Examination: 5073
Management III
<u>Marketing Management</u>

Winter Semester 2005 / 2006

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You are allowed to use a non-programmable calculator (in accordance with the instructions given by the examination office) and a translating dictionary from your native language to English (without any notes written into it). **<u>All</u>** of the **<u>twelve</u>** (12) examination questions must be answered (the estimated time to spend on each question is provided). This examination consists of **<u>four</u>** (4) pages and must be completed within 120 minutes.

Question 1 (8 Minutes)

The study of Consumer Behavior is guided by several theories originating in the field of psychology. Understanding the behavior of consumers is never a simple task!

(a) In 1913, John Watson delivered a famous lecture that became known as the "behaviorist manifesto." Explain the major elements of Watsonian Behaviorism (SR) and how it was influenced by the work of Ivan Pavlov (Classical Conditioning).

(b) Discuss the extension of this theory by B. F. Skinner (Operant Conditioning).

Question 2 (8 Minutes)

The State Farm Insurance Company is a major provider of insurance services to consumers in the United States. Their Mission Statement says, "Our success is built on a foundation of shared values, quality service, and relationships. Our vision for the future is to be the customer's first and best choice in the products and services we provide. Our customers' needs will determine our path."

(a) Explain this statement of business philosophy in the context of Relationship Marketing. What is the difference between the "Selling Concept" and the "Marketing Concept"?

(b) Do you see any relationship between "ethical business practices" in general and "corporate profitability" – or are these concepts at odds with each other?

Question 3 (8 Minutes)

A company must design strategies that are appropriate for each stage of the Product Life Cycle (PLC) for the products they sell in order to extend their life and profitability.

(a) Explain how the profitability that a company might expect from a product during each of the four PLC stages that the product experiences during its life as a saleable product might differ.

(b) How might packaging strategies for this product differ within each of the four PLC stages? At which stage is the package likely to be the flashiest? At which stage is it likely to be the most basic, with the most attention paid to cost? When might it be redesigned the most radically and why?

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Question 4 (10 Minutes)

Suppose that Karstadt Magdeburg is selling two consumer products; X and Z. The store management knows that these products are complements to each other. The profit-maximizing price of product X is € 14.50. On average 4.1 units of Z are sold every time a unit of X is sold. The profit-maximizing price of product Z is € 2.85 and its direct variable cost is € 1.65. It has been estimated that the cross price elasticity between these two products is equal to (– 1.91) and the profit maximizing price elasticity of product X is (– 3.93).

(a) What assumptions were made when the Amoroso-Robinson Relation was derived? Explain the relation and what does it tell us about pricing?

(b) Explain the concept of Cross Price Elasticity of Demand and what relevance does it have to the marketer?

(c) Is it optimal for the company to charge the profit-maximizing price for X? Based on the Niehans Formula, what price would you recommend that they charge for X?

$$P_X^* = [\varepsilon_X / (1+\varepsilon_X)](v_X) - M, \quad \text{where } M = (p_Z - v_Z)[\varepsilon_{ZX} / (1+\varepsilon_X)](x_Z / x_X)$$

Question 5 (15 Minutes)

Consider a single product company that is currently spending an advertising budget of 14 on two available advertising media (z_1 with unit price p_1 and z_2 with unit price p_2).

$$z_1 = 4.0;\ p_1 = 2.0 \text{ and } z_2 = 2.0;\ p_2 = 3.0$$

$$S = 2.4 + 6.4\sqrt{z_1} + 3.2\, z_2 - 0.2\, z_2^2, \text{ where } S = \text{Sales Quantity}$$

The product sells for 5.5, direct variable cost is 4.25, and the fixed cost is 3.8.

(a) Is this company allocating its advertising budget optimally between these two available media? Explain and justify your answer in detail (Yes / No answers are not sufficient).

(b) Calculate the profit earned by this company.

(c) Could this company increase its profit by spending 19 on advertising (Assume $z_1 = 5$ and $z_2 = 3$)? Explain your answer in detail.

Question 6 (10 Minutes)

All diffusion models have a similar structure:

$$S(t) = g(t)\,[N^* - N(t)].$$

(a) How are diffusion models used in marketing?

(b) A very popular diffusion model used in marketing planning is the Bass Model. Explain the workings of the Bass Model.

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Question 7 (10 Minutes)

A German company with headquarters in Leipzig is considering the launch of a new product this summer. A marketing research firm has provided the following information. The marketing research firm projects that at a price of € 21.60, 150,000 units could be sold in the first year. The company had previously expected a higher level of sales and based on the findings of the market research firm they are now a bit concerned about the prospects for this new product. A sales agent in Magdeburg has offered to handle this product for a fixed cost of € 1,000 per month and a sales commission of 15%. The company estimates the cost of establishing an office in Magdeburg to be around € 240,000 per year. The sales person in this office would earn a monthly sales commission of 5% on all sales exceeding the € 5,000 level.

(a) Should the company use the sales agent or not? What are the factors that must be considered when deciding whether to use a sales agent?

(b) What is the difference between agents and merchants?

Question 8 (8 Minutes)

When only one advertising media, z, is available, the sales response function is: $S = f(z)$ and profit is equal to: $\pi = P\,f(z) - C_f - v\,f(z) - z\,p$; where: P = selling price and p = the price of the media (both constants). At profit maximization:

(a) $z^* = [\varepsilon_z^* (P - v)\, S^*] / p$; Explain this result and what it means to the marketer.

(b) Explain the Dorfman / Steiner Theorem: $B^*/P^*S^* = -\,\varepsilon_z^* / \varepsilon^*$ (Why is it negative?)

Question 9 (10 Minutes)

Harvard Business School Professor Michael E. Porter is one of the world's most influential thinkers on completive strategy.

(a) In the strategy literature the word "Synergy" often appears. Name two sources of synergy and explain each of them using examples.

(b) Professor Porter has said, "Competitive advantage is at the heart of any strategy." Explain the two generic strategies he outlined and what was his "warning" to companies?

Question 10 (10 Minutes)

An important tool in marketing planning is market share analysis.

(a) Using scanner data, the Parfitt / Collins Model decomposes market share into three main components (in the model these components from left to right are: A, B, and C). What is the name given to each of these three components and how are they calculated?

(b) Consider a brand that has B = 38 %. If you were the marketing manager responsible for this brand, what would you recommend?

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Question 11 (15 Minutes)

Consider a popular consumer product that has the following price response function:

$$S = 5{,}273{,}600 - 95{,}200\ P$$

The product has a total cost of production and distribution given by the following function

$$TC = 56{,}800 + 7.12\ S$$

where: S = sales quantity, P = selling price, and TC = total cost.

(a) Calculate the revenue-maximizing price for this product. If the company were to charge this price, how much profit would it earn?

(b) Calculate the profit-maximizing price for the product. If the company were to charge this price, how much profit would it earn.

(c) Calculate the profit maximizing price elasticity and demonstrate that the Amoroso-Robinson Relation is in fact true.

Question 12 (8 Minutes)

The concept of Market Segmentation attempts to divide a large heterogeneous total market into groups of relatively "homogeneous" potential buyers called market segments.

(a) What do we mean by relatively "homogeneous" market segments in the sentence above? These segments display homogeneity in what sense?

(b) What is meant by the term "lifestyle" and explain why it has significance to marketers who are engaging in market segmentation?

This is the end of the examination

GOOD LUCK!