

國立清華大學 104 學年度碩士班考試入學試題

系所班組別：計量財務金融學系碩士班 甲組、乙組

考試科目（代碼）：經濟學(4502)(4602)

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EACH QUESTION IS WORTH 5 POINTS.

1. Which of the following statement is false?

- [A] Investment is often referred to as capital formation.
- [B] Models are simplifications of the relationships among a set of variables.
- [C] The study of how the world works belongs to normative science.
- [D] Economics is based on the assumption that individuals are rational decision makers.
- [E] Opportunity cost is the value of the most desirable alternative given up when choosing an option.

2. Which of the following factor does not shift the demand curve?

- [A] Consumer income.
- [B] Prices of other goods and service.
- [C] Consumer tastes.
- [D] Consumer expectations.
- [E] None of the above.

3. Suppose the supply curve for rental housing is $5P = Q - 5000$, and the demand curve for rental housing is $Q + 10P = 14000$. A rent control law establishes a price ceiling at $P_c = 400$. What is the shortage of the housing?

- [A] 1000.
- [B] 2000.
- [C] 3000.
- [D] 4000.
- [E] None of the above.

4. Continue the above question. What is the net loss to society of the rent control law?

- [A] 140000.
- [B] 150000.

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[C] 160000.

[D] 165000.

[E] None of the above.

5. Which of the following statement is false?

[A] External benefits cause resources to be over-allocated to markets, prices to be too low, and output to be too high.

[B] Public goods permit individuals to attempt to free ride on others, by understating the value of the goods to them.

[C] The use of private goods by one person means that less is available for use by others.

[D] Special-interest group consists of individual with a common interest in some economic issue.

[E] Government can to some degree smooth out business cycles by use of fiscal and monetary policies.

6. A demand curve is of the form $Q^d = \frac{a}{P^2}$. Assume that $P = 5$, calculate the point elasticity of demand.

[A] $1a$.

[B] $1.5a$.

[C] 1.

[D] 1.5.

[E] None of the above.

7. Tommy has \$240 that he can spend, and the only two goods that he purchases are books and CDs. Per-unit price of book is \$60, and per-unit price of CD is \$10. Tommy's total utility (TU) from the consumption of books and CDs are as follows:

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Books		CDs	
Number of units	TU	Number of units	TU
0	0	0	0
1	90	1	250
2	180	2	290
3	270	3	320
4	360	4	345
5	450	5	365
6	540	6	380
7	630	7	390
8	720	8	390

What is Tommy's optimal consumption of books and CDs?

- [A] (6, 6).
- [B] (5, 3).
- [C] (4, 5).
- [D] (3, 6).
- [E] None of the above.

8. Continue the above question. What is Tommy's maximum total utility?

- [A] 650.
- [B] 680.
- [C] 740.
- [D] 770.
- [E] None of the above.

9. Let P and MC denote price and marginal cost, respectively. For a monopoly, the profit-maximizing condition is:

- [A] $\frac{P}{MC} = \frac{1}{1-(1/\epsilon)}$, $\epsilon = -\frac{\Delta Q/Q}{\Delta P/P}$.
- [B] $\frac{P}{MC} = \frac{1}{1+(1/\epsilon)}$, $\epsilon = -\frac{\Delta Q/Q}{\Delta P/P}$.
- [C] $\frac{P}{MC} = \frac{1}{1-(1/\epsilon)}$, $\epsilon = \frac{\Delta Q/Q}{\Delta P/P}$.

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[D] $\frac{P}{MC} = \frac{1}{1+(1/\epsilon)}, \epsilon = \frac{\Delta Q/Q}{\Delta P/P}$.

[E] None of the above.

10. A monopoly sells in two countries, and resale between the countries is impossible. The demand curves in the two countries are:

$$P_1 = 120 - 2Q_1$$

$$P_2 = 100 - Q_2$$

The monopoly's marginal cost is $MC = 20$. Solve for the equilibrium price in each country.

[A] $(P_1, P_2) = (60, 60)$.

[B] $(P_1, P_2) = (60, 70)$.

[C] $(P_1, P_2) = (70, 60)$.

