UNIVERSITÉ DE GENÈVE

SECTION DES SCIENCES ÉCONOMIQUES
UNIVERSITÉ DE GENÈVE

# Introduction to Microeconomics Exam

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FAMILY NAME (capital letters):

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Given name:

.....

Student Number:

.....

Total number of pages: 10.

Duration of the exam: 3 h. (30 questions)

Authorized material: none (calculator not authorized).

# Instructions to answer multiple choice questions

⋆ The answers sheet is stapled at the end of the exam. Please detach properly.

⋆ On the answers sheet, write down your family name, given name and "code candidat" (= 8 digit student number without scores) properly and in capital letters.

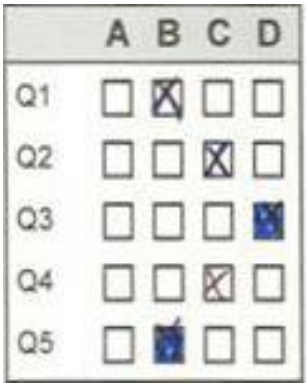
⋆ The answers sheet must absolutely be handed in at the end of the exam. The questionnaire can be retained.

⋆ On the answers sheet, the box corresponding to the chosen answer (A to D) must be checked or filled properly with a dark blue or black pen.

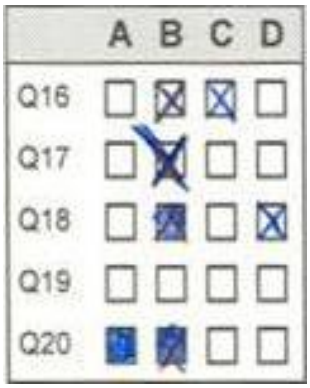
⋆ If necessary, make corrections carefully. The answer must be clearly identifiable and unique. If this is not the case, it will be counted as wrong.

## Example:

**Fine**




**Bad**




**In order not to waste your chances, answer all questions.**

**There are no negative points.**

**There is only one correct answer.**

**ATTENTION:**
**Unless otherwise specified, supply and demand are represented by curves with the usual slope.**

**Question 1**

The study of economics is mainly concerned with:

(a) the allocation of unlimited resources (land, labor, capital) to unlimited alternative uses (number of sectors, agents, goods).

(b) the allocation of unlimited resources to limited alternative uses.

(c) the allocation of limited resources to unlimited alternative uses.

(d) the allocation of limited resources to limited alternative uses.

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Answer (c)

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**Question 2**

Marie has an available income of 100 CHF. She hesitates between buying clothes or books. She is ready to pay 60 CHF to buy a first skirt and 40 CHF to buy a second skirt. On the other hand, she is ready to pay 80 CHF for the first book and 20 for the second. We know that the price of a skirt is 45 CHF and the price of a book is 70 CHF. If Marie wishes to maximize her surplus (net benefit), which of the following propositions is correct?

(a) Marie buys two skirts.

(b) Marie buys a skirt and a book.

(c) Marie's surplus is equal to 20.

(d) Marie does not spend all the available income.

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Answer (d)

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**Question 3**

On the market for good $X$, which of the following events leads to a simultaneous increase in price and quantity exchanged?

(a) An increase in the price of a substitute good.

(b) An increase in the price of a complementary good.

(c) A decrease in income if $X$ is a normal good.

(d) An increase in income if $X$ is an inferior good.

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Answer (a)

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**Question 4**

In the housing market, we observe that during a certain period the number of new apartments sold increases by 40% and the average price decreases by 30%. Which of the following events allows to explain this phenomenon?

(a) The imposition of a price ceiling on real estate.

(b) The sale of new apartments in a new residential neighborhood.

(c) The imposition by the government of a subsidy to purchase real estate.

(d) A reduction in consumers' income, given that the supply of real estate is perfectly inelastic.

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Answer (b)

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**Question 5**

On a given market, we observe that when households' income increases, the budget share devoted to this good by households decreases. This good can therefore be:

(a) a normal good.

(b) a necessity good.

(c) an inferior good.

(d) All of the above answers are correct.

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Answer (d)

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**Question 6**

On the market for good $A$, demand and supply are given by the functions:

$$Q^D = 12 - 3P_A + 4P_B + 2Y \qquad \text{and} \qquad Q^S = -5 + 2P_A$$

where $P_A$ and $P_B$ represent the prices of goods $A$ and $B$, and $Y$ is consumers' income. We know that $P_B = 1$ and $Y = 2$.
In the market equilibrium, which of the following propositions in correct?

(a) Producers' total revenue is equal to 10.

(b) Supply is less elastic than demand in equilibrium.

(c) Goods $A$ and $B$ are complements.

(d) Good $A$ is an inferior good.

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Answer (b)

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**Question 7**

In a market initially in equilibrium, which of the following propositions in correct?

(a) The excess supply resulting from the imposition of a price floor is larger, the more inelastic the demand.

(b) The imposition of a price floor has no effect if the price floor is lower than the equilibrium price.

(c) The excess demand resulting from the imposition of a price ceiling is larger, the more inelastic the demand.

