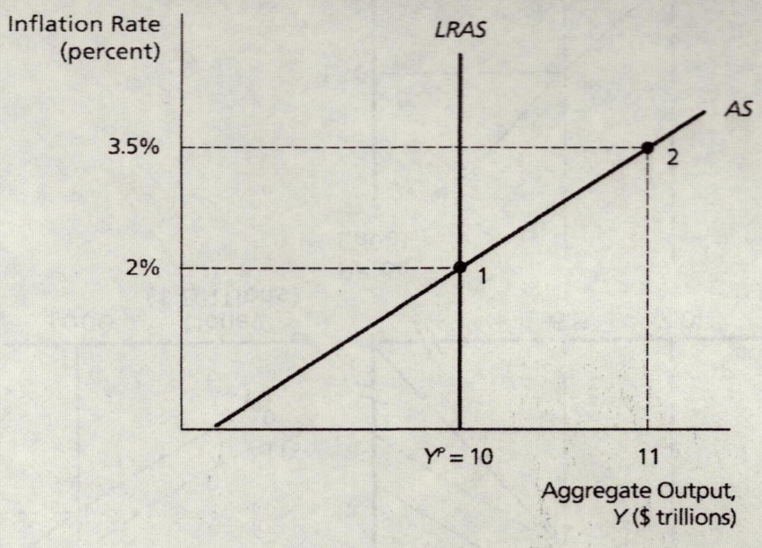

Figure 2

1. Based on the **Figure 2**, if the economy is at point 2, then (assuming no price shocks and no changes in actual and potential output) the inflation rate next period will be ________ percent.
(A) 5　(B) 3.5　(C) 4.5　(D) 4　(E) none of the above

2. If the price of used automobiles increased dramatically relative to all other prices, and the demand for all goods remained the same, which of the following would most likely occur?
(A) The GDP price index would decrease less than the CPI.
(B) Both the GDP price index and the CPI would decrease.
(C) The GDP price index would increase more than the CPI.
(D) The CPI would increase more than the GDP price index.
(E) Both the GDP price index and the CPI would increase by the same amount.

