系級	經濟學系碩士班	考試時間	100 分鐘
科目	經濟學	本科總分	100 分

※一律作答於答案卷上(題上作答不予計分)；並務必標明題號，依序作答。

Section A: Multiple Choice (60%, 3% each)

1. Suppose the prices of a pair of jeans, a shirt, and a tie are $30, $20, and $10, respectively. Which of the following statements is true in this context?
A) The opportunity cost of buying a pair of jeans is 2 ties.
B) The opportunity cost of buying a tie is 3 pairs of jeans.
C) The opportunity cost of buying a tie is 2 shirts.
D) The opportunity cost of buying a shirt is 2 ties.

2. Which of the following correctly describes incentives?
A) Incentives refer to the maximum price that a buyer is willing to pay for a good.
B) Incentives are rewards or penalties that motivate people to behave in a particular way.
C) Incentives are prices that are fixed by the government and not by market forces.
D) Incentives refer to the minimum price at which a seller is willing to sell a product.

3. The following figure depicts a nonlinear production possibilities curve.
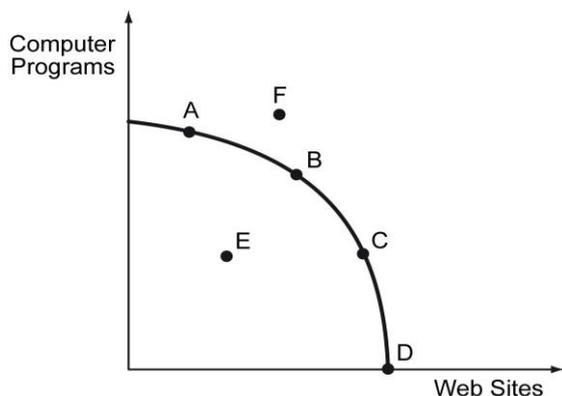
Refer to the figure above. If the market economy moves from point A to point C, _____.
A) there is unemployment in the computer programs industry
B) the opportunity cost of producing an additional Web site increases
C) technological change has made the production of Web sites more efficient
D) society values Web sites more than computer programs

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4. The following figure shows the demand curve faced by a monopolist.
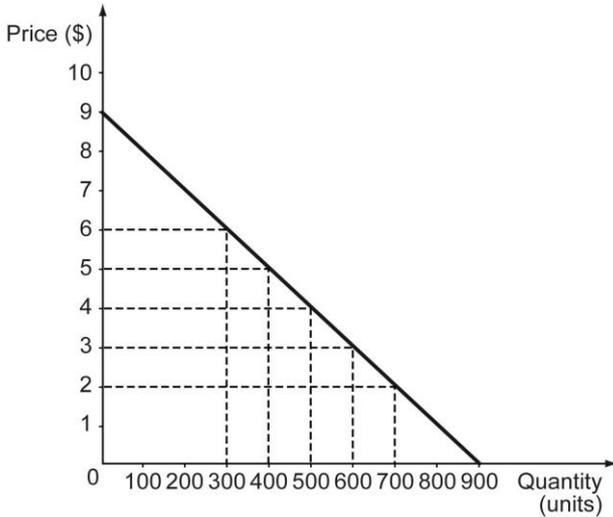
Refer to the figure above. What is the quantity effect of a price reduction from $6 to $4?

A) $600

B) $800

C) $1,000

D) $1,200

5. Traffic congestion is an example of a _____.

A) positive externality

B) negative externality

C) pecuniary externality

D) free-rider problem

6. A dominant strategy _____.

A) always results in equal payoffs to all the players in a game

B) always results in a zero payoff to the opponent

C) results in a high payoff irrespective of the strategy chosen by the other player

D) always results in a low payoff irrespective of the strategy chosen by the other player

7. Scenario: Your friend Joe and you decide to race your new cars. However, both of you are caught speeding by a police patrol. The matrix below shows the respective payoffs for each choice of actions. The first number listed in each cell is the payoff to the row player, and the second number listed is the payoff to the column player.

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		Joe	
		Bribe	Do not bribe
You	Bribe	You are fined $100, Joe is fined $100	You are fined $100, Joe is let free with a warning
	Do not bribe	You are let free with a warning Joe is fined $100	You are let free with a warning Joe is let free with a warning

Refer to the scenario above. Which of the following strategy combinations denotes the dominant strategy equilibrium in this case?

