科目：經濟學　　　　　系所：金融管理學系　　　是否使用計算機：是

考試時間：100 分鐘　　本科原始成績：100 分

I. Multiple Choice Questions (4 points each, total 80 points)

1. The following relationship must hold between the average total cost (ATC) curve and the marginal cost curve (MC):

a. If MC is rising, ATC must be rising.

b. If MC is rising, ATC must be greater than MC.

c. If MC is rising, ATC must be less than MC.

d. If ATC is rising, MC must be greater than ATC.

e. If ATC is rising, MC must be less than ATC.

2. Miss R lives on Doritos and seafood salads. The price of Doritos is 1 dollar per bag and the price of seafood salads is 2 dollars each. Miss R allows herself to spend no more than 11 dollars a day on food. She also restricts her consumption to 6,500 calories per day. There are 1,500 calories in a bag of Doritos and 500 calories in a seafood salad. If she spends her entire money budget each day and consumes no more calories than her calorie limit, she can consume up to

a. 3 bags of Doritos per day but no more.

b. 1 bag of Doritos per day but no more.

c. 4 seafood salads per day but no more.

d. 4 bags of Doritos per day but no more.

e. None of the above.

3. Miss R has at one time or another lived in Argentina, Bolivia, and Colombia. She buys only two goods, X and Y. In Argentina, the prices were ($9, $3) and she consumed the bundle (6, 7). In Bolivia, she consumed (9, 2). In Colombia, she consumed the bundle (6, 5) at the prices ($3, $3).

a. The Argentine bundle is directly revealed preferred to the Bolivian bundle.

b. The Argentine bundle is indirectly revealed preferred to the Bolivian bundle.

c. The Colombian bundle is directly revealed preferred to the Argentine bundle.

d. The Bolivian bundle is indirectly revealed preferred to the Argentine bundle.

e. None of the above.

4. Miss R consumes only two goods, apples, and bananas. Her utility function is given by $U(A, B) = \min\{A, 2B\}$. She is endowed with w_A apples and w_B bananas. Unaware that prices are about to change, Miss R buys the quantities of apples and bananas that maximize her utility subject to her budget constraint. After she has made her purchases but before she has eaten them, the relative prices change. Miss R is then free to make further trades at the new relative prices if she wishes.

a. Miss R will definitely be better off after the price change.

b. Miss R will definitely be worse off after the price change.

c. Miss R will be better off after the price change if the price of the good for which she is a net seller rises relative to the price of the other good.

d. Miss R will be better off after the price change if the price of the good for which she is a net buyer rises relative to the price of the other good.

e. Miss R's utility will not be affected by the price.

5. Miss R's utility function is $X_A X_B$. The price of apples used to be \$1, the price of bananas used to be \$2, and her income used to be \$40. If the price of apples increased to \$5 and the price of bananas stayed constant, the substitution effect on Miss R's apple consumption would reduce her consumption by

a. 4 apples.

b. 13 apples.

c. 8 apples.

d. 16 apples.

e. None of the above.

6. A firm has a production function $f(X, Y) = 1.80(X^{0.80} + Y^{0.80})^3$ whenever $X > 0$ and $Y > 0$. When the amounts of both inputs are positive, this firm has

a. increasing returns to scale if $X + Y > 1$ and decreasing returns to scale otherwise.

b. decreasing returns to scale.

c. constant returns to scale.

d. increasing returns to scale.

e. increasing returns to scale if output is less than 1 and decreasing returns to scale if output is greater than 1.

7. An industry has 1,000 firms, each with the production function $f(X_1, X_2) = X_1^{1/2} X_2^{1/2}$. The price of factor 1 is \$1 and the price of factor 2 is \$1. In the long run, both factors are variable, but in the short run, each firm is stuck with using 100 units of factor 2. The long-run industry supply curve is

a. upward sloping with zero supply if the price is less than \$10.

b. downward sloping for outputs less than 10.

c. horizontal with zero supply for prices less than \$2 and infinite supply for prices greater than \$2.

d. horizontal with zero supply for prices less than \$10 and infinite supply for prices greater than \$10.

e. upward sloping with zero supply if the price is less than \$20.

