

41112, 41212, 4122A, 41713, 41822, 41922, 4194C, 42112, 42122.

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Multiple Choice (1 point each)

Identify the letter of the choice that best completes the statement or answers the question.

1. Assume that the price elasticity of demand for good X is constant and equal to -0.5 , and the price elasticity of demand for good Y is constant and equal to -2 . Assume that goods X and Y have identical upward-sloping elastic supply curves. If a per-unit excise tax of the same amount is levied on good X and on good Y , which of the following would be true?

A. The percentage decrease in the quantity of good X demanded would be greater than the percentage decrease in the quantity of good Y demanded.

B. The tax share paid by consumers of good X would be relatively higher than that paid by consumers of good Y .

C. The tax share paid by consumers of good Y would be relatively higher than that paid by consumers of good X .

D. The tax share paid by sellers of good Y would be relatively lower than that paid by sellers of good X .

2. If the income elasticity of demand for good X is negative and the cross-price elasticity of demand between good X and good Y is negative, which of the following must be true of good X ?

A. X is a normal good and is a substitute for Y .

B. X is a normal good and is a complement to Y .

C. X is an inferior good and is a substitute for Y .

D. X is an inferior good and is a complement to Y .

3. If an industry ignores the external costs it generates in its production, which of the following will be true at the competitive market equilibrium output?

A. Price will be greater than the marginal social cost.

B. Price will be less than the marginal social cost.

C. Price will be equal to the marginal social cost.

D. Marginal private cost will be greater than the marginal social cost.

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註

一、作答於試題上者，不予計分。
二、試題請隨卷繳交。

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4. Karen works part-time at a local convenience store and earns \$10 per hour. She wants to spend next Saturday afternoon attending a music concert. The full price of a concert ticket is \$75, but Karen was able to get a discounted price of \$50 from a friend who purchased the ticket but has become unable to attend. If Karen took 4 hours off from her job to attend the concert, what was her opportunity cost of attending the concert?

- A. \$40
- B. \$50
- C. \$90
- D. \$125

5. Which of the following is true of the substitution effect of an increase in the price of a normal good?

- A. It works to offset the income effect.
- B. It works to reinforce the income effect.
- C. It is less than the income effect.
- D. It causes an increase in the quantity demanded of the good.

6. A firm employs unskilled and skilled labor in a cost-minimizing mix at its manufacturing plant. The marginal product of unskilled labor is considerably lower than skilled labor. The equilibrium wage of the unskilled labor is only NT\$90 per hour. The government passes a law that mandates a minimum wage of NT\$120 per hour. Equilibrium wages for skilled workers exceed this minimum wage and therefore are not affected by the new law. The firm will most likely respond to the imposition of the minimum wage law by:

- A. employing fewer skilled workers and allocate their salaries to unskilled workers.
- B. keeping the mix of unskilled and skilled workers the same.
- C. employing more unskilled workers at its plant.
- D. employing fewer unskilled workers at its plant.

7. The short-term shutdown point of production for a firm operating under perfect competition will most likely occur when:

- A. price is equal to average total cost.
- B. marginal revenue is equal to marginal cost.
- C. marginal revenue is less than average variable costs.
- D. price is less than the marginal cost.

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8. Which of the following might cause a monopoly to exist?

- I. Economies of scale
- II. A single firm owning a key resource
- III. A firm owning a patent on a product
- IV. A firm being a price taker
- V. Price discrimination
- A. I, II, and III only.
- B. II, III, and V only.
- C. I, II and IV only.
- D. II, III and V only.

9. Which of the following events could cause an increase in the production of labor?

- I. Office workers receive faster computers.
- II. Wages for textile workers rise.
- III. More useful tools are given to a construction crew working on a house.
- IV. The minimum wage law is enforced.
- V. Bank clerks take a training course.
- A. I and III only.
- B. I, III and V only.
- C. I, II, and IV only.
- D. II, IV, and V only.

10. Companies most likely have a well-defined supply function when the market structure is

- A. oligopoly.
- B. monopoly.
- C. perfect competition.
- D. monopolistic competition.

11. Suppose that a country produces only two goods, x and y . In year 2012, the price of x is $P_x = 5$ and the production level is $Q_x = 5$. The price and production level of y are $P_y = 5$ and $Q_y = 5$. In year 2015, they are $P_x = 10$, $Q_x = 2.5$, $P_y = 10$, and $Q_y = 2.5$. If the base year is 2012, how the nominal and real GDP change between 2012 and 2015.

- A. The nominal GDP does not change. The real GDP decreases.
- B. The nominal GDP increases. The real GDP increases.

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- C. The nominal GDP decreases. The real GDP decreases.
D. The nominal GDP does not change. The real GDP increases.
12. In the Keynesian model, the output is more sensitive to the change of money supply if
A. investment is more elastic to changes in interest rate.
B. the unemployment is high.
C. the country trades more with rest of the world.
D. the country has been operating on the production possibility frontier.
13. If the central bank purchases government bonds from the public,
A. supply of money increases.
B. interest rate increases.
C. the discount rate increases.
D. the price of bond decreases.
14. The natural rate of unemployment is the unemployment rate when the country
A. has zero growth rate.
B. has no inflation.
C. has only cyclical and structural unemployment.
D. operates on the production possibility frontier.
15. When the central bank increases the money supply, according to the short-run Philips curve, which of the following is true?
A. Both the unemployment rate and the inflation rate will decrease.
B. Both the unemployment rate and the inflation rate will not change.
C. The unemployment rate will decrease but the inflation rate will increase.
D. Both the unemployment rate and the inflation rate will increase.
16. Which of the following will decrease U.S. net capital outflow?
A. capital flight from the United States
B. the government budget deficit increases
C. the U.S. imposes import quotas
D. None of the above is correct.

