Examination: 11058
## Management III
Marketing Management
Summer Semester 2009
Dr. John E. Brennan

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). __All__ of the __twelve__ (12) examination questions must be answered. This examination consists of __four__ (4) pages and must be completed within 120 minutes.

Question 1 (10 Minutes)
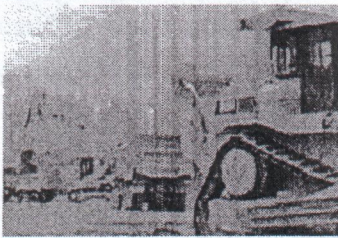
For more than 75 years, Caterpillar Inc. has been building the world's infrastructure and is the leading manufacturer of construction and mining equipment. Chairman & CEO Jim Owens has said, "Caterpillar's reputation for making a difference in the world is something we are proud of as a company and we are fully committed to good corporate citizenship. We are doing well by 'doing good' all around the world."

(a) Explain this statement of business philosophy in the context of Relationship Marketing.

(b) Relate the stated core values and culture of the Caterpillar Corporation to the "Stakeholder Approach" and the "Marketing Concept".

Question 2 (10 Minutes)

Diffusion models in general all share a common structure:

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

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

(a) Consider product A (p = 0.03; q = 0.42) and product B (p = 0.16; q = 0.42). Which of these two products would take the least amount of time to exhaust their potential market, N*? Explain your answer in detail with a sketch if possible.

Question 3 (10 Minutes)

Communication theory offers a convenient way to think about a major advertising campaign.

(a) Explain Lasswell's basic communication model and explain its relevance to business communication policies (It is simply not enough to draw the picture!).

(b) What is meant by the term "competitive clutter" and give an example?

Question 4 (10 Minutes)

Suppose that the Paulaner Münchner brewery 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).

$$z_1 = 5.2; \; p_1 = 2.0 \text{ and } z_2 = 1.2; \; p_2 = 3.0$$

$$S = 15.4 + 6.4 \, z_1^{\frac{1}{2}} + 3.2 \, z_2 - 0.2 \, z_2^2,$$
where: S = Sales Quantity

The product sells for $P = 5.5$, direct variable cost is $v = 4.25$, and the fixed cost is $C_f = 3.8$.

(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) Is there a way that this company could increase its profit? Explain in detail and if so calculate the new profit.

Question 5 (10 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 6 (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 7 (10 Minutes)

A company's freedom to determine prices for its products is constrained between a "ceiling" and a "floor".

(a) What is the "ceiling" and the "floor" and outline two of the price setting methods presented in the lecture.

(b) If $x = 40 - 4p$, calculate the revenue maximizing price and the revenue maximizing price elasticity of demand.

Question 8 (10 Minutes)

A certain drug retailer sells four popular brands of shampoo (A - D). Sales have been tracked using scanner data and the following concepts have been calculated.

Brands	Penetration	Repeat Purchase Rate	Buying Intensity Rate
A	0.4382	0.4258	1.0592
B	0.2811	0.5432	0.9643
C	0.8526	0.2264	0.9903
D	0.5759	0.7968	1.0112

(a) Which of these brands is experiencing the most difficulty penetrating the market? Outline and explain a marketing strategy that might be appropriate for this company.

(b) Assume that you are a product manager with responsibility for brand "C". Tell as much as you can about the performance of this brand from the data given in the table above and outline a strategy to increase the market share of this brand.

Question 9 (10 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 above sentence?

(b) What is the significance of "lifestyle" to marketers engaging in market segmentation?

Question 10 (10 Minutes)

A wholesaler is selling two industrial products (A and B) and has discovered that they are complements to each other. The profit maximizing price of product A is 185 EUR per unit and on average two units of product B are sold every time a unit of product A is sold. The profit-maximizing price of product B is 95 EUR and its direct variable cost is 46 EUR. It has been estimated that the cross price elasticity between these products is equal to (− 5.3) and the price elasticity of product A is (− 2.8).

(a) Discuss the factors that must be considered when pricing product A.

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

$$p_A{}^* = [\varepsilon_A / (1+\varepsilon_A)](v_A) - M, \quad \text{where} \quad M = (p_B - v_B)[\varepsilon_{BA} / (1+\varepsilon_A)](x_B / x_A)$$

Question 11 (10 Minutes)

When only one advertising media, z, is available to use, 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).

(a) The profit maximizing quantity of the advertising media is $z^* = [\varepsilon_z^* (P - v) S^*] / p$; Explain this result and what does it mean to the marketer.

(b) Explain the Dorfman / Steiner Theorem $\{B^*/P^*S^* = - \varepsilon_z^* / \varepsilon^*\}$. Why is there a negative sign on the right-hand side of this theorem?

Question 12 (10 Minutes)

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

$$x = 4,200,000 - 95,000 p$$

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

$$C = 50,000 + 7 x$$

where x = sales quantity, p = unit selling price, and C = total cost.

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

(b) Calculate the profit-maximizing price for the product. Again, if the company were to charge this price, how much profit would they earn?

(c) Calculate the profit maximizing price elasticity.

This is the end of the examination
GOOD LUCK !