

Before you start read the following carefully:

- The exam has a maximum duration of two hours and thirty minutes.
- The exam has two parts: Part A consists of 14 multiple-choice questions, Part B, of three groups of open-answer questions.
- Write your answers to **Part A** in the **table** below, on 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.
- You cannot look up any books, notes or any other learning material. Keep any mobile phones, tablets and pcs switched off.
- You may use only NON-GRAPHING calculators.

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

Part A (7 marks)

Indicate with an 'O' in the table below the correct answer to the questions 1 to 14. You get 0.5 marks for each correct answer and will have a 0.15 deduction for each wrong answer. If you want to change your choice, make sure it is perfectly clear the one you want to be considered.

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.

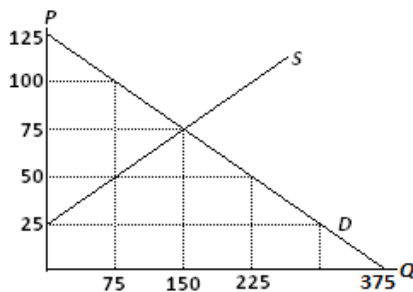
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)	a)
b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)	b)
c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)	c)
d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)	d)



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- In a market with the usual upward-sloping supply, and downward-sloping demand curves, the price of an input rises and the price of a substitute good also rises. Then:
 - Equilibrium price and quantity increase.
 - Equilibrium price and quantity fall.
 - Equilibrium price rises; we cannot tell whether equilibrium quantity rises or falls.
 - Equilibrium quantity rises; we cannot tell whether equilibrium price rises or falls.
- In a market with a downward-sloping demand curve, if the supply curve shifts to the right, consumer surplus:
 - Increases.
 - Decreases.
 - Does not change.
 - The information is not enough to answer.

- In the market in the figure, how much is the deadweight loss if there is a price ceiling of 50?

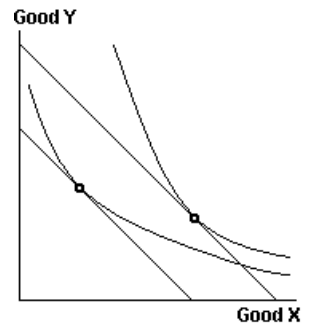


- 11 250.
 - 8 437.5.
 - 5 687.5
 - 1 875.
- An increase in the price of pork chops led to a fall in demand for bread. This relationship can be quantified with:
 - The income-elasticity of demand.
 - The price-elasticity of demand.
 - The cross-price-elasticity of demand.
 - The price-elasticity of demand and supply together.

- In the consumer theory which of the following is FALSE?
 - A consumer has one indifference curve only.
 - The consumer is indifferent between any two bundles on the same indifference curve.
 - The marginal rate of substitution equals the slope of the indifference curve in absolute value.
 - The farther the indifference curve is from the origin the higher the utility is.

- Consumer income falls 15%, and both prices increase by 20%. Then the budget line:
 - Shifts to the right in parallel fashion.
 - Shifts to the left in parallel fashion.
 - Remains unchanged.
 - Shifts to the left and becomes less steep.

- The figure shows Fred's budget lines and optimal bundles for two income levels and constant prices. Then:
 - X and Y are both normal goods.
 - X and Y are both inferior goods.
 - X is a normal good; Y is an inferior good.
 - X is an inferior good; Y is a normal good.



- A firm's cost function is $TC = 100 + 5Q^2$. Marginal cost is:
 - $MC = 100/Q + 5Q$.
 - $MC = 10Q$.
 - $MC = 5Q$.
 - $MC = 100/Q + 10Q$.
- A firm will have neither profit nor loss if the market price:
 - Equals the minimum marginal cost.
 - Equals the value at which the marginal cost curve crosses the average variable cost curve.
 - Equals the minimum average variable cost.
 - Equals the minimum total cost.
- A monopolist's marginal revenue is:
 - Equal to the market price.
 - Twice the market price.
 - Half the market price.
 - None of the other options is correct.
- Teams A and B sell lemonade on the school yard, and have to decide, without knowing the other team's price, whether to charge €0.50 or €1 a glass. They know their profits will be as shown in the payoff table (number on the left-hand side is team A's profit).

		Team B	
		€0,50	€1
Team A	€0.50	€200, €200	€150, €210
	€1	€100, €120	€180, €180

At the Nash equilibrium profits are:

- (€200, €200).
- (€150, €210).
- (€100, €120).
- (€180, €180).



12. A monopolistically competitive firm faces a downward-sloping demand curve. So its price will be:

- a) Equal to its marginal revenue.
- b) Lower than its marginal revenue.
- c) Higher than its marginal revenue.
- d) Equal to total revenue.

13. In a monopolistically competitive industry:

- a) The number of firms is small.
- b) There are barriers to entry and exit.
- c) Firms produce different goods that are close substitutes to each other.
- d) Each firm faces a horizontal demand curve.

14. Production of a good generates a negative externality (and negotiation costs among interested parties are high). Then, without government intervention, the equilibrium quantity will be:

- a) Efficient and higher than the socially optimal quantity.
- b) Inefficient and lower than the socially optimal quantity.
- c) Efficient and lower than the socially optimal quantity.
- d) Inefficient and higher than the socially optimal quantity.

**Part B (13 marks)**

1. Barla e Sota are two countries, and each produces bread and fish. Both countries have linear production possibility frontiers. The two countries are equally endowed with labour, which is the only factor of production. Barla can produce at most 80 tons of bread (if it produces no fish) or 50 tons of fish (if it produces no bread). Sota can produce at most 52 tons of bread (if it produces no fish) or 40 tons of fish (if it produces no bread).
 - a) Draw the production possibility frontiers for both countries in the same graph. Place fish on the horizontal axis. Properly label the figure. (1 mark)
 - b) Explain what the opportunity cost of fish in terms of bread is, and find its values for both countries. (1.5 marks)
 - c) Which country has absolute advantages in each good? And which country has comparative advantages in each good? Explain. (1.5 marks)

2. In a market demand is given by $Q^D = 40 - 2p$, and supply is given by $Q^S = 4p - 20$.
 - a) Find the equilibrium price and quantity. (0.75 marks)
 - b) Now the government levies a tax of €3 per unit. Find the new equilibrium quantity, the price paid by consumers, the price received net of tax by producers. (1.5 marks)
 - c) Find the tax revenue and deadweight loss. Show in a graph. (1.5 marks)

3. In a certain perfectly competitive industry there are 10,000 firms. Each firm operates with the cost function $TC = 0.5Q^2 + Q + 2$. The market demand curve is $Q^d = 70,000 - 10,000p$.
 - a) Is the cost function above the short-run or the long-run cost function? Explain. (0.5 marks)
 - b) Find the expressions for the variable cost, average variable and total cost, and marginal cost. (1 mark)
 - c) Find the firm's supply curve and the industry's supply curve. Explain you calculations. (2 marks)
 - d) Find the market equilibrium price and quantity. And find a firm's quantity and profit. (1.75 marks)