

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

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

Chyml  
BA

Final Exam: *Economics and Management I* Teil 1  
Principles of Economics I (5004) + Teil 2

Examiner: Prof. Dr. Schwödiauer

Term: Winter 2001/02

**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.*

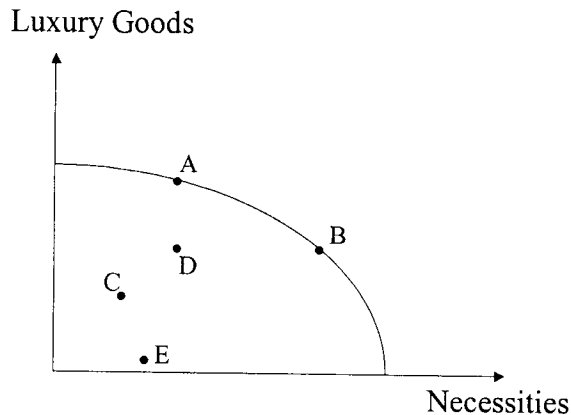
1. Economists only analyze situations in which the scarce goods involved are

- a) privately provided goods.
- b) publicly provided goods.
- c) either privately or publicly provided goods.

2. Normative economics is concerned with

- a) the identification of policies leading to welfare gains.
- b) policy recommendations based on value judgements.
- c) the explanation of economic situations.

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



- a) A and B are both efficient.
- b) E is more efficient than D.
- c) B isn't a technologically feasible consumption choice.

4. By the elimination of a negative production externality through a government an economy

- a) becomes less efficient.
- b) extends its production possibility frontier.
- c) moves closer to its production possibility frontier.

5. If the factor input prices of all suppliers in a given market decrease sharply 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 increased while the demand curve remained unchanged, the supply 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 caps generates

- a) always a market equilibrium where demand equals supply.
- b) always some form of rationing.
- c) sometimes some form of rationing.

8. If a profit-maximizing firm observes a price elasticity of its demand curve equal to 0.95, 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 four songs per week. If he works for three weeks then he produces

- a) exactly twelve songs.
- b) a number of songs which cannot be inferred from the information given.
- c) either more or less than twelve songs.

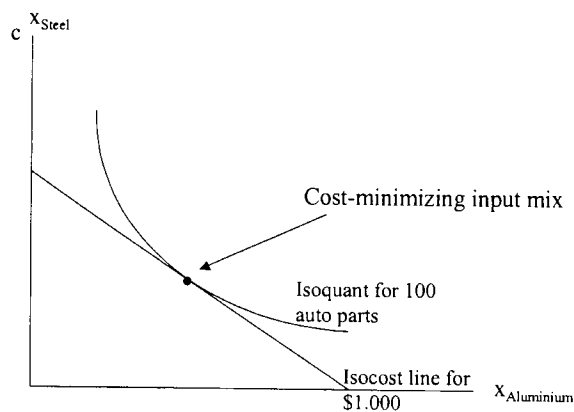
10. Joey can substitute three washing machine hours for six hours of washing by hand while producing the same number of cleaned shirts. A labor hour costs €6 while employing a washing machine hour is priced at €10. If Joey wants to minimize costs he should

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

11. If marginal costs increase and always exceed average costs, then average costs

- a) increase.
- b) decrease.
- c) either increase, remain constant, or decrease.

12. The following graphic depicts a cost-minimizing input factor choice. If the price of aluminium decreases by 15% and the price of steel decreases by 20% 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 revenue of a profit-maximizing monopolist exceeds the firm's total costs, then the firm should in the short run

- a) don't touch the level of production.
- b) increase its level of production.
- c) gather additional information if it wants to decide rationally on its level of production

14. If there are five firms in an industry each having the same market share. Then the Herfindahl-Hirschmann-Index is equal to

- a) 20.
- b) 2.000.
- c) cannot be calculated from these information alone.

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) firms earn economic profits in the short run and in the long run.
- c) firms don't earn positive economic profits in the long run.

16. If there are 5 firms in the industry and market shares are 5%, 10%, 40%, 15%, 30% the 3-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	-5 15	0 0	Utility of Schmidt  Utility of Jones
	Berlin	0 0	10 10	

Mark the correct statement:

- a) There is no Nash-equilibrium.
- b) The unique Nash-Equilibrium is that both suggest Berlin.
- c) Neither Schmidt nor Jones has a dominant strategy.

