

Matr.-Nr. \_\_\_\_\_

Name: \_\_\_\_\_

ORIGINAL

BA

Examination: Principles of Economics I, Sommersemester 2002

Examiner: Prof. Dr. Schwödiauer *Economics and Management I Teil 1  
+ Teil 2*

**No aids permitted except for English language dictionaries without any marking.**

*There are 25 different exercises on this exam. Make sure that this copy of the exam is complete and write your matriculation number and your name into the appropriate fields on top of this page. Work on all 25 questions. Do not mark more than one possible answer otherwise it is considered false. For every correct answer you obtain two points. For every false answer one point is subtracted. If no answer is marked you neither obtain nor lose a point. In order to pass this exam you need at least 25 points.*

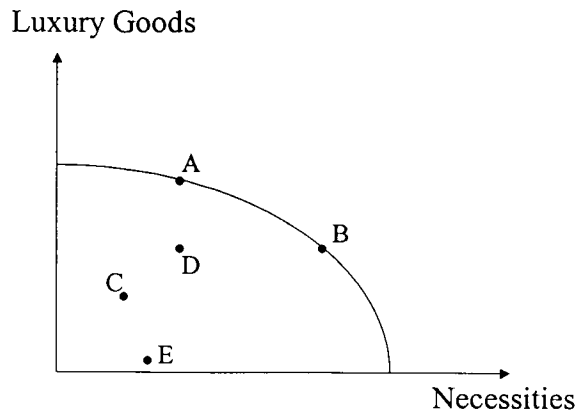
1. "National defense" is an example of a

- a) private good.
- b) public good.
- c) neither a private nor a public good.

2. Microeconomics is mainly concerned with

- a) the study of the economy as a whole.
- b) the study of individual entities (e.g. firms and households).
- c) the identification of policies leading to welfare gains.

3. The following diagram depicts the production possibility set, its frontier and some outcomes. Which statement is true?



- a) E is more efficient than C.
- b) D is more efficient than C.
- c) A and B aren't technologically feasible consumption choices.

4. If a cake is to be allocated among two persons, then

- a) any allocation is Pareto-efficient as long as nothing of the cake is left over.
- b) the criterion of Pareto-efficiency requires that each person is assigned 50% of the cake.
- c) the principle of Pareto-efficiency can be used to identify a unique allocation of the cake.

5. If a technological improvement allows all suppliers in a given market to produce at lower total costs then it is most likely that the equilibrium market price in the short run

- a) increases.
- b) falls.
- c) remains constant.

6. Since the market equilibrium price of the pizza market decreased while the supply curve remained unchanged, the demand of pizzas must have

- a) increased.
- b) decreased.
- c) responded in a way which cannot be predicted from the price movement alone.

7. In the short run the existence of price floors generates

- a) always a market equilibrium where demand equals supply.
- b) never a market equilibrium where demand equals supply.
- c) sometimes excess supply at a price equal to the price floor level.

8. If a profit-maximizing firm observes a price elasticity of its demand curve equal to 2, an increase in price leads to

- a) higher revenue.
- b) lower revenue.
- c) unchanged revenue.

9. Suppose the marginal product of songwriter Robbie is constant and equals one song per week if he works no more than two weeks. In case he works more than two weeks, his marginal product drops by 50%. If he returns from vacation and works for four weeks then he produces in this period of time

- a) exactly two songs.
- b) exactly three songs.
- c) exactly four songs.

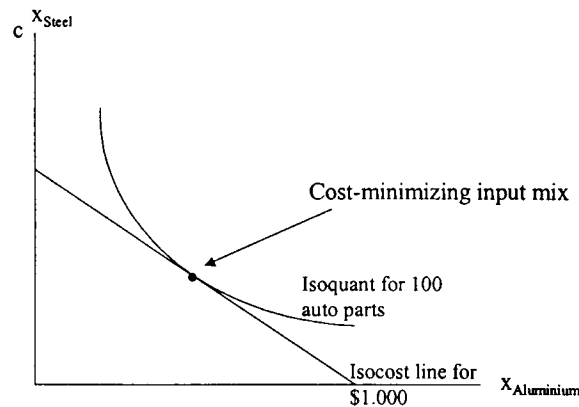
10. Joey can substitute five washing machine hours for twenty hours of washing by hand while producing the same number of cleaned shirts. A labor hour costs €6 while employing a washing machine hour is priced at €24. If Joey wants to minimize costs he should

- a) only employ washing machines.
- b) only employ laborers.
- c) be indifferent between every combination of both inputs.

