OTTO-VON-GUERICKE-UNIVERSITY MAGDEBURG
Faculty of Economics & Management
CHAIR OF BUSINESS ECONOMICS
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11048 Introduction to Management (WT 2007/08) – Final Exam

Examiner: Prof. Dr. Kirstein, Prof. Dr. Raith, Prof. Dr. Erichson, Prof. Dr. Spengler, Prof. Dr. Chwolka, Prof. Dr. Burgard, Prof. Dr. Inderfurth, Prof. Dr. Schöndube-Pirchegger, Prof. Dr. Wolff

Please hand in the question sheets together with the answer sheet.

Matrikel-Nummer: _____

Name, Vorname: _____

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 feedback than just the number of points.

Here is the set of problems:

Please solve four (4) of the following six (6) problems (maximum of 12.5 points per problem):

(You are welcome to use a non-programmable calculator.)

1. Definitions

Define the following terms. Provide an example to illustrate your definitions.

a) JIT
b) Diversification
c) Opportunity Costs
d) Economies of Scope
e) Property Rights

2. Marketing

Candak Corporation produces professional quality digital cameras. The market for professional digital cameras is monopolistically competitive. Assume that the inverse demand curve faced by Candak (given its competitors' prices) can be expressed as $P=5{,}000 - 0.2Q$ and Candak's total costs can be expressed as $TC = 20{,}000{,}000 + 0.05Q^2$.

a) What price and quantity will Candak choose?
Is it likely to be a long-run equilibrium for Candak Corporation? Why or why not? If not, what is likely to happen in the market for professional digital cameras, and how will it affect Candak?
b) Suppose your company produces one product and that you are currently at an output level where your price elasticity is -0.5. Define "elasticity of demand". Are you at the optimal output level for profit maximization? Why or why not?
c) Which indicator measures the substitution between products? Offer the relevant definition. Why is this kind of data important to managers in terms of strategic planning?

3. Financial Planning

Part I of question 3

A company manufactures two products: A and B. The product data per unit are the following:

Per unit of	**A**	**B**
Expected demand	50 units	100 units
Selling price	80 €	50 €
Variable cost	43 €	18 €
Capacity requirement (machine X)	2.5 hrs.	1.5 hrs.

The capacity of machine X is restricted to 250 hours in the next period. Assume that the capacity of machine X cannot be increased and that there are no other capacity constraints. There are no beginning inventories.

a) What is the required capacity of machine X to satisfy the expected demand of A and B in the next period?
b) What are the unit contribution margins of A and B?
What is your recommendation on how many products of A and B should be produced in the next period to make the highest possible profit?

Part II of question 3

The accountant of your company presented you the following financial statements for the year 2003. It is your task to check if there are any mistakes. Mark and explain briefly five mistakes.

MATTEL, INC.

Statement of Retained Earnings
At December 31, 2001
(millions of U.S. Dollars)

Retained Earnings, January 1, 2003	341
Net Income for 2003	537
Depriciation	35
Dividends Declared for 2003	(171)
Retained Earnings, December 31, 2003	1.084

MATTEL, INC.
Income Statement
At December 31, 2003
(millions of U.S. Dollars)

Revenues	
Sales Revenue	4.960
Total Revenue	4.960
Expenses	
Cost of Goods Sold Expense	2.531
Advertising and Promotion Expenses	636
Other Selling and Administrative Expenses	991
Interest Expense	62
Income Taxes Expense	203
Total Expenses	4.423
Net Income	**537**

MATTEL , INC.
Statement of Cash Flows
For the Year Ended
December 31, 2003
(millions of U.S. Dollars)

Cash Flows from Operating Activities	
Cash collected from customers	4.907
Cash paid to suppliers and employees	(2.763)
Cash paid for other operating activities	(1.772)
Net cash flow form operating activities	372
Cash Flows from Investing Activities	
Cash paid to purchase equipment and other assets	(206)
Cash received from selling equipment and other assets	25
Net cash flow from Investing Activities	(181)
Cash Flows from Financing Activities	
Cash paid on notes payable and other financing	(134)
Cash paid for dividends	(171)
Net cash flow from financing activities	(305)
Net Change in Cash During the Year	**(114)**
Cash at Beginning of Year	**1.267**
Cash at End of Year	**1.153**

MATTEL, INC.

Balance Sheet
At December 31, 2003
(millions of U.S. Dollars)

Assets	
Cash	1.311
Accounts Receivable	543
Inventories	895
Property, Plant and Equipment	626
Other Assets	1.799
Total Assets	4.150
Liabilities	
Accounts Payable	1.467
Notes Payable	827
Total Liabilities	2.294
Stockholder's Equity	
Contributed Capital	1.509
Retained Earnings	707
Total Stockholders' Equity	2.216
Total Liabilities and Stockholders' Equity	4.510

4. Creating and Capturing Value

A reason for the existence of producer rents is the availability of "superior production factors".

a) Name and explain potential "superior factors of production". Illustrate these with your own examples.
b) Discuss the above statement critically.
c) HOSS-Couture is a famous manufacturer of suits. For summer 2008 they plan to enter additionally the shirt- and shoe market. Discuss potential ways that this business combination might increase value. Which trade-offs does the company have to consider with this kind of growth-plan.

5. Production and Logistics

Part I of question 5

What is the difference between centralized and decentralized production. Which trade-offs have to be considered for each option? Provide the graphical illustration of this trade-off considering the choice of plant location. Consider all necessary graphs.

Part II of question 5

A company manufactures two types A and B of kitchen tables. Each table consists of four table-legs and one tabletop. The tabletops are type-specific (A and B, respectively), while the legs for each table are common.
To its suppliers the company has to pay 20 € per leg. A tabletop costs 200 € for type A and 300 € for type B per unit. The selling price for a kitchen table amounts to 300 € for type A and 500 € for type B. Potential sales are limited by 50 tables of type A and 20 tables of type B. There exists a sales obligation of 10 units of table type A. The number of table-legs that can be supplied is limited by 240 units, and the supply of tabletops type B is restricted to 15 units.

(a) Describe the managerial production function for the company while using the following notation!
T_A / T_B : number of tabletops type A/B
Q_A / Q_B : number of kitchen tables type A/B
L : number of table-legs

(b) Calculate the marginal profits w_A and w_B for a single kitchen table of type A and B.

(c) Use the information given in the problem description and formulate the company's profit (TP) maximization problem as a Linear Program (solving this Program is not required).

6. Outsourcing and Vertical Integration

a) Describe and explain the Value Chain by Porter with all its elements. Feel free to use your own examples.

b) Only Radios (OR) makes nothing but radios. They distribute the radios through independent retailers carefully selected by location (so as to prevent free-rider problems). Suppose the demand for the radios faced by each retailer is P=$100-2Q. The marginal cost of production to OR is $20. The retailer sells so many other goods that the effective marginal cost to retailers is only the wholesale price they pay for the radios. What is the profit earned by the retailer and OR? Show that both the retailer and OR can increase profits if the retailer agrees to pay a $500 fee for the privilege of selling the radios and OR agrees to charge $20.

Good Luck!