OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

FAKULTÄT FÜR WIRTSCHAFTSWISSENSCHAFT

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Economics of Business and Law

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11048 Introduction to Management (WT 2010/11) – Final Exam

Examiners: Prof. Dr. Kirstein, Prof. Dr. Raith, Prof. Dr. Spengler, Prof. Dr. Chwolka, Prof. Dr. Burgard, Prof. Dr. Inderfurth, Prof. Dr. Schöndube-Pirchegger

You have 120 minutes time in which you can reach a maximum of 50 points.

Please:

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. Write legibly. The less we can read your handwriting, the fewer points you will receive.
5. Leave a margin for our comments.
6. You are welcome to use a non-programmable calculator.

Last Name, First Name: _____

Student ID-number: _____

Please solve four (4) – and only four – of the following five problems (maximum of 12.5 points per problem). If you present solutions to more than four problems, only the first four solutions in your answer sheet will be graded, so make sure to cancel out clearly what shall not be graded.

1. Marketing

a) Name the three Generic Marketing Strategies as defined by Porter. List and briefly explain three problems that may arise. What does Porter mean with "stuck in the middle"?

b) Apfel Corporation produces professional quality tablet computers. The market for professional tablet computers is monopolistically competitive. Apfel Corporation faces a demand function for its product which can be expressed as $Q = 25{,}000 - 5P$, where Q is the number of tablet computes and P is the price per tablet computer. Apfel's total costs can be expressed as $TC = 20{,}000{,}000 + 0.05Q^2$. Answer the following questions.

   i) Derive the "inverse" demand curve, the revenue function, the marginal revenue curve, and the marginal cost curve faced by Apfel Corporation. Display inverse demand, marginal revenue and marginal cost in a graph (do not forget to label the axes and curves).

   ii) Calculate the profit maximizing quantity and price.

2. Basics of Accounting

a) The main function of financial statements is to provide quantitative information. Explain briefly why managers, the supervisory board, stockholders, and creditors are interested in accounting information.

b) Name three further groups of potential users of accounting information.

c) BeaPea started its business on January 01, 2010. The company produces high-tech machines that can clean up oil-contaminated sea water. From the beginning of the year till December 31, 2010 different business activities occurred. BeaPea asks you to prepare the **balance sheet** as of the end of 2010 and the **income statement** for the year that ended December 31, 2010 with the proper heading and section headings. As part of that task, calculate the net income and the retained earnings at the end of the year 2010. The management of the company gives you a list of items which you have to report either in the balance sheet or in the income statement:

1. Income tax expenses	$30
2. Notes payable	$1.100
3. Cost of goods sold expenses	$550
4. Property, plant and equipment	$200
5. Sales revenues	$1.200
6. Wage expenses	$390
7. Inventory	$250
8. Accounts receivable	$550
9. Interest expenses	$100
10. Contributed capital	$300
11. Cash account	$670
12. Accounts payable	$220
13. Promotion expenses	$60

Moreover, BeaPea paid out dividends of $20 in the year 2010.

3. Production and Cost

a) Define the term supply chain and provide a brief graphical illustration.

b) Describe briefly the concepts economies of scale and economies of scope.

c) A company manufactures two types A and B of bicycles. Each bicycle consists of two wheels and one frame. The frames are type-specific (A and B, respectively), while the wheels for each bicycle are common. To its suppliers the company has to pay 10 € per wheel. A frame costs 100 € for type A and 250 € for type B per unit. The selling price for a bicycle amounts to 250 € for type A and 450 € for type B. Potential sales are limited by 50 bicycles of type A and 20 bicycles of type B. There exists a sales obligation of 10 units of bicycle type A. The number of wheels that can be supplied is limited by 240 units, and the supply of frames for type B is restricted to 15 units.

i) Describe the managerial production function for the company while using the following notation!

F_A / F_B : number of frames type A/B
W : number of wheels
Q_A / Q_B : number of bicycles type A/B

ii) Calculate the marginal profits m_A and m_B for a single bicycle of type A and B.

iii) Use the information given in the problem description and formulate the company's profit (*TP*) maximization problem as a Linear Program (Note: A solution is not required).

4. Company Law

a) Name 5 possible legal forms of organizations.

b) What are the ten crucial questions with respect to choosing the right legal form for a company? Answer them for <u>one</u> of the legal forms from part a).

5. Revenue and Production budgets

a) Define the concept of a master budget and explain its significance.

b) The Scarborough Corporation manufactures and sells two products Deluxe and Standard. In July 2010, Scarborough's budget department gathered the following data to prepare budgets for 2011:

2011 Projected Sales:

Product	Units	Price
Deluxe	100,000	$ 200
Standard	70,000	$ 150

2011 Expected/ Target Inventories in Units:

Product	January 1, 2011	December 31, 2011
Deluxe	15,000	40,000
Standard	4,000	10,000

The following direct materials are used in the two products:

	Amount (in lbs.) used per unit	
Direct Material	Deluxe	Standard
A	5	4
B	4	6
C	2	0

Projected data for 2011 with respect to direct materials are as follows:

Direct Material	Anticipated purchase price (in $)	Expected Inventories (in lbs.) January 1, 2011	Target Inventories (in lbs.) December 31, 2011
A	7	44,000	50,000
B	5	20,000	40,000
C	2	4,000	5,000

Based on the preceding projections and budget requirements for the two products, prepare the following budgets for 2011:

1. Revenues budget (in dollars)
2. Production budget (in units)
3. Direct materials purchase budget (in lbs.)
4. Direct material purchase budget (in dollars)