

第一部分：單選題(共 40 分)。請於試卷內之「選擇題作答區」依序作答。

請注意：本部份題目，每題只有一個答案，請選擇最好的一個答案。不必提供理由或過程。共 10 題，每題 4 分。

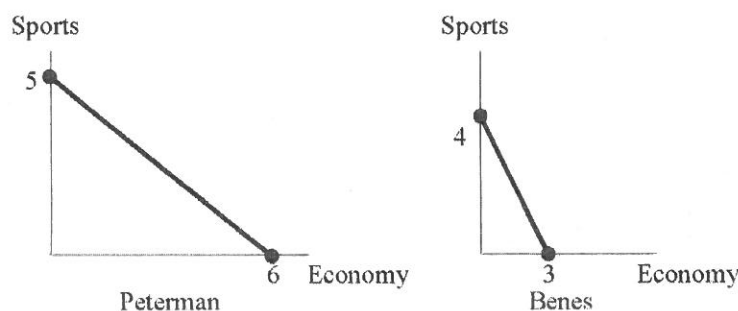
- When a firm with market power practices third-degree price discrimination, it charges the highest price to the group that
 - has the most elastic demand.
 - has the most inelastic demand.
 - purchases the highest quantity.
 - purchases the lowest quantity.
 - has the highest income.
- Which of the following is an implication of the Coase Theorem?
 - Government intervention is not necessary to solve externality problems.
 - Negotiation leads to an efficient outcome if transaction costs are high.
 - Bargaining always lead to an efficient allocation of resources.
 - Granting the polluter the rights to pollute will lead to as efficient allocation of resources as granting the pollution victims the rights to the clean environment does.
 - Taxation leads to an efficient allocation of resources regardless of who holds the property rights.

The matrix below shows the payoffs to two firms when they choose between two different strategies. The first number listed in each cell is the payoff to Firm 1 and the second number listed is the payoff to Firm 2.

		Firm 2	
		Strategy A	Strategy B
Firm 1	Strategy A	-1, 1	0, 0
	Strategy B	0, 0	3, -3

- Refer to the scenario above. Which of the following is true about this game?
 - This game has two dominant strategy equilibria.
 - This game has multiple Nash equilibria.
 - This game has a unique Nash equilibrium.
 - This game does not have a dominant strategy equilibrium.
 - This is a symmetric game.
- Refer to the scenario above. Among the four outcomes (four pairs of payoffs), how many are considered as Pareto efficient?
 - 0
 - 1
 - 2
 - 3
 - 4

5. There are a few ship manufacturers in Polonia and each firm faces a horizontal demand curve. The ship-building industry in Polonia is an example of a(n) _____.
- perfect competition
 - monopolistic competition
 - monopoly
 - oligopoly
 - Contestable market
6. Two persons, Peterman and Benes, use all their available time in writing economy columns and sports columns. The following figures show their production possibilities curves:



Which of the following statements is INCORRECT?

- Peterman has an absolute advantage in writing economy columns.
- Benes has a comparative advantage in writing sport columns.
- Peterman's opportunity cost of writing sports columns is higher than Benes'.
- Benes should specialize in writing economy columns.
- They each have only one field that they have the comparative advantage in.

Read the following article ("Open Markets—A healthy re-examination of free trade's benefits and shocks", *Economist*, May 4th 2018) and answer Questions 7-10. The article has been edited and shortened.

ECONOMISTS have long argued that free trade makes everyone richer. The Economist spoke to John Van Reenen an economist at MIT:

The Economist: Is free trade good for economic growth?

John Van Reenen: As I see it, there are four big benefits. The first one can be traced all the way back to David Ricardo in the early 1800s. It allows countries to specialise in producing what they do best. For instance, the French are good at making wine, the British not so good. But the British are good at producing *The Economist*. Without trade, Britain would have to produce and consume its own its own wine. But with trade, Britain and France can focus on what they do best, with the French exchanging wine for more copies of *The Economist*. This is sometimes called "comparative advantage".....

The second benefit of trade is that it makes markets bigger. If you are producing just for one country,

your market is quite limited. But with trade, you can also start selling things to customers all over the world. That means that things like spending large amounts of money on research—self-driving vehicles or whatever – looks a lot more viable. The lump-sum costs of such investment are spread out, so we can get more innovation, which is the key to growing national income.

The third benefit relates to productivity differences between firms. Some firms are really productive, others are really poorly managed. What happens when you have trade, is that you have much stronger competition. Domestic firms are competing not just with other domestic firms but with firms all over the world. The less-efficient ones face more competition, so they shrink and they exit the market. Or they shape up. And the really innovative firms can expand. So it's about creative destruction, really – shifting resources from less productive firms to more productive ones.

The final benefit, which economists sometimes forget, relates to politics. With free trade, you come into more contact with foreign companies, new ideas, new people and so on. That's mutually beneficial. And it is a political force for cooperation. Think of Europe. Since the second world war, those countries have had lower trade barriers, and that period has coincided with an unprecedented period of peace and cooperation.....

The Economist: What can countries do to compensate those people who do lose out (due to trade)?

John Van Reenen: There are lots of different options. The first thing I would emphasise is that you want to grease the wheels of mobility – to make it easier to move from one firm to another, or one industry to another, or one place to another. Putting up barriers to doing that is costly. For instance, planning regulations sometimes make housing in dynamic parts of the country very expensive, which makes it difficult for people in struggling areas to move there.

You also want to help citizens get the skills to move. So-called “active labour market policies” are important here. Scandinavian countries like Denmark do these quite well. Rather than protecting jobs by increasing the costs of downsizing which ends up making employers reluctant to hire, these nations have generous unemployment-benefit systems combined with a lot of help for people who have become unemployed. Retraining is well resourced. Governments also enforce looking for work pretty strongly.

