



Before you start read the following carefully:

- The test has a maximum duration of one hour and fifteen minutes.
- The exam has of two parts: Part A consists of 20 multiple-choice questions, Part B, of one open question with four parts.
- Write your answers to Part A in the table below in this page. At the end of the exam separate this sheet from the rest of the exam and hand it in together with your answers to Part B. Make sure you have written your identification in this page below.
- You cannot look up any book or any other learning material.
- You may use non-graphic calculators but you cannot use graphic calculators.
- Keep any mobile phone, tablets and pcs switched off.

Full name: (as it appears on your student record)		
Student number:	Class:	Degree:

Part A (15 marks)

Indicate with an 'O' in the table below the correct answer to the questions 1 to 20. You get 0.75 marks for each correct answer and will have a 0.2 deduction for each wrong answer.

At the end of your exam separate this sheet from the rest of the exam paper and hand it in together with your answers to Parts B.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)
b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)
c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)
d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)



**1. Trade with other countries allows a country to:**

- a) Consume above its production possibility frontier.
- b) Produce above its production possibility frontier.
- c) Avoid opportunity costs.
- d) None of the other options is correct.

2. David Ricardo illustrated his theory of comparative advantage with the following example:**Hours required to produce a unit of cloth/wine**

	Cloth	Wine
Portugal	90	80
England	100	120

Which of the following is correct?

- a) Portugal has absolute advantages in both goods.
- b) England has a comparative advantage in cloth.
- c) Portugal has a comparative advantage in wine.
- d) All other options are correct.

3. The production possibility frontier will shift outwards if:

- a) The minimum wage increases.
- b) The production technology of both goods improves.
- c) The price of one of the goods falls.
- d) None of the other options is correct.

4. There is excess supply if:

- a) The price exceeds the equilibrium price.
- b) Quantity demanded exceeds quantity supplied.
- c) The price is below the equilibrium price.
- d) The supply curve shifts to the right..

5. What happens if (i) the price of a substitute for good T rises and (ii) consumers' income also rises?

- a) (i) causes the demand curve to shift leftwards, and so does (ii) if T is an inferior good. So we cannot tell whether either equilibrium price or quantity will rise or fall.
- b) (i) causes the demand curve to shift rightwards, and so does (ii) if T is a normal good, leading to an increase in both equilibrium price and quantity.
- c) (i) causes the demand curve to shift leftwards; (ii) causes it to shift rightwards if T is an inferior good. So equilibrium price will rise and equilibrium quantity will fall.
- d) (i) causes the demand curve to shift rightwards; (ii) causes it to shift leftwards if T is a normal good. So we cannot tell whether either equilibrium price or quantity will rise or fall.

6. The monthly supply curve of insulin is $Q^S=100p - 20,000$ (price in euros). The consumers are 2,000 diabetic patients who absolutely require 2 units a month, and will buy them at any price. The equilibrium price is:

- a) €100
- b) €240.
- c) €200.
- d) The information is insufficient to answer.

7. Additional producers entered a certain market. So, *ceteris paribus*:

- a) Consumer surplus increases.
- b) Quantity traded falls.
- c) Equilibrium price increases.
- d) There will be excess supply.

8. Additional consumers developed a taste for good X , causing equilibrium quantity to rise from 30 to 40 and the equilibrium price to rise by €1. Supply is linear. What happens to the producer surplus?

- a) Increases by €10.
- b) Increases by €40.
- c) Increases by €35.
- d) The information is insufficient to answer.

9. On the eve of a U2 concert in Lisbon 50 additional tickets were offered at €200 each. Initial prices had ranged from €30 to €325. Five friends' willingness to pay is as follows:

	Willingness to pay
Jo	€300
Rui	€100
Maria	€150
Mike	€300
Xica	€250

The friends that decided to go to the concert joined the queue early and managed to get a ticket. Then:

- a) Maria and Rui decided not to go to the concert.
- b) The five friends' consumer surplus was €100 in total.
- c) Everyone bought a ticket.
- d) None of the other options is correct.

10. The consumer surplus is:

- a) The difference between quantity demanded and quantity supplied when the price is artificially set below the equilibrium price.
- b) The difference between the maximum amount consumers would be willing to pay for a good and what they actually pay.
- c) The money consumers are left with after paying for the goods they need.
- d) The money consumers save when the price is artificially set below the equilibrium price.



