Examination: 11058

Marketing Management

Winter Semester 2009 / 2010

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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). **All** of the **twelve** (12) exam questions must be answered (the estimated time to spend on each question is provided). This examination consists of **four** (4) pages and must be completed within 120 minutes.

Question 1 (8 Minutes)

Harold D. Lasswell (1902-1978) was one of the most influential political scientists of our time. The Communication Model he contributed asks, "Who says what, in which channel, to whom, with what effect?" This model provides a very useful tool when analyzing advertising messages.

(a) Within the context of this model, explain what is meant by "Encoding" and "Decoding."

(b) Discus what is referred to by the concept of "Competitive Clutter." Can you give an example?

Question 2 (8 Minutes)

Diffusion Models have been used extensively in marketing to forecast the number of first purchases of a new product. The general structure of most diffusion models is:

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

The popular Bass Model specifies a functional form for g(t) that proves to be very useful.

(a) In the Bass formulation, the total sales quantity sold in time period t, S_t, is the sum of sales to two different groups of consumers. Describe the differences in the consumption behavior of these groups and how a communication strategy might take this into account.

(b) Assume that two different products are launched on the market at the same time. One of these products has a brand name FLAIR (with Bass Model parameters $p = 0.02$, $q = 0.41$) and the other has a brand name DUMBO (with $p = 0.12$, $q = 0.42$). Explain how the sales of these products would develop over time.

Question 3 (8 Minutes)

The "Percentage of Sales Revenue" is a commonly used method for determining advertising budgets. When setting price, many companies rely on a method called "Mark-up Pricing."

(a) In terms of management decision-making, what do these two methods have in common? What are the advantages of using these methods?

(b) Are there any disadvantages to using these kinds of decision-making methods?

Please turn to page 2

Question 4 (15 Minutes)

Consider a company that sells only one product. This company is currently spending 5.204 on advertising by utilizing two different advertising media, newspaper (z_1) and radio (z_2). The product is selling for 14.76 and has a direct variable cost of 13.63 (z_1 and z_2 represent units of the media employed; p_1 and p_2 are the unit prices of these media).

$$S = 2.0 + 3.4\, z_1 - 0.24\, z_1^2 + 1.8 \ln (z_2)\text{, where S = Sales Quantity}$$

$$z_1 = 6.4;\ p_1 = 0.59 \text{ and } z_2 = 2.8;\ p_2 = 0.51$$

(a) Is this company allocating its advertising expenditures optimally between these two available media in order to produce the maximum profit? Explain and justify your answer in detail (Yes / No answers are not sufficient).

(b) If you agree with the advertising policy of this company, there is no need to answer this part of the question. If you think that this company could do better, what would you recommend?

Question 5 (10 Minutes)

An extremely interesting and successful corporate communication strategy is that used by the Intel Corporation in the "Intel Inside®" Program.

(a) In the beginning Intel studied well-known companies supplying component or ingredient products such as NutraSweet, Teflon, and Dolby. Explain how this developed into a "pull" distribution channel strategy.

(b) Today the Intel Inside® Program is one of the world's largest co-operative marketing programs. Explain this in terms of a "push" distribution channel strategy.

Question 6 (12 Minutes)

A bookstore in Magdeburg sells four popular magazines named by the letters (A - D). Sales have been tracked using scanner data and the following concepts have been calculated.

Magazine	A	B	C	D
Penetration	0.4382	0.3751	0.8526	0.5233
Repeat Purchase Rate	0.4258	0.8846	0.2264	0.5623
Buying Intensity Rate	1.0302	0.9821	0.9710	1.0008

(a) Assuming the total market consists of only these magazines, which of these brands of is the market leader? Explain your answer and tell as much as possible about this magazine.

(b) Assume that you have been hired as the marketing manager with responsibility for the sales of magazine "C". Tell as much as you can about this magazine from the data given in the table above and outline a strategy to increase its market share.

Please turn to page 3

Question 7 (15 Minutes)

Assume that a certain company sells only one product. This company has a fixed cost of 26 and direct variable cost 0f 5.8 per unit. The price response function is:

$$S = 20 - 0.1\ p^2$$

(a) Calculate the Revenue maximizing price.

(b) Calculate the Profit maximizing price.

$$f(x) = a\ x^2 + b\ x + c$$
where a, b, and c are real numbers with $a \neq 0$
$$x_{1,2} = -\ b\ /\ 2a \pm \sqrt{(b^2 - 4\ a\ c)\ /\ 4\ a^2}$$
where $(b^2 - 4\ a\ c) \geq 0$

(c) Calculate the Profit maximizing price using the Amoroso-Robinson Relation.

$$p^* = [\varepsilon^*\ /(1 + \varepsilon^*)]\ v$$

Question 8 (8 Minutes)

Decisions concerning the Channel of Distribution are important for Marketing Management.

(a) Explain the advantages and disadvantages of using Direct Marketing as apposed to using marketing intermediaries.

(b) Explain the concept of Channel Levels. Name some of the factors that one must consider when designing a channel of distribution. What are the advantages of increasing channel levels, and what are the disadvantages.

Question 9 (8 Minutes)

Understanding the behavior of consumers is never a simple task. Consumer Behavior, however, attempts to explain how consumers make their consumption decisions.

(a) Using the "Marlboro Country" advertisements as an example, explain Classical Conditioning. What is the Unconditioned Stimulus? What is the Unconditioned Response? Explain the Conditioned Relationship.

(b) What is Cognitive Dissonance and how is it related to Marketing.

Question 10 (10 Minutes)

A company's freedom to set price is constrained by many factors. Consider the sales of product i as represented by the following Price Response Function:

$$S_i = 2.0 - 6.75\ P_i + 3.5\ P_j + 0.04\ Y$$

(a) If $P_j = 0.45$ and $Y = 120$, calculate the point Price Elasticity at $P_i = 0.50$

(b) If $P_i = 0.50$ and $Y = 120$, calculate the Cross Price Elasticity at $P_j = 0.45$

Please turn to page 4

Question 11 (10 Minutes)

Consider a company that sells two products, A and B.
The Amoroso-Robinson Relation is:

$$P_A^* = [\varepsilon_A^* / (1 + \varepsilon_A^*)]\, v_A$$

$$P_B^* = [\varepsilon_B^* / (1 + \varepsilon_B^*)]\, v_B$$

And the Niehans Formula is:

$$P_A^\circ = \{[\varepsilon_A^\circ / (1 + \varepsilon_A^\circ]\, v_A\} - M_A$$

$$\text{Where: } M_A = (P_B^\circ - v_B)[\varepsilon_{BA}^\circ / (1 + \varepsilon_A^\circ)](S_B^\circ / S_A^\circ)$$

$$P_B^\circ = \{[\varepsilon_B^\circ / (1 + \varepsilon_B^\circ)]\, v_B\} - M_B$$

$$\text{Where } M_B = (P_A^\circ - v_A)[\varepsilon_{AB}^\circ / (1 + \varepsilon_B^\circ)](S_A^\circ / S_B^\circ)$$

(a) Explain in some detail the difference between P_A^* and P_A°.

(b) Explain the difference between ε_A^* and ε_A°.

Question 12 (8 Minutes)

Determining the "best" price is an important task for all marketers.

(a) If $S = 40 - 4P$, calculate the revenue maximizing price and the revenue maximizing price elasticity of demand.

(b) What is the "price ceiling" for this product?

<u>This is the End of the Examination</u>

<u>GOOD LUCK!</u>