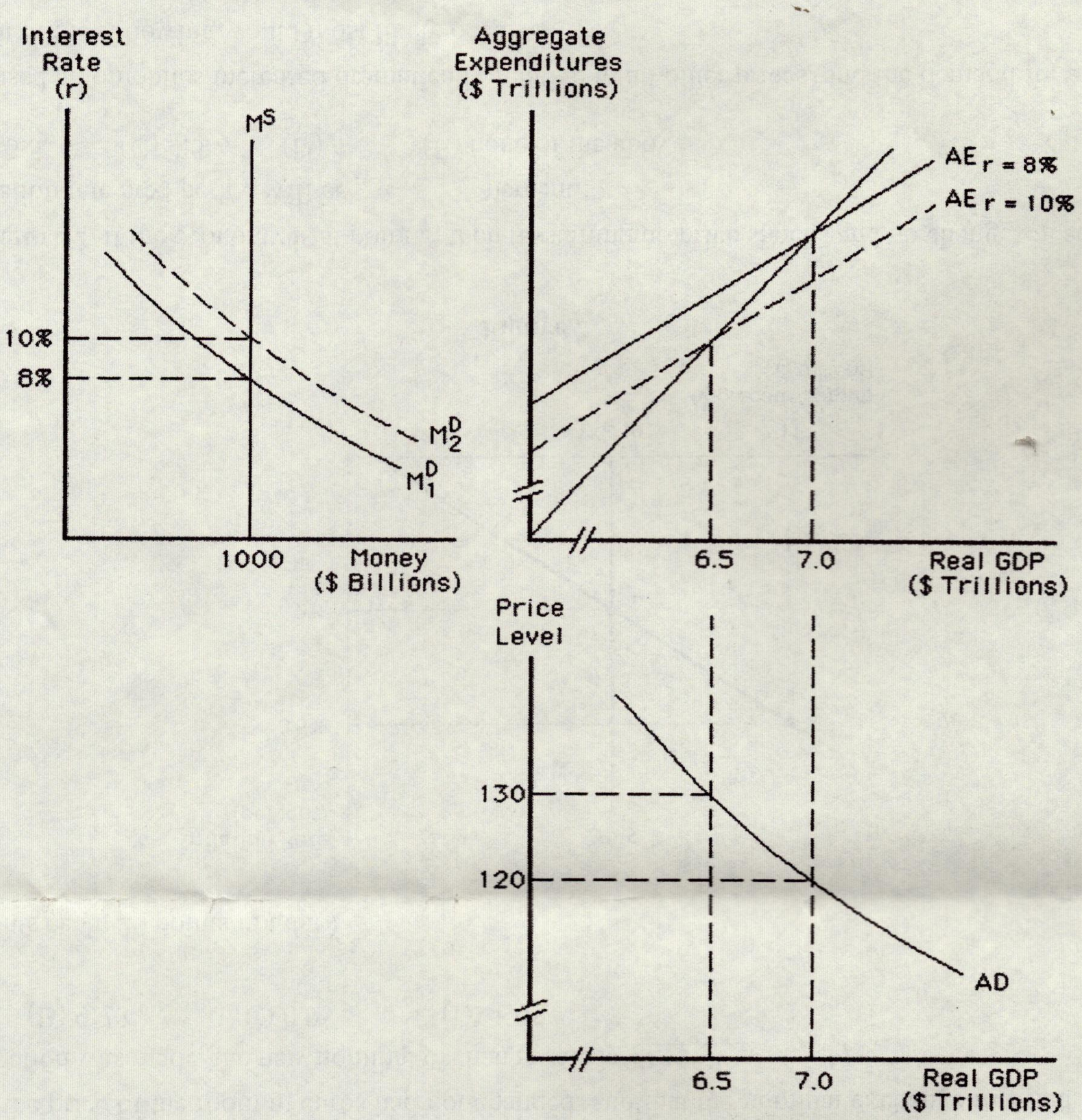

Figure 3

3. Refer to **Figure 3**. Assume the economy is in equilibrium at $7 trillion. If the changes in all three graphs were caused by the same event, what was that event?
   (A) An increase in nominal income
   (B) An increase in the price level
   (C) An increase in the interest rate
   (D) An increase in taxes
   (E) An increase in real income

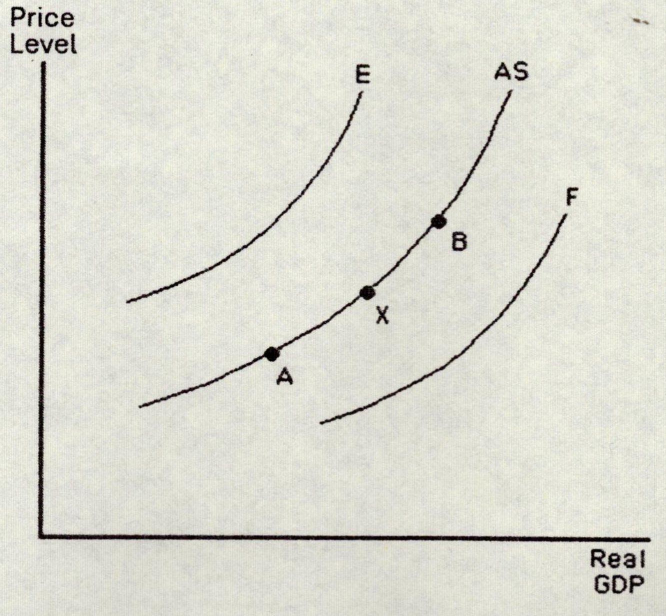

Figure 4

4. Refer to **Figure 4**. Assuming that the economy starts at point X, a decrease in world oil prices would
(A) move the economy to point A.
(B) move the economy to point B.
(C) shift the aggregate supply curve upward to curve E.
(D) shift the aggregate supply curve downward to curve F.
(E) have no impact since the model only shows the relationship between the overall price level and real GDP.

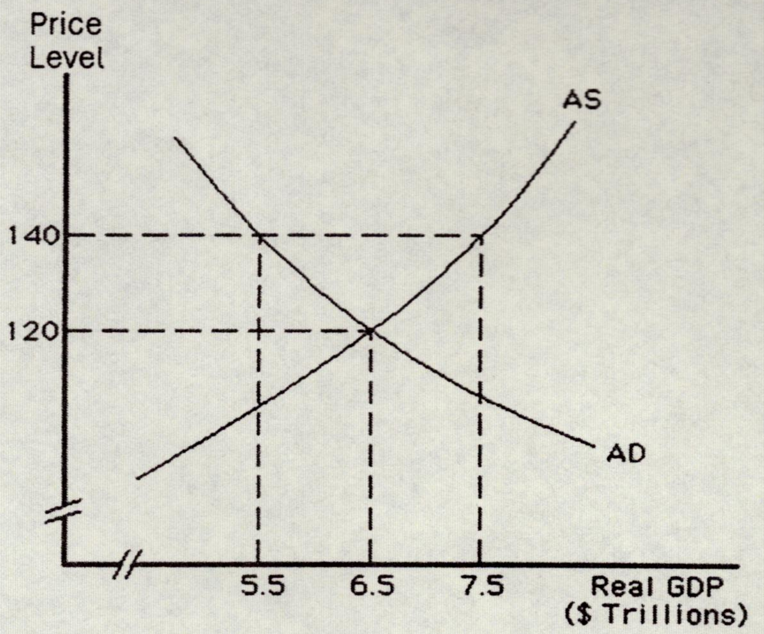

Figure 5

5. Refer to **Figure 5**. If the economy is currently at a price level of 120 and real GDP is $6.5 trillion, an increase in government purchases will, in the short run,
(A) shift the aggregate demand curve rightward, increasing both the price level and real GDP.
(B) shift the aggregate demand curve leftward, decreasing both the price level and real GDP.
(C) shift the aggregate supply curve upward, increasing the price level and decreasing real GDP.
(D) shift the aggregate supply curve downward, decreasing the price level and increasing real GDP.
(E) have no effect on aggregate demand because of crowding out.