



MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS

EAE 303: MANAGERIAL ECONOMICS

DATE: 21/1/2021

TIME:8.30-10.30 AM

INSTRUCTIONS:

Answer question one and any other two questions

QUESTION ONE (30 MARKS)

- a) Discuss the economic meaning of costs and profit (4 marks)
- b) Suppose that the demand equation for Delmonte, a monopolist, is given by $P = 400 - 20Q$ cost equation is given by $TC = 500 + 20Q^2$. Find the profit-maximizing price and output for the monopolist. (6 marks)
- c) Explain the shape of the production function and Law of Diminishing Returns (6 marks)
- d) Using the following demand and supply functions for a commodity x , compute the equilibrium price and quantity. (4 marks)
- $$Q_d = 100 - 2p; \quad Q_s = 40 + 4p$$
- e) State and explain the methods of evaluating an industry's performance. (4 marks)
- f) Suppose an investor regards 200,000 with certainty as equivalent to the expected risky return of \$800,000 per year for the next five years. The initial cost outlay for the project is \$600,000, and the risk-free discount rate is 10 percent. Find the net present value of the investment project.

Compute the certainty equivalent coefficient (α) (6 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 company is considering two mutually exclusive projects requiring an initial cash outlay of Sh 18,000 each and with a useful life of 5 years. The company required rate of return is 10% and the appropriate corporate tax rate is 30%. The projects will be depreciated on a straight line basis. The before depreciation and taxes cashflows expected to be generated by the projects are as follows.

<i>YEAR</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Project A	Shs 9,000	7,000	5,000	4,000	3,000
Project B	Shs 6,000	10,000	3,000	5,000	6,000

Required:

Calculate for each project

- a) The payback period
- b) The average rate of return
- c) The net present value
- d) Profitability index
- e) The internal rate of return

Which project should be accepted? Why?

QUESTION FOUR (20 MARKS)

- 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) A firm produces candles. The market for candles is highly competitive, with candles currently selling for \$10. The firm's short-run total cost function is $C = 200 + 0.2q$, so its marginal cost is $MC = 0.4q$.
- i. What is the firm's profit-maximizing quantity? (4 marks)
 - ii. Is the firm earning a profit? (5 marks)
 - iii. What is the short-run shutdown price? (3 marks)
- b) Discuss any four sources of monopoly power. (8 marks)