

國立清華大學 101 學年度碩士班考試入學試題

系所班組別：計量財務金融學系 甲組、乙組

考試科目（代碼）：經濟學（4402、4502）

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1. Which of the following statements is true?

- [A] Macroeconomics is the study of employment levels and prices in a particular industry.
- [B] The birth of macroeconomics as a separate branch within economics can be dated to the publication in 1776 of Adam Smith's *The Wealth of Nations*.
- [C] The U.S. experience with rising inflation *and* rising unemployment in the 1970s was called deflation.
- [D] Deposit insurance may make depositors feel safer, but it can actually make the banking system less safe by creating an incentive for banks to invest in risky projects.
- [E] None of the above.

2. Given the information below about a fictitious economy, how much did real GDP grow between 1990 and 2000?

	1990	1995	2000	2005	2010
Nominal GDP (Trillions)	3	4	6	8	10
GDP deflator (2006=100)	60	75	80	100	105

- [A] 0.020 trillions
- [B] 0.025 trillions
- [C] 0.030 trillions
- [D] 0.035 trillions
- [E] None of the above.

3. Which of the following statements is true?

- [A] Real interest rates adjust to equate labor demand with labor supply.
- [B] As the real interest rate rises, the cost of borrowing funds for investment projects declines.
- [C] Increases in saving lead to lower real interest rates and lower levels of investment.
- [D] Output is equal to potential GDP when the economy is at full employment.
- [E] Money is neutral if changes in the nominal supply of money produce proportional changes in the real output and the price level.

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4. Let  $Y$  denote GDP,  $C$  denote consumption,  $I$  denote investment,  $S$  denote national saving,  $G$  denote government purchases,  $T$  denote tax revenues,  $X$  denote exports and  $M$  denote imports.

- [A]  $Y = C + I + G + M - X$ .
- [B]  $(G - T)$  is government's surplus.
- [C] Private saving is equal to  $(Y - T - C)$ .
- [D] Aggregate demand is equal to  $(C + I + G + M)$ .
- [E] In equilibrium,  $S = I$ .

5. Let  $s_L$  denote the share of labor in GDP,  $s_K$  denote share of capital in GDP,  $g_Y$  denote the rate of growth of output,  $g_L$  denote rate of growth of labor, and  $g_K$  denote rate of growth of capital. The rate of total factor productivity (TFP) increase is calculated as:

- [A]  $g_Y - (s_L \times g_L) - (s_K \times g_K)$
- [B]  $(s_L \times g_L) + (s_K \times g_K) - g_Y$
- [C]  $g_Y - (s_K \times g_L) - (s_L \times g_K)$
- [D]  $(s_K \times g_L) + (s_L \times g_K) - g_Y$
- [E] None of the above.

6. Which of the following statements is false?

- [A] The percentage deviation between actual GDP and potential GDP is called the output gap.
- [B] Unemployment results if wages fail to adjust in response to shifts in the aggregate demand and supply curves for labor.
- [C] Plant and equipment utilization falls during recessions.
- [D] Wages may be slow to adjust because of union contracts.
- [E] The short run is a length of time sufficient to allow wages and prices to fully adjust to equilibrate supply and demand.

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7. Suppose the consumption function is given by  $C = a + b \times (Y - T)$ , where  $a$  and  $b$  are constants and  $(Y - T)$  is disposable income. Taxes vary with income and are equal to  $t_0 + t \times Y$ , where  $t_0$  and  $t$  are constants. The effect on consumption of a \$1 change in total income is:

- [A]  $b \times (1 - t)$ .
- [B]  $b \times (1 + t_0 - t)$ .
- [C]  $(1 - t)$ .
- [D]  $b$ .
- [E] None of the above.

8. Which of the following statements is false?

- [A] The unemployment rate that occurs at full employment is called the natural rate of unemployment.
- [B] The natural rate of unemployment can change because the demographics of the labor force change over time.
- [C] Expectations are called *rational* if they respond to recent experience.
- [D] Phillips curve refers to the relationship that higher unemployment is associated with lower inflation in the short run.
- [E] The original Phillips curve related the rate of wage increase to the rate of unemployment.

9. Given the information below about two fictitious economies A and B, calculate the change of real exchange rate (the nominal exchange rate is the number of A dollars that can be purchased with one B dollar) between the nations of A and B from 2008 to 2011?

Year	Price level in A	Price level in B	Nominal exchange rate
2008	100	100	1
2009	110	100	1.1
2010	120	100	1.2
2011	130	100	1.3

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- [A] appreciates by 10%.
- [B] appreciates by 20%.
- [C] depreciates by 10%.
- [D] depreciate by 20%.
- [E] real exchange rate doesn't change.

10. Which of the following changes would tend to depreciate the U.S. dollar?

- [A] Lower interest rates in Japan.
- [B] Faster economic growth in Germany.
- [C] A lower U.S. rate of inflation.
- [D] A tight U.S. monetary policy.
- [E] An expansion of U.S. fiscal policy.