[D] $(P_1, P_2) = (70, 70)$.

[E] None of the above.

11. Which of the following statements is false?

[A] The national income accounts are an accounting framework used in measuring current economic activity.

[B] $GNP = GDP - NFP$, where NFP denotes net factor payments from abroad.

[C] $S = I + CA$, where CA denotes current account balance.

[D] The expected real interest rate is the nominal interest rate minus the expected rate of inflation.

[E] Total production = total income = total expenditure.

12. In the base year, the production and price data were as follows:

Commodity	Quantity	Price
Apples	30 bags	\$2 per bag
Bananas	60 bunches	\$3 per bunch
Oranges	80 bags	\$4 per bag

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In the current year the production and price data are as follows:

Commodity	Quantity	Price
Apples	40 bags	\$4 per bag
Bananas	80 bunches	\$2 per bunch
Oranges	100 bags	\$6 per bag

What is the GDP deflator for the current year?

- [A] ≈ 128 .
- [B] ≈ 164 .
- [C] ≈ 72 .
- [D] 100.
- [E] None of the above.

13. The marginal product of labor for a certain firm is

$$MPN = 2(120 - N),$$

where N is the number of labor hours used in production. The price of output is \$2 per unit. What is the demand for labor if the nominal wage is \$40?

- [A] 100.
- [B] 105.
- [C] 110.
- [D] 115.
- [E] None of the above.

14. A closed economy has full-employment output of 8000. Government purchases, G , are 1200. Desired consumption and desired investment are

$$C^d = 4600 - 2000r + 0.10Y$$

$$I^d = 2000 - 4000r$$

where Y is output and r is the real interest rate. What is the desired nation saving?

- [A] 800.

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- [B] 1000.
- [C] 1200.
- [D] 1600.
- [E] None of the above.

15. Consider a world with only two countries. Output equals its full-employment level in each country.

	Home Country	Foreign Country
Consumption	$C_H = 100 + 0.5Y_H - 500r^w$	$C_F = 110 + 0.6Y_F - 600r^w$
Investment	$I_H = 250 - 500r^w$	$I_F = 250 - 200r^w$
Government Purchases	$G_H = 150$	$G_F = 100$
Full-employment Output	$Y_H = 1000$	$Y_F = 1200$

The national saving in the home country as function of the world real interest rate r^w is:

- [A] $250 + 250r^w$.
 - [B] $250 + 500r^w$.
 - [C] $500 + 250r^w$.
 - [D] $500 + 500r^w$.
 - [E] None of the above.
16. Continue the above question. What is the equilibrium value of the world real interest rate?

- [A] 0.01.
- [B] 0.02.
- [C] 0.05.
- [D] 0.10.
- [E] None of the above.

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17. Over the past twenty years an economy's total output has grown from 1000 to 1200, its capital stock has risen from 2000 to 2500, and its labor force has increased from 500 to 600. All measurements are in real terms. Assume that the elasticity of output with respect to capital and labor are 0.3 and 0.7, respectively. What is the contributions of productivity to economic growth?

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

18. An economy is described by the following equations:

Desired Consumption	$C^d = 400 + 0.5(Y - T) - 300r$
Desired Investment	$I^d = 100 - 100r$
Government Purchases	$G = 100$
Taxes	$T = 100$
Real Money Demand	$L = 0.5Y - 200r$
Money Supply	$M = 6600$
Full-employment Output	$\bar{Y} = 800$

Suppose that $P = 20$. What is the short-run equilibrium value of output?

- [A] ≈ 807 .
- [B] ≈ 813 .
- [C] ≈ 819 .
- [D] ≈ 825 .
- [E] None of the above.

19. Which country has not adopted the euro as its currency and sole legal tender?

- [A] Latvia.
- [B] Denmark.
- [C] Lithuania.

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[D] Estonia.

[E] Malta.

20. The assertion, proposed by Robert Mundell, that it is impossible to have a fixed exchange rate, free capital movement, and an independent monetary policy at the same time, is called

[A] the golden rule.

[B] the classical dichotomy

[C] the trilemma.

[D] the silver fetter.

[E] None of the above.