11. An entrant into the German mobile phone market faces fixed costs of €100 Mio. and constant marginal costs of €0.01 per minute of network traffic. It is obvious that the entrant's average costs

- a) increase in network traffic.
- b) decrease in network traffic.
- c) remain constant for any volume of network traffic.

12. The following graphic depicts a cost-minimizing input factor choice. If the price of aluminium increases by 10% and the price of steel increases by 10% due to fiercer competition in input markets, then a cost-minimizing firm should



- a) increase its use of aluminium and decrease its use of steel.
- b) increase its use of steel and decrease its use of aluminium.
- c) not change its input mix.

13. If the total costs of a profit-maximizing monopolist exceed the firm's revenue, then the firm should

- a) shut down.
- b) gather additional information before it acts.
- c) increase its level of production such that average costs fall due to economies of scale while average receipts remain constant.

14. If the Herfindahl-Hirschmann-Index in an industry is equal to 9.000 then

- a) any firm's market power is negligible.
- b) there are very few firms with a small market share in the market

15. What completes a true statement? In an industry characterized by monopolistic competition where each monopolistic competitor maximizes its profit,

- a) firms earn economic profits in the long run.
- b) any monopolistic competitor has some market power.
- c) the quantity of goods produced in the long-run equilibrium is efficient.

16. If there are six firms in the industry and market shares are 5%, 10%, 20%, 20%, 15%, 30% the four-firm-concentration ratio

- a) equals 85%.
- b) equals 70%.
- c) equals 2.850.

17. Two companies merge. The CEOs Schmidt and Jones suggest both simultaneously and independently where to locate the merger's new headquarter. The following strategic form results:

		Schmidt		
		London	Berlin	
Jones	London	0	0	<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Utility of Schmidt                       Utility of Jones                 </div>
	Berlin	50	0	
Jones	London	0	10	
	Berlin	0	10	

Mark the correct statement:

- a) There is no Nash equilibrium.
- b) The only Nash equilibrium is that both suggest Berlin.
- c) There are two Nash equilibria.

18. Consider the following strategic form:

		Firm 2		
		High Price	Normal Price	
Firm 1	High Price	40€	30€	<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Profit of Firm 2                       Profit of Firm 1                 </div>
	Normal Price	20€	-5€	
Firm 1	High Price	10€	4€	
	Normal Price	30€	4€	

Mark the correct statement:

- a) There exists no Nash equilibrium.
- b) There exists one Nash equilibrium.

19. In a world with two goods, if a consumer always prefers to consume more of any good than less, then his indifference curves

- a) never have a positive slope.
- b) may have a positive slope.
- c) don't slope upward but may have horizontal/vertical parts.

20. Mark the correct statement:

- a) If the income effect of any good is positive, it lowers the substitution effect arising if the good's price increases.
- b) If two goods are complements and the price of one of them decreases, the demand for the good with the unchanged price most likely increases.
- c) If the demand for any good is price-inelastic, the substitution effect must be very large.

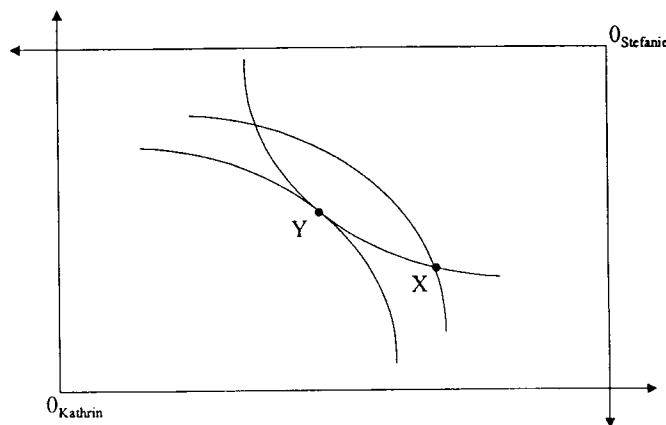
21. Jill consumes 10 bars of chocolate which is priced at €1 per bar and 5 bags of peanuts priced at €2 per bag on a weekly base. She is willing to exchange two bars of chocolate for one bag of peanuts and vice versa while her utility remains unchanged. If she wants to maximize her well-being subject to her budget for sweets fixed at €20 then she should

- a) buy more chocolate and less peanuts.
- b) buy less chocolate and more peanuts.
- c) any consumption pattern is utility-maximizing.