11. Which of the following statements is true?

- [A] The inside lag is shorter for fiscal policy while the outside lag is normally shorter for monetary policy.
- [B] England was the first country to use inflation targeting to guide monetary policy.
- [C] The problem of whether a government will actually carry out a promised course of action is called the problem of dynamic inconsistency.
- [D] Life expectancies are usually longer in less developed countries than in developed countries.
- [E] None of the above.

12. Which of the following countries does not belong to euro area as of 2011:

- [A] Cyprus
- [B] Estonia
- [C] Malta
- [D] Poland
- [E] Slovakia

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13. The massive and persistent current account deficits experienced by the U.S. and financed by the periphery are called:

- [A] Bretton Woods system.
- [B] Global imbalances.
- [C] Financial contagion.
- [D] Liabilities dollarization.
- [E] Currency mismatches.

14. Jenifer can wax 5 cars per day or wash 15 cars. Billy can wax 4 cars per day or wash 8 cars.

- [A] Jenifer's opportunity cost of washing a car is  $1/2$  car wax.
- [B] Billy's opportunity cost of washing a car is 2 car wax.
- [C] Jenifer has a comparative advantage in waxing cars.
- [D] Billy has a comparative advantage in washing cars.
- [E] None of the above is true.

15. Which of the following factors would increase market supply curve for corn?

- [A] A new aviation technique is discovered.
- [B] The price of fertilizer rises.
- [C] The government offers new tax breaks to farmers.
- [D] A typhoon sweeps through the land.
- [E] The government announces a bank holiday.

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16. The schedule below shows the number of donuts bought in a shop each day at a variety of prices.

Price of donuts	Number of donuts purchased per day
6	30
5	60
4	90
3	120
2	150
1	180

What is the price elasticity of demand at the point on the demand curve at which the price of donuts is 3?

- [A] 0.40
- [B] 0.75
- [C] 1.00
- [D] 1.50
- [E] 2.50

17. Continue the previous question. What would happen to total revenues if the donut shop increased the price of donuts from 3 to 4?

- [A] Total revenues increase by 30.
- [B] Total revenues decrease by 30.
- [C] Total revenues increase by 60.
- [D] Total revenues decrease by 60.
- [E] None of the above is true.

18. The demand curve for gasoline is:

$$Q = 100 - 10P$$

Find the total amount of consumer surplus that results in the gasoline market if gasoline price is 2.

- [A] 20
- [B] 160
- [C] 320

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[D] 500

[E] None of the above.

19. The supply and demand functions of the market for pizza are given below:

$$Q^S = 4P$$

$$Q^D = 24 - 4P$$

Find the producer surplus.

[A] 18

[B] 36

[C] 72

[D] 90

[E] None of the above.

20. Suppose the demand and supply functions for a certain goods are given by:

$$Q^D = 10 - P$$

$$Q^S = P - 4$$

Find the total economic surplus generated at the market equilibrium.

[A] 4.5

[B] 6.0

[C] 9.0

[D] 10.5

[E] 24.5

21. Continue the previous question. Suppose a per-unit tax of 2, to be collected from sellers, is imposed in this market. Find the deadweight loss caused by the tax.

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- [A] 0.0
- [B] 0.5
- [C] 1.0
- [D] 1.5
- [E] None of the above.

22. Sara supplements her income as a teaching assistant by editing term papers for undergraduate. She must charge the same price to each student, and her opportunity cost to edit each paper is 20. Below are Sara's total and marginal revenues at various output levels.

Student	Reservation price	Total revenue	Marginal revenue
A	30	30	30
B	28	56	26
C	26	78	22
D	24	96	18
E	22	110	14
F	20	120	10

How many papers should Sara edit to maximize her profit?

- [A] 2
- [B] 3
- [C] 4
- [D] 5
- [E] 6

23. Continue the previous question. How much economic profit will Sara make?

- [A] 18
- [B] 16
- [C] 14
- [D] 12
- [E] 10



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24. Two airplane manufacturers are considering the production of a new passenger jet. The payoff matrix is show below.

		Airbus	
		Produce	Don't produce
Boeing	Produce	(A) : -50 for each	(B) : 100 for Boeing, 0 for Airbus
	Don't produce	(C) : 0 for Boeing, 100 for Airbus	(D) : 50 for each

Identify two possible equilibrium outcomes in this game.

- [A] (A); (B)
- [B] (C); (D)
- [C] (A); (D)
- [D] (C); (B)
- [E] None of the above.

25. Suppose the European Union decides to subsidize Airbus with an amount of 75 if Airbus produces the new plane. What is the new equilibrium outcome?

- [A] (A)
- [B] (B)
- [C] (C)
- [D] (D)
- [E] None of the above.