- 11. Thinking the current price too low, the government sets a price floor above the equilibrium price. Then:**
- Producers will be willing to sell a larger quantity.
 - Consumers will be willing to buy a larger quantity.
 - Producers will manage to sell a larger quantity and increase their surplus.
 - None of the other options is correct.
- 12. A price ceiling above the equilibrium price leads to:**
- Excess demand.
 - Excess supply.
 - A lower quantity traded.
 - None of the other options is correct.
- 13. Taxis need a license (“alvará”) to operate in Portugal. These are strictly limited, and have kept the price artificially high. Now that web-based operators (Uber, Cabify, etc.) have entered the market we should expect:**
- The deadweight loss to fall.
 - An increase the quantity demanded for taxi services (traditional + web-based).
 - Consumer surplus to rise.
 - All other options are correct.
- 14. A vertical demand curve means elasticity is:**
- Infinite.
 - 1.
 - Zero.
 - Variable.
- 15. If the demand curve is a downward-sloping straight line, at which of the following prices (for all of which quantity demanded is strictly positive) is price-elasticity of demand the highest?**
- €20.
 - €10.
 - €30.
 - The information is insufficient to answer.
- 16. If demand is elastic and the price falls, total expenditure:**
- Remains unchanged.
 - Falls
 - Rises.
 - The information is insufficient to answer.
- 17. Which of the following does NOT affect price-elasticity of demand?**
- Possibilities of substituting for other goods.
 - Share of income spent on the good.
 - Time elapsed since the price changed.
 - All other options affect price-elasticity of demand.
- 18. The government levies an excise tax on a good. The tax revenue will be the larger and the deadweight loss the smaller:**
- The more inelastic demand is and more elastic supply is.
 - The more elastic demand is and more inelastic supply is.
 - The more inelastic both demand and supply are.
 - The more elastic both demand and supply are.
- 19. In a certain market, demand is given by $Q^D = 50 - 0.5p$, and supply by $Q^S = 3p$. Producers are required to pay a tax per unit sold. The tax burden will be borne:**
- Exclusively by producers.
 - Mostly by producers.
 - Mostly by consumers.
 - Exclusively by consumers.
- 20. If a price falls, the income effect contributes:**
- To increase the quantity demanded.
 - To decrease the quantity demanded.
 - To increase the quantity demand if the good is inferior, and to decrease it if it is normal.
 - To decrease the quantity demand if the good is inferior, and to increase it if it is normal.

Part B (5 marks)

In a certain market, demand and supply are described by the curves $Q^D = 100 - p$ and $Q^S = 0.5p - 5$, where p is the price in euros.

- a) Find the equilibrium price and quantity. Show your calculations and illustrate in a graph. [1 mark]
- b) Now the government sets a price ceiling €10 below the equilibrium price (you have just found). Find the new quantity traded. Explain whether there is a shortage or a surplus, and if yes quantify it. Illustrate in a graph (you may use the graph you drew for the previous part). [1 mark]
- c) What is the effect of the price ceiling on the producer surplus? Give numbers, explain, and illustrate in a graph (you may use the graph you drew for the previous part). [1 mark]
- d) Succinctly explain the potential negative effects of the price ceiling. [2 marks]

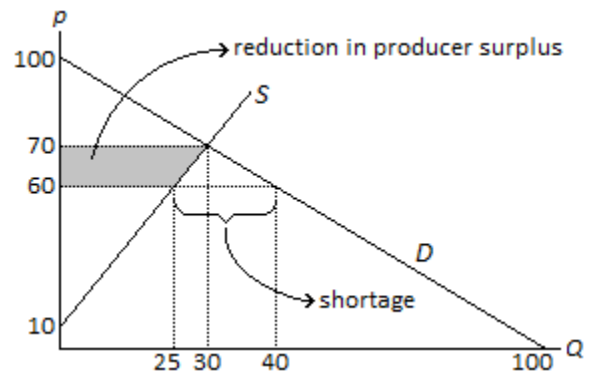
Answers

Part A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
a	d	b	a	b	b	a	c	a	b	a	d	d	c	c	c	d	c	c	d

Part B

- a) $Q^S = Q^D \Leftrightarrow 0.5p - 5 = 100 - p \Leftrightarrow p = 70$. $Q = 30$, as shown in the figure.
- b) Price ceiling is $70 - 10 = 60$, so $Q^S = 25$, $Q^D = 40$, so there is a shortage of 15, as shown in the figure. Traded quantity is the lowest of the two: 25.
- c) The producer surplus falls because producers are selling five units less and receive a lower price for the 25 units they are still selling. Its reduction corresponds to the grey area shown in the figure, and it amounts to: $(70 - 60) \times (25 + 30) / 2 = 275$.



- d) There is a reduction in quantity traded, so there is a deadweight loss, as neither consumers nor producers obtain any surplus from the units that are no longer traded. There is misallocation to consumers: as consumers would like to buy more than what is offered for sale, units will not necessarily go to those who value them most. Consumers will waste time and money trying to find the good and get there ahead of the others. There will be incentives for black market. Producers may lower quality to reduce costs, as they know they will still be able to sell the good because of excess demand.