(d) Producers' total revenue necessarily decreases after the imposition of a price floor.

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Answer (b)

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**Question 8**

Consider a market where demand and supply are given by the following functions:

$$Q^D(P) = 5 - P \qquad \text{and} \qquad Q^S(P) = -3 + 3P$$

Following the imposition of a price ceiling equal to 1, which of the following propositions in correct?

(a) There is an excess supply in the market.

(b) The impact on the quantity exchanged is identical to the impact of a price floor equal to 3.

(c) The cost for the government of re-purchasing the excess production is equal to 4.

(d) A unit subsidy for producers equal to 4/3 would have allowed all consumers to purchase the desired quantity at the price ceiling.

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Answer (d)

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**Question 9**

Consumer surplus:

(a) is a good measure of welfare because it reflects the total value of consumption.

(b) is equal to producer surplus in market equilibrium.

(c) is represented graphically by the area below the demand curve and above the firm's marginal cost.

(d) is equal to zero if the marginal valuation of every unit consumed of the good is equal to the price.

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Answer (d)

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**Question 10**

The government decides to introduce a unit tax, charged on producers, in a perfectly competitive market. The incidence of the tax is:

(a) fully on consumers if demand is perfectly inelastic.

(b) fully on producers if supply is perfectly elastic.

(c) fully on producers if demand is perfectly inelastic.

(d) fully on consumers if supply is perfectly inelastic.

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Answer (a)

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**Question 11**

Consider a market where demand and supply are given by the following functions:

$$Q^D(P) = 20 - P \qquad \text{and} \qquad Q^S(P) = -10 + 2P$$

The government decides to introduce a unit tax of 3 CHF, paid by consumers. Which of the following propositions is **false**?

(a) Producer surplus after the introduction of the tax is equal to 16 CHF.

(b) The tax burden is equal to 24 CHF, of which 16 are paid by producers.

(c) The decrease in consumer surplus is twice the decrease in producer surplus.

(d) The wedge between the price received by producers and the price paid by buyers is exactly equal to the amount of the tax.

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Answer (b)

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**Question 12**

The imposition of an ecological tax with the aim of internalizing a pollution externality caused by a productive activity:

(a) leads to an increase in the total revenue of producers.

(b) does not necessarily lead to a complete abatement of pollution.

(c) does not have any effect on pollution, it just increases the revenues raised by the government.

(d) ends up bearing entirely on consumers one way or another, because producers will merely pass the tax burden on the price of their product.

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Answer (b)

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**Question 13**

Which of the following propositions is correct?

(a) In case of a negative pollution externality, a Pigouvian tax allows to reach the social optimum, but it is less efficient in terms of quantity of pollution than a system of tradeable pollution permits.

(b) The Coase Theorem only applies if transaction costs are low enough, if the interests of the agents are not too divergent and if it is possible to quantify the value of the externality in monetary terms.

(c) In case of a negative pollution externality, economists generally prefer taxation to regulation because a Pigouvian tax evenly distributes abatement effort across different polluting firms.

(d) The application of the Coase Theorem requires that property rights are clearly defined, although their distribution across the various agents concerned does not affect the outcome of negotiations in terms of quantity generated of the externality (noise, pollution...).

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Answer (d)

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**Question 14**

A recent study has estimated the demand for gasoline in Switzerland to be highly inelastic. This implies:

(a) it is sufficient to introduce a tax to reduce significantly gasoline consumption.

(b) the government will obtain significant fiscal revenues by taxing gasoline consumption.

(c) the deadweight loss caused by a tax on gasoline consumption will be substantial.

(d) producers will be totally opposed to a tax on gasoline consumption because they will bear the largest part of the tax incidence.

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Answer (b)

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**Question 15**

Charl's Beensch has opened a small shop selling cheap alcohol that he distills in his grandmother's garage. He sells his bottles on a competitive market with 100 producers (99 + Charl's). Each producer $i$'s supply is:

$$q_i^S(P) = \frac{2}{100}P$$

Iv's, a friend of Charl's, has just finished his studies in economics, and has estimated the following demand function for this market:

$$Q^D(P) = 25 - 0.5P$$

If the government decides to introduce a tax of 20 CHF per bottle sold, what will be the consequence of the tax?

(a) The largest part of tax incidence will be borne by producers.
(b) The deadweight loss will be equal to 80.
(c) The tax revenue will be equal to 192.
(d) The price received by producers after the introduction of the tax will be equal to 26.

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Answer (b)

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**Question 16**

Vaccination against seasonal flu creates positive externalities. This implies:

(a) the number of vaccinations is too large relative to the socially optimal quantity.
(b) the government should intervene by imposing a tax on vaccination.
(c) the social marginal cost of vaccination is larger than the private marginal cost.
(d) the marginal social benefit of vaccination is larger than the marginal private benefit.

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Answer (d)

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**Question 17**

Jim and Tom share a studio at the *Cité Universitaire*. Jim likes to play hard rock and he would be willing to pay 25 CHF to be able to do so. Tom likes quietness and he would be willing to pay 50 CHF in order not to hear hard rock. Which of the following propositions suggests the efficient solution to this externality problem (in the absence of transaction costs)?