8. A profit-maximizing monopolist faces the demand curve $q = 100 - 3p$. It produces at a constant marginal cost of \$20 per unit. A quantity tax of \$10 per unit is imposed on the monopolist's product. The price of the monopolist's product

a. rises by \$5.

b. rises by \$10.

c. rises by $20.

d. rises by $12.

e. stays constant.

9. An industry has two firms producing at a constant unit cost of $10 per unit. The inverse demand curve for the industry is p = 110 − 0.5q. Suppose that firm 1 is a Stackelberg leader in choosing its quantity. How much output will firm 2, the follower produce?

a. 40 units.

b. 15 units.

c. 20 units.

d. 50 units.

e. 30 units.

10. If the marginal cost of brewing beer is 40 dollars and the profit- maximizing price is 90 dollars, then the price elasticity of demand is

a. −2.

b. −1.8.

c. −2.33.

d. −0.66.

e. −3.

11. If the fraction of employed workers who lose their jobs each month (the rate of job separation) is 0.01 and the fraction of the unemployed who find a job each month is 0.09 (the rate of job findings), then the natural rate of unemployment is:

a. 1 percent.

b. 9 percent.

c. 10 percent.

d. about 11 percent

12. In the Solow growth model, if investment is less than depreciation, the capital stock will _____ and output will _____ until the steady state is attained.

a. increase; increase

b. increase; decrease

c. decrease; decrease

d. decrease; increase

13. If the Taiwan production function is Cobb-Douglas with capital share 0.3, output growth is 3 percent per year, depreciation is 4 percent per year, and the capital-output ratio is 2.5, the saving rate that is consistent with steady-state growth is:

a. 12.5 percent.

b. 14 percent.

c. 17.5 percent.

d. 20 percent.

14. The increase in income in response to a fiscal expansion in the IS-LM is:

a. always less than in the Keynesian-cross model.

b. less than in the Keynesian-cross model unless the LM curve is vertical.

c. less than in the Keynesian-cross model unless the LM curve is horizontal.

d. less than in the Keynesian-cross model unless the IS curve is vertical.

15. According to the sticky-price model, other things being equal, the greater the proportion, s, of firms that follow the sticky-price rule, the _____ the _____ in output in response to an unexpected price increase.

a. greater; increase

b. smaller; increase

c. greater; decrease

d. smaller; decrease

16. Every indifference curve shows combinations of first-period and second-period consumption that:

a. are tangent to the intertemporal budget constraint.

b. have equal income and substitution effects.

c. are available to the consumer.

d. make the consumer equally happy.

17. The difference between banks and other financial intermediaries is that only banks have the legal authority to:

a. transfer funds from savers to borrowers.

b. pay interest on debt obligations.

c. manage portfolios of assets.

d. create assets that are part of the money supply.

18. If the ratio of currency to deposits (cr) increases, while the ratio of reserves to deposits (rr) is constant and the monetary base (B) is constant, then:

a. it cannot be determined whether the money supply increases or decreases.

b. the money supply increases.

c. the money supply decreases.

d. the money supply does not change.

19. If the nominal exchange rate falls 10 percent, the domestic price level rises 4 percent, and the foreign price level rises 6 percent, the real exchange rate will fall:

a. 0 percent.

b. 8 percent.

c. 10 percent.

d. 12 percent.

20. The income velocity of money increases and the money demand parameter k _____ when people want to hold _____ money.

a. increases; more

b. increases; less

c. decreases; more

d. decreases; less

II. Essay Questions (10 points each, total 20 points)

1. Assume that an economy is described by the IS curve $Y = 3,600 + 3G - 2T - 150r$ and the LM curve $Y = 2 M/P + 100r$ [or $r = 0.01Y - 0.02(M/P)$]. The investment function for this economy is $1,000 - 50r$. The consumption function is $C = 200 + (2/3)(Y - T)$. Long-run equilibrium output for this economy is 4,000. The price level is 1.0 and $M = 1,200$. Assume that government spending is fixed at 1,200. The government wants to achieve a level of investment equal to 900 and also achieve $Y = 4,000$. What level of r is needed for $I = 900$? What level of T must be set to achieve the two goals?

2. Miss R consumes goods X and Y. Her utility function is $U(X, Y) = XY^3$. She is endowed with 43 units of X and 7 units of Y. The price of X is \$1 and the price of Y is \$3. Find her net demand for X.