22. If John's marginal utility of consuming chocolate is 8, marginal utility of consuming peanuts is 10 and the prices of chocolate and peanuts coincide, then utility-maximizing John should

- a) buy more peanuts and less chocolate.
- b) not change his consumption pattern.
- c) gather additional information to calculate marginal rates of substitution and then decide on his consumption pattern.

23. The following figure depicts a typical Edgeworth-box. Mark the correct statement:



- a) Allocation X is Pareto-efficient.
- b) Allocation Y is Pareto-efficient.

24. Suppose that the economies Potterville and Fantasia are both closed, i.e. there is no trade between those economies (or with any other one). In Potterville and Fantasia the two goods brooms and crystal balls are produced with labor being the only factor of production. The following table summarizes the available production technology in each economy:

	Necessary Labor for Production [labor hours]	
	In Potterville	In Fantasia
1 broom	2	6
1 crystal ball	4	8

If both economies engage in trade in the absence of any transaction costs (such as costs of transportation), the principle of comparative advantage predicts that

- a) Fantasia specializes in the production of brooms and imports crystal balls from Potterville.
- b) Fantasia specializes in the production of crystal balls and imports brooms from Potterville.
- c) there is no trade because it is not beneficial to Potterville.

25. If today's value of receiving €120 in one year from now is equal to 100, then the current rate of interest is

- a) impossible to calculate with the given information.
- b) equal to 10%.
- c) equal to 20%.



**5004 Introduction to Management I (ST 2002) – Final Exam**

**Final Exam**

You will be able to make a maximum of 50 points. There are a few pieces of advice we can offer at this page:

1. Use the theoretical tools and terminology you have learned in class and from the textbook.
2. Make sure there is a clear structure in your argument. (Use some time to sort your ideas before you start writing the version you want to submit.)
3. Use the time you have! If you are ready much earlier than we planned you should wonder if you forgot something.
4. Remember: people have to be able to decipher what you write.
5. Leave a margin for our comments, so we can give you a more detailed feedback than just the number of points.

Here is the set of problems:

**Examiners:** Prof. Dr. Erichson, Prof. Inderfurth, Prof. Luhmer, Prof. Dr. Raith, Prof. Dr. Reichling, Prof. Dr. Spengler, Prof. Dr. Wolff

Please solve four (4) of the following five (5) problems (maximum of 12.5 points per problem):

You are welcome to use a dictionary and a calculator.

**Question 1: Terms**

Define the following terms. Feel free to illustrate your definitions by examples.

- a) Elasticity of Demand
- b) Factoring
- c) Limited Liability Company
- d) Marketing Mix
- e) Recruiting Potential

**Question 2: Decision Making**

The CEO of a software company has been asked by the board to decide which of two software markets to enter in China, business or entertainment. The marketing department has established the sales and probabilities for each market. These are given in the table below.

Profits	Probability Business	Probability Entertainment
\$10 million	.10	.30
0	.40	.40
\$10 million	.30	.20
\$20 million	.20	.10

- a) Calculate the expected profit from entering each market.
- b) Calculate the variance and standard deviation in payoffs for each market.
- c) If the CEO is risk neutral, which market would he choose to enter? Would his decision be different if he was risk averse? Explain your answers.

**Question 3: Demand**

Mike's Motor faces the demand curve:  $P = 50 - 0,02Q$ .

- a) What price and quantity maximize total revenue?
- b) What is the price elasticity at this point? Why?

**Question 4: Product Life Cycle and Experience Curve**

- a) Explain the concept of Product Life Cycle. What is the focus of production at each stage of product life cycle?
- b) Explain how the product life cycle effects the experience curve? Feel free to use graphical illustration.

**Question 5: Financial Planning and Financial Performance**

- a) Explain the concept of pro forma financial statements. Which financial statements do they include? For what purpose are they used?
- b) What is a break even point? How can it be calculated?

**Good Luck!**

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 Economics and  
 Management I Teil 2