A) (Bribe, Bribe)

B) (Bribe, Do not bribe)

C) (Do not bribe, Bribe)

D) (Do not bribe, Do not bribe)

8. Asymmetric information in a market can lead to _____.

A) market failure

B) the moral hazard problem

C) the free-rider problem

D) the tragedy of the commons

9. Jane donates time and money to charity because she values helping others. This is an example of _____.

A) pure altruism

B) rationalism

C) impure altruism

D) liberalism

10. Which of the following best describes a production possibilities curve?

A) How much of one good an economy can produce if they forgo production of another good

B) The rate at which an economy can trade production of one good for another

C) The total amount of goods an economy can produce

D) A relationship showing the maximum production of one good for a given level of production of another good

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11. The average income per capita in a country in its own currency is 75,000 units. If U.S. \$1 is worth 20 units of its currency, the income per capita in the country in dollars is _____.

A) \$1,850

B) \$2,500

C) \$3,750

D) \$15,000

12. Sustained growth refers to a growth process in which _____.

A) GDP per capita grows at a positive and steady rate for long periods of time

B) GDP per capita grows at a rate of more than 20 percent per year for long periods of time

C) growth in GDP per capita is primarily attributed to public sector firms and enterprises

D) growth in GDP per capita is translated into an equal increase in welfare for all citizens in a country

13. Which of the following statements is true?

A) As an economy experiences growth in GDP, the rate of unemployment is expected to decrease.

B) As an economy experiences growth in GDP, the rate of unemployment is expected to increase.

C) The unemployment rate in a country always remains constant.

D) The unemployment rate in a country is not correlated with the level of economic activity in the country.

14. Consider two economies: A and B. The nominal interest rate is the same in both economies, but the rate of inflation is higher in economy B. Which of the following statements will then be true?

A) The real interest rate will be higher in economy A.

B) The real interest rate will be higher in economy B.

C) The real interest rate will be the same in both economies.

D) The number of borrowers in both economies will depend on whether the real interest rate is higher in economy A or economy B.

15. Which of the following economic variables is affected when the central bank adopts a countercyclical monetary policy?

A) Government spending

B) Transfer payments

C) Tax rates

D) Interest rates

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16. A country's labor demand curve shifted to the right after the adoption of a new technology. This implies that the use of the new technology _____, assuming all else equal.

A) increased the marginal product of labor

B) reduced the marginal product of labor

C) increased the minimum wage that firms need to pay

D) lowered the minimum wage that firms need to pay

17. On a graph with real GDP growth on the *x*-axis and the unemployment rate on the *y*-axis, you plot each year's values for the United States as a separate point. What does the overall trend in this graph look like?

A) An upward-sloping line

B) A vertical line

C) A horizontal line

D) A downward-sloping line

18. _____ money refers to something that is used as money but is otherwise worthless and typically has the backing of the government or a central bank.

A) Commodity

B) Fiat

C) Representative

D) Federal

19. The real interest rate is equal to _____.

A) the nominal interest rate adjusted for tax rates

B) the nominal interest rate adjusted for inflation

C) the nominal interest rate adjusted for income changes

D) the nominal interest rate adjusted for changes in exchange rate

20. A decrease in the value of the domestic currency in terms of the foreign currency means that _____.

A) the domestic currency has appreciated and the nominal exchange rate has risen

B) the domestic currency has depreciated and the nominal exchange rate has risen

C) the foreign currency has appreciated and the nominal exchange rate has fallen

D) the foreign currency has depreciated and the nominal exchange rate has fallen

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Section B: (40%, 20% each)

1. Consider a pure exchange economy with two goods,1 and 2, and two consumers, A and B. Utility functions are as follows.

$$U^A\left(x_1^A, x_2^A\right) = x_1^A\left(x_2^A\right)^2$$

$$U^B\left(x_1^B, x_2^B\right) = x_1^B x_2^B$$

and the economy's endowments are $w_1 = 2, w_2 = 1$.

(1) Please derive an equation identifying the contract curve for this economy. (10 %)

(2) Consider the allocation $x_1^A = 1, x_2^A = 2/3, x_1^B = 1, x_2^B = 1/3$. Can this allocation be supported as an equilibrium allocation? If so, at what prices? (10 %)

2. Two goods, Food (f) and Cloth (c), are produced. According to the specific factors model, there are three production factors: Labour (L), Capital (K) and Land (T). The production function is concave and the marginal product of each production factor diminishes as the output increases. The prices of Food and Cloth are P_f and P_c, respectively. The quantities of Food and Cloth are Q_f and Q_c. The wage of the labour is w.

(1) Please indicate which production factor is the mobile factor and which production factors are the specific factors. (5%)

(2) Please draw the production possibility frontier (PPF). (5%)

(3) Please discuss why the slope of PPF equals to $-\dfrac{MPL_f}{MPL_c}$, where MPL_f is the marginal product of labour in Food and MPL_c is the marginal product of labour in Cloth. (10%)