



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

THIRD YEAR SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS & FINANCE

BACHELOR OF ECONOMICS & STATISTICS

EAE 303: MANAGERIAL ECONOMICS

DATE:

TIME:

INSTRUCTIONS:

Answer question one and any other two questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) State and explain the methods of evaluating an industry's performance. (10 marks)
- b) State the law of diminishing marginal returns and explain with a diagram the three stages of production (10 marks)
- c) Suppose an investor regards \$100,000 with certainty as equivalent to the expected risky return of \$400,000 per year for the next five years. The initial cost outlay for the project is \$300,000, and the risk-free discount rate is 10 percent. Find the net present value of the investment project.

Compute the certainty equivalent coefficient (α) (10 marks)

QUESTION TWO (20 MARKS)

- a) Explain the difference between fixed and variable costs (4 marks)
- b) Briefly discuss the main sources of economies and diseconomies of scale (8 marks)
- c) Explain the relationship between short-run and long-run costs of production (4 marks)
- d) With the aid of a diagram explain the break-even analysis of the firm (4 marks)

QUESTION THREE (20 MARKS)

A firm 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 competitors' 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 also that the estimated net present value (NPV) of profits of the firm given each pricing response of the competitors is as presented in the table below

The NPV of Profits of the Firm given each Pricing Response of competitors'

<u>Firm Prices High</u>		
State of economy	Competitors' pricing response	
	High	Low
Boom	\$60,000	50,000
Normal	\$40,000	30,000
Recession	\$20,000	20,000
<u>Firm Prices Low</u>		
State of economy	Competitors' pricing response	
	High	Low
Boom	50,000	35,000
Normal	40,000	30,000
Recession	25,000	25,000

Require;

Construct a decision tree for the above company and determine the net present value (NPV) of the profits of the firm, given each possible pricing response of the competitors and states of economy. (20 marks)

QUESTION FOUR (20MARKS)

- a) Identify and explain various techniques of demand estimation (8 marks)
- b) Explain consumer clinics and market experiments as methods of information collection. (4 marks)
- c) Briefly discuss the steps involved in demand estimation by regression analysis.(8 marks)

QUESTION FIVE (20 MARKS)

- a) To determine the equilibrium price and output of a monopolistic market both in short-run (8 marks)
- b) The following is the demand and total revenue functions of a firm;

$P = 20 - 4Q$, $TC = 5Q$ where P is the demand function, TC is the total cost and Q is the quantity produced and sold. Calculate;

- i) Total revenue function (3 marks)
- ii) The output maximizing the revenue (4 marks)
- iii) The output maximizing the profit and hence the maximum profit (5 marks)