It's also important to take a longer-term view. Your education system needs to make people resilient to shocks. You want people to be well educated, and you want that education not to be too tightly linked to a particular skill. Having general skills – literacy, numeracy, social skills – is the right idea. So, when people are hit by tough times, they can reskill and move around more easily.

But it is also important to be realistic. Some people, especially older people, are not going to be able to retrain if they were made unemployed by structural economic changes. For these people, there is nothing wrong with a reasonably generous welfare state and direct investment to support communities that are under stress from trade, technology or any other crisis. But remember: thanks to free trade, you can afford that, because the overall size of the pie is bigger.

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7. According to Reenen, what is NOT a benefit of free trade?
- (A) Realization of comparative advantages
 - (B) Winners take it all
 - (C) Creative destruction leading to more efficient use of resources
 - (D) Creation of political force for cooperation
 - (E) Increased competition and specialization
8. According to Reenen, why is it beneficial to make the market larger?
- (A) It makes winners take it all
 - (B) It enhances specialization in production
 - (C) It promotes creative destruction
 - (D) It enables more R&D and thus more innovations
 - (E) It increases market efficiency
9. Which of the following is approved by Reenen as an active labour market policy that may help compensate trade losers?
- (A) Job retraining
 - (B) Minimum wage
 - (C) Specialization in production
 - (D) Retirement pension benefits
10. According to Reenen's arguments, how is education related to free trade?
- (A) Free trade increased income, making education more affordable
 - (B) General skills are more important to buffer negative impacts of trade on labor market
 - (C) Education facilitates employment
 - (D) Skills are needed to compete in a large market
 - (E) Education benefits low-skilled workers who are more vulnerable to trade

第二部分：簡答題(共 60 分)。請於試卷內之「非選擇題作答區」作答。

請注意：本部份題目，計算的部分須說明計算過程並說明理由，圖形的部分需標明兩軸與各線的定義與變動方向，否則酌予扣分。共 4 個題組。

QUESTION 11 (16 marks)

Tomato sauce is a complement for hot dogs. If the price of hot dogs rises, what happens to the market for tomato sauce? For tomatoes (an input for tomato sauce and tomato juice)? For tomato juice? For orange juice (a substitute good for tomato juice)? Note: For each question, use a demand-supply diagram to CLEARLY demonstrate, if any, corresponding shifts of demand curve and supply curve, and changes in equilibrium price and equilibrium quantity. For each of the four diagrams, the X-axis, Y-axis, supply curve, demand curve, and equilibrium price and equilibrium quantity should all be clearly denoted. Use an arrow to indicate the direction of any change.

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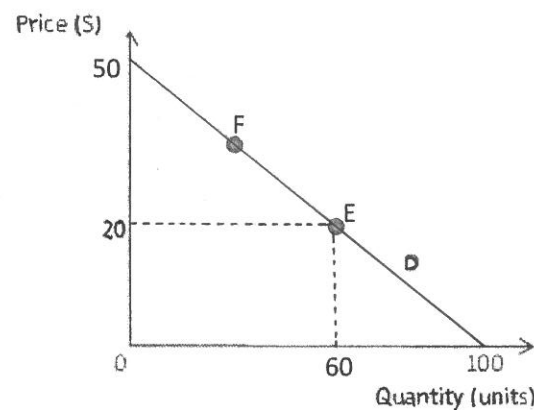
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QUESTION 12 (15 marks)

The following diagram shows the demand curve for product X.



- (A) Derive the inverse-demand function for X. What is the slope of the demand curve?
 (B) Use the slope obtained from (A) to calculate the elasticity of demand at point E. [Hint: think about how the definition of price elasticity $(\Delta Q/Q)/(\Delta P/P)$ is related to the slope of demand curve]
 (C) Is the price elasticity of demand at point F the same, larger than, or smaller than the elasticity at point E? Explain.

QUESTION 13 (20 marks)

Consider the following two-year model: Suppose you have \$1,000 today and will receive another \$1,000 next year. Your savings account pays an annual interest rate of 25%; namely, if you save \$1 today, you will obtain \$1.25 next year. Also, your bank is willing to lend you money at that same interest rate to the extent that you can pay the loan back next year. Your life ends at the end of next year (sorry); no saving or loan goes beyond that point.

- (A) Suppose that you save all of your money to spend next year. How much will you be able to spend next year? How much will you be able to spend today?
 (B) What is the maximum amount of today's consumption you can reach if you maximize your loan from the bank?
 (C) Draw your budget constraint between "consumption today" (on X-axis) and "consumption next year" (on Y-axis). What is its slope?
 (D) Now, suppose that the interest rate rises to 50%. Show how your budget line shifts using the same graph as in (C). Clearly specify the point where the new and original budget lines intersect.
 (E) Following (D), will you increase or decrease today's spending? Briefly explain.

QUESTION 14 (9 MARKS)

Suppose that 10 people live on the street and that each of them is willing to pay \$2 for each extra streetlight, regardless of the number of streetlights provided. The cost of providing L streetlights is given by $C(L) = L^2$. [Note: marginal cost of providing a streetlight is then $MC(L) = 2L$]

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- (A) What is the individual inverted demand function of streetlights? Please use P and l to denote price and individual quantity demanded. Draw the demand curve in a price-quantity diagram. Clearly denote your diagram.
- (B) What is the aggregate inverted demand function of streetlights? Please use P and L to denote price and aggregate quantity demanded. Draw both the demand curve and supply curve in a price-quantity diagram. Clearly denote your diagram.
- (C) What is the most efficient number of streetlights to provide from the point of view of a central planner whose intention is to maximize social welfare?

試題必須隨卷繳回