

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION

MBAD 802: MANAGERIAL ECONOMICS

STREAMS: Y1S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 4/12/2019

2.30 P.M - 4.30 P.M

INSTRUCTIONS

Answer question one and any other two

QUESTION ONE

- (a) Explain giving relevant examples the relationship among managerial economics, economic theory and decision sciences. [6 marks]
- (b) Derive the shareholder's wealth maximization model and explain how it is affected by new technology increased risk and inflation. [6 marks]
- (c) Describe the main conditions for determining a maximum and a minimum of a function. [4 marks]
- (d) Managers face constraints that limit the options available to them in their optimization decisions. Supposing a firm faces the following constraint optimization problem.
Maximize profit $(\Pi) = 160X - 44X^2 - XY - 6Y^2 + 100Y$
Subject to $X + Y = 24$
Solve the above optimization problem by using the Lagrangian multiplier method. [8 marks]
- (e) The marginal cost of a firm for a particular commodity is and \$ 15 its price elasticity of demand equals -2. Find the optimal price. [3 marks]
- (f) Describe the factors that determine the advertisement elasticity. [3 marks]

QUESTION TWO

(a) Consider a firm that is considering whether to adopt a high - price or a low price strategy.

The success of the firm’s pricing strategy depends however on its competitor’s reaction to the firm’s pricing strategy. The firm estimates that if it adopts a high price strategy there is a 60% probability that competitors will respond with a high - price of their own and 40% that they will respond with a low price. On the other hand, if the firm adopts a low price strategy, there is a 20% probability that competitors will respond with a high price and 80% with a low price. Each pricing strategy on the part of the firm and competitors price response (reaction) can occur under three states of the economy boom, normal and recession with probabilities of 30,50 and 20% respectively.

Assume the NPV of profits of the firm is represented below given each pricing response by the competitors.

Firm prices high

State of economy	Competitors pricing response	
	High	Low
Boom	\$60,000	50,000
Normal	\$40,000	30,000
Recession	\$20,000	20,000

Firm prices low

State of economy	Competitors pricing response	
	High	Low
Boom	50,000	35,000
Normal	40,000	30,000
Recession	25,000	25,000

Use the decision tree analysis to establish the expected profits. [16 marks]

(b) Explain the significance of elasticity concept. [4 marks]

QUESTION THREE

(a) Suppose that a coffee producing firm estimated the following regression of the demand for its brand of coffee

$$Q_c = 1.5 - 3.0p_c + 0.8Y + 2.0 P_b - 0.6p_s + 1.2 A$$

Where Q_c = sales of coffee brand C, in dollars per pound

P_C – price of coffee brand C, in dollars per pound

Y = personal disposable income in millions of dollars per year

P_b = price of the competitive brand of coffee in dollars per pound

P_s = price of sugar in dollars per pound

A = advertising expenditures for coffee brand C in thousands of dollars per year.

Suppose in that year $p_c = \$ 2$, $Y = \$ 2.5$, $p_b = \$1.80$, $p_s = 81$ and $A = \$1$

Required :

- (a) Interpret the results of the estimated demand. [2 marks]
- (b) Compute point elasticity of demand for the firm’s brand of coffee with respect to its price. [3 marks]
- (c) Compute the cross price elasticity of demand for coffee with respect to the price of competitive coffee brand b. [3 marks]
- (d) At the current price level, would it be viable for the firm to increase the price level of its brand of coffee? Support your answer. [5 marks]
- (e) Would you recommend that the firm continues to advertise its product? [2 marks]
- (f) Explain in details the techniques used to estimate demand of the consumers. [3 marks]
- (g) What do you understand by the term consumer clinics? [2 marks]

QUESTION FOUR

- (a) (i) Explain the scope of market experiments. [5 marks]
- (ii) Outline the main sources of economies and diseconomies of scale. [3 marks]
- (iii) Using diagrams explain the short run per unit cost curves. [5 marks]
- (iv) Given ;

$$TC = 100 + 10X$$

$$TR = PX$$

Compute the algebraic break even output. [2 marks]

- (b) Explain the major factors that should be considered when analyzing the structure of a market. [5 marks]

QUESTION FIVE

- (a) Suppose that the cost equation for a monopolist is given by

$$TC = 500 + 20Q^2$$

Let the demand equation be given by

$$P = 400 - 20Q$$

Find the profit maximizing price and output for a monopolist. [5 marks]

- (b) Differentiate between psychological pricing and two part pricing. [2 marks]
- (c) What are the strengths and weaknesses of the risk adjusted discount rate. [4 marks]
- (d) Discuss the relationship between scarcity choice and opportunity cost and show how they influence the management decision making process. [6 marks]
- (e) Why would a firm that incurs losses choose to produce rather than shut down. [3 marks]
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