(a) Jim gives Tom 25 CHF and Jim stops playing hard rock.
(b) Tom gives Jim an amount of money between 25 and 50 CHF and Jim stops playing hard rock.
(c) Jim gives Tom 50 CHF and Jim continues to play hard rock.
(d) Tom gives Jim an amount of money between 25 and 50 CHF and Jim continues to play hard rock.

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Answer (b)

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**Question 18**

A public good is a good:

(a) whose existence is known to everybody.

(b) to which every consumer attaches the same value.

(c) for which the cost of supplying an additional consumer is zero.

(d) that satisfies a basic need and therefore is available to everyone for free.

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Answer (c)

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**Question 19**

"The regions beyond the exclusive economic zones (EEZ extend 200 nautical miles – 370 km – from the coast) are the high seas, in nautical terms. These vast expanses of water, last places on the planet where no sovereignty can be claimed, belong in theory to everybody and to nobody" (National Geographic, October 2010).
Your knowledge of economics allows you to claim that:

(a) the quantity of fish caught in the high seas will be too large relative to what would be globally optimal.

(b) nobody will fish in the high seas: given the distance to be traveled, it cannot be profitable.

(c) a big industrial country will end up obtaining a monopoly on fishing in the high seas.

(d) there is no equilibrium on this market because property rights are not defined.

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Answer (a)

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**Question 20**

A firm which is monopolist on the market for good $X$ chooses at the optimum:

(a) to maximize total revenue.

(b) to supply more of good $X$ relative to a competitive market.

(c) to maximize its average revenue.

(d) to equalize marginal revenue and marginal cost.

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Answer (d)

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**Question 21**

On the market for a good supplied by a monopolist, the inverse demand is given by:

$$P(Q) = 150 - 10Q$$

The monopolist's marginal cost is equal to $5Q$. If the government forces the monopolist to charge a price equal to its marginal cost, the welfare gain to society relative to monopoly pricing is equal to:

(a) 180.
(b) 150.
(c) 120.
(d) 100.

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Answer (c)

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**Question 22**

In an oligopolistic market, which of the following propositions is correct?

(a) Firms find themselves in a situation of "strategic interaction" where the Nash equilibrium is Pareto optimal.
(b) It is not optimal for firms to cooperate.
(c) The creation of a cartel is optimal for the firms.
(d) Only strategies with punishment allow to sustain the Nash equilibrium on this type of market.

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Answer (c)

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**Question 23**

Consider a game with two players with the following payoffs matrix:

| | | *Player B* | |
|---|---|---|---|
| | | confesses | does not confess |
| **Player A** | confesses | **−1** ; *−1* | **0** ; *−10* |
| | does not confess | **−10** ; *0* | **−5** ; *−5* |

What can you claim?

(a) There are two Nash equilibria.
(b) The Nash equilibrium is not Pareto optimal and coordination among the two players could increase their welfare.
(c) To reach the Nash equilibrium, the two players have to coordinate.
(d) There is only one Nash equilibrium, and this equilibrium is Pareto optimal.

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Answer (d)

**Question 24**

A monopolistically competitive market is characterized by:

(a) free entry and exit of firms.
(b) homogeneous products.
(c) high barriers to entry.
(d) a low number of producers.

Answer (a)

**Question 25**

Which of the following propositions is correct in the case of a monopolistically competitive market?

(a) Advertisement suffers from the free-riding problem.
(b) Firms do not maximize profits.
(c) In the long-run equilibrium, firms have excess capacity.
(d) In the long-run equilibrium, price is equal to marginal cost.

Answer (c)

**Question 26**

Which of the following propositions is in line with economic theory?

(a) The introduction of a tax can be efficient from the perspective of social welfare.
(b) Markets in situation of monopoly, oligopoly and monopolistic competition have high entry barriers.
(c) The Coase Theorem tells us that government intervention is never economically justified.
(d) Heterogeneous products lead the market to a situation of oligopoly.

Answer (a)

**Question 27**

In the case of two goods that are perfect substitutes, the indifference curves are:

(a) linear.
(b) concave.
(c) convex.
(d) right angles.

Answer (a)

**Question 28**

Indifference curves in the case of a good and a "bad" (undesirable good):

(a) are concave with a negative slope.
(b) are convex with a negative slope.
(c) have a slope equal to zero.
(d) have a positive slope.

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Answer (d)

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**Question 29**

A compulsory insurance avoids:

(a) problems of moral hazard.
(b) problems of adverse selection.
(c) problems of moral hazard and of adverse selection.
(d) None of the above answers.

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Answer (b)

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**Question 30**

Consider an individual who decides how to allocate income between present and future consumption. Following a reduction in the interest rate, observe an increase in his future consumption and a decrease in his present consumption. This implies:

(a) future consumption is a normal good.
(b) future consumption is a Giffen good.
(c) present consumption is an inferior good.
(d) present consumption is a Giffen good.

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Answer (b)

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