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17. An economic contraction caused by a shift in aggregate demand remedies itself over time as the expected price level

- A. rises, shifting aggregate demand right.
- B. rises, shifting aggregate demand left.
- C. falls, shifting aggregate supply right.
- D. falls, shifting aggregate supply left.

18. The term *crowding-out effect* refers to

A. the reduction in aggregate supply that results when a monetary expansion causes the interest rate to decrease.

B. the reduction in aggregate demand that results when a monetary expansion causes the interest rate to decrease.

C. the reduction in aggregate demand that results when a fiscal expansion causes the interest rate to increase.

D. the reduction in aggregate demand that results when a decrease in government spending or an increase in taxes causes the interest rate to increase.

19. Given a nominal interest rate of 20 percent, in which case would you earn the highest after-tax real interest rate?

- A. Inflation is 5 percent; the tax rate on interest income is 20 percent.
- B. Inflation is 4 percent; the tax rate on interest income is 30 percent.
- C. Inflation is 3 percent; the tax rate on interest income is 40 percent.
- D. The after-tax real interest rate is the same for all of the above.

20. If output is above its natural rate, then according to sticky-wage theory

A. workers and firms will strike bargains for higher wages. This increase in wages shifts the short-run aggregate supply curve right.

B. workers and firms will strike bargains for higher wages. This increase in wages shifts the short-run aggregate supply curve left.

C. workers and firms will strike bargains for lower wages. This decrease in wages shifts the short-run aggregate supply curve right.

D. workers and firms will strike bargains for lower wages. This decrease in wages shifts the short-run aggregate supply curve left.

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Problems and Short-essay Questions

Please answer the following questions IN SEQUENCE. All questions may be answered in either Chinese or English.

1. Assume that sugar production in the U.S.A. was 15.6 billion pounds, and sugar consumption in the U.S.A. was 21.1 billion pounds in 1995. In the same year, price of sugar in the U.S.A. was 21.9 cents per pound, while the world price was 11.1 cents per pound.

a. (5 points) With a -0.3 price elasticity of demand, derive the demand function of the sugar in the U.S.A. in 1995. (Assume that the demand function of sugar is linear.)

b. (5 points) With a 1.5 price elasticity of supply, derive the supply function of the sugar in the U.S.A. in 1995. (Assume that the supply function of sugar is linear.)

c. (5 points) Compute the loss of consumer's surplus caused by the higher sugar price in the U.S.A.

d. (5 points) Compute the changes in producer's surplus caused by the higher sugar price in the U.S.A.

2. The processing of payroll for the workers of a major corporation can be done to varying degrees by clerks and computers. Suppose that we can represent the trade-offs between labor and capital by the following production function $Q = K^{3/4}L^{1/4}$. Q is measured in thousands of payment processed, K is measured in hours of processing time and L is measured in man-hours.

a. (5 points) Does the production function exhibit constant, increasing, or decreasing returns to scale? Please show your result with a simple demonstration or proof.

For the remainder of the question you may assume that the wage rate is NT\$160 per man-hour and the rental rate of capital is NT\$30 per hour.

b. (5 points) Given the prices of the inputs and the production function, find the compensated factor demands for labor and capital.

c. (5 points) What is the variable cost curve of the firm? If fixed costs are 100, then what is the total cost curve of the firm.

d. (5 points) Without calculating the derivative, are marginal costs constant, upward sloping, or downward sloping? Briefly explain your answer.

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3. Suppose in an economy, the autonomous consumption equals 100, the marginal propensity to consume equals 0.8, the net taxes are fixed at 100, the planned private-sector investment is fixed at 100, the government purchases are fixed at 100, and the net exports are fixed at 100. Answer the following questions.

- (10 points) What is the equilibrium output in this economy?
- (10 points) Suppose the government increases its expenditure to 200, which is financed by the fixed taxes. What is the equilibrium output in this economy?

4. In the summer of 1986 the *Economist* magazine conducted an extensive survey on the prices of Big Mac hamburgers at McDonald's restaurants throughout the world. Since then it has periodically updated its calculations. The following table reproduces the results of the *Economist's* January 2015 survey report with slight modification to make the calculation easier.

Country	Price of a Big Mac	Predicted Exchange Rate	Actual Exchange Rate
Taiwan	80 NTD	NTD/USD	32 NTD/USD
Japan	360 JPY	JPY/USD	120 JPY/USD
USA	4.8 USD	1 USD/USD	1 USD/USD

- (6 points) Suppose that purchasing power parity (PPP) holds. For Taiwan and Japan, compute the predicted exchange rate of local currency per U.S. dollar.
- (4 points) According to PPP, what is the predicted exchange rate between the Japanese Yen and the New Taiwan Dollar? What is the actual exchange rate?
- (4 points) Given the actual nominal exchange rate, what is the real exchange rate between Japan and Taiwan?
- (6 points) Suppose that the actual exchange rate between Japan and Taiwan will converge to the PPP predicted exchange rate over the next ten years. Which of these two countries will experience a higher rate of inflation over this period? Which country will likely have a higher nominal interest rate? Why?

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