18. Consider the following strategic form:

		Player 2		
		L	R	
Player 1	U	-1 1	1 -1	Utility of Player 2  Utility of Player 1
	D	1 -1	-1 1	

Mark the correct statement:

- a) There exists no Nash-equilibrium (in pure strategies).
- b) There exists a unique Nash-equilibrium in dominant strategies.
- c) There exist four Nash-equilibria (in pure strategies).

19. If inflation in consumer goods is measured using a Laspeyres-index then it is usually

- a) underestimated.
- b) overestimated.
- c) precisely measured

20. Mark the correct statement:

- a) If a consumer good is inferior then its quantity demanded increases as its price increases.
- b) If the price of any good increases then its quantity demanded always drops.
- c) If a price increase leads to an increase in demand then it must be inferior

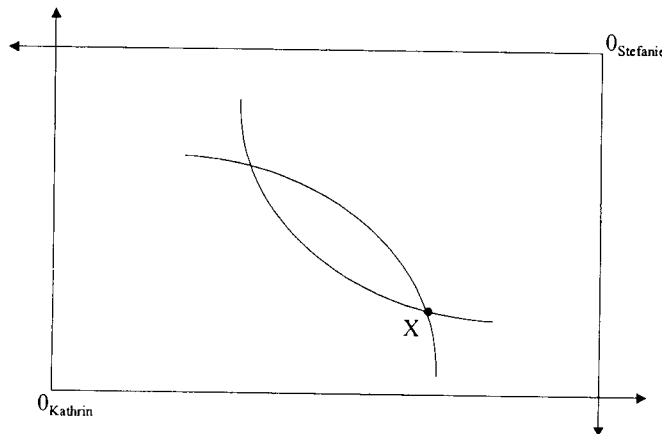
21. Jill consumes 10 bars of chocolate which is priced at €1 per bar and 5 bags of peanuts priced at €2 per bag on a weekly base. She is willing to exchange three bars of chocolate for one bag of peanuts and vice versa while her utility remains unchanged. If she wants to maximize her well-being subject 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) not change her consumption pattern.

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

- a) buy more peanuts and less chocolate.
- b) not change his consumption pattern.
- c) equalize marginal rates of substitution and relative prices.

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



- a) There is no Pareto-improvement possible.
- b) Allocation X is Pareto-efficient.
- c) Allocation X is not 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	4	6
1 crystal ball	2	2

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) Potterville specializes in the production of brooms and imports crystal balls from Fantasia.
  - b) Potterville specializes in the production of crystal balls and imports brooms from Fantasia.
  - c) there is no trade because it is not beneficial to Potterville.
25. Today's value of receiving €100 in one year from now where the current rate of interest is given by 25% is
- a) impossible to calculate with the given information.
  - b) equal to €75.
  - c) equal to €80.



5004 Introduction to Management (WS 2001/2) – Final Exam

Economics and Management I Teil 2

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 stage:

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 feed-back 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 six (6) 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) Utility maximization
- b) Bounded rationality
- c) Merchant
- d) Commercial Register
- e) Limited Partnership

Question 2: Decision Making

Suppose that an investment can yield three possible cash flows: \$5 000; \$1 000; or \$0. The probability of each outcome is 1/3.

- a) What is the expected value and standard deviation of the investment?
- b) How much would a risk-neutral person be willing to pay for the investment?
- c) How much would a risk-averse person be willing to pay for the investment?

Question 3: Marketing

Explain the notion of *market segmentation*. You are welcome to use an example to illustrate your explanation.

Question 4: Financials

- a) Describe the basic procedure for a new issue of equity.
- b) Define the following terms:
  - public issue
  - private issue
  - general cash offer
  - rights offer
  - IPO
  - Greenshoe

Question 5: Learning & Experience Effects

- a) What is the meaning of a 70% experience curve?
- b) Which factors cause experience effects?

Question 6: Financial Planning and Financial Performance

The beginning balance sheet per Jan. 1<sup>st</sup>, 2002 for a business looks like this:

	€	€	
Fixed assets	100	Debt	300
Inventory	400	Equity	?
Cash + Bank	50		

Budgeted sales for 2002 are € 1000 while the target sales growth for next year is 40%. The profit margin is assumed to remain constant at 25%. 10% interest on the debt is due at the end of each year. The relations between asset items in the beginning balance sheet and budgeted sales remain the same for each year.

Required:

- Complete the beginning balance sheet for 2002.
- Calculate operating income and interest expense expected for 2002.
- Determine the pro forma balance sheet per Dec. 31<sup>st</sup>, 2003.
- Is the growth rate of 40% feasible from the financial planning point of view if the firm cannot acquire additional funds from external sources? What dividend is affordable for 2002?

Good Luck!

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