MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

SCHOOL OF BUSINESS, ECONOMICS AND HOSPITALITY AND TOURISM MANAGEMENT

DEPARTMENT OF ECONOMICS

THIRD YEAR SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND FINANCE

EAE303: MANAGERIAL ECONOMICS

DATE: **TIME:**

INSTRUCTIONS: Answer Question ONE and any other THREE questions

QUESTION ONE (COMPULSORY 30 MARKS)

a) Given that the future is unknown, the best we can do is to estimate the likelihood of future events and then use expected profit as the decision criterion.' Discuss

(6 marks)

b) Discuss how managers can apply of price elasticity of demand to their decision making.

(8 marks)

c) Proxy Computing Co. has the following costs:

TC = 256 + 128Q + 8Q2

Identify the fixed, variable and marginal costs. Does the cost structure represent a short-run or long-run cost structure? Why? (8 marks)

d) Suppose there are two classes of buyers in a market served by a monopolist. At this point the two classes are lumped together and the monopolist is currently producing the profit maximizing quantity based upon being a single price monopolist. Suppose that the monopolist perceives that its relevant market demand curve is given by the equation $P = (40/3) - (2/3)Q$ and its MC = ATC = 4. Suppose this monopolist acts as a single price monopolist. Calculate the monopolist's price, quantity, and profit given the above information. (8 marks)

QUESTION TWO (20 MARKS)

a) A firm has 2 projects, and their probability distribution and their possible returns for various states of the economy are as follows;

State of the Economy	Probability of occurrence of state of economy (P_i)	Profit of project A if state of economy occurs	Profit of project B if state of economy occurs
BOOM	0.2	4400	3200
NORMAL	0.5	1800	1600
RECESSION	0.3	1200	110

Required

Compute the standard deviation and coefficient of variation of each project. Advise the firm on which project to undertake. (10 marks)

b) Analyze the effects of an increase in both wage rates and labour productivity on the costs of the firm (6 marks)

c) Explain the inability of economic theory to find satisfactory solutions to the theoretical problem of price and output decision-making in oligopolistic markets (4 marks)

QUESTION THREE (20 MARKS)

a) Clearly distinguish between consumer clinic and market experiments (6 marks)

b) Consider a perfectly competitive market with a market demand curve that is given by the equation $P = 2000 - Q$. A representative firm in this market has a total cost curve given by the equation $TC = 121 + 64q + q^2$ and a marginal cost curve given by $MC = 64 + 2q$. Q is the market quantity and q is the firm quantity.

Let's start in the short-run with this market. Suppose the short-run price in this market is $100.

   i) What is the market quantity in this market given this short-run price? (2 marks)

   ii) What is the representative firm's level of production given this short-run price? (2 marks)

   iii) What is the representative firm's level of profits in the short-run given this market price?
   (4 marks)

c) Can this short-run equilibrium also represent a long-run equilibrium for this firm? Explain your answer. What do you anticipate will happen as this market adjusts to the long-run? (2 marks)

d) What is the break-even price in the long-run for a representative firm in this industry?
(4 marks)

QUESTION FOUR (20 MARKS)

a) Explain the various dimensions of industrial structure in a competitive market

(6 marks)

b)   L Company is considering two new machines that should produce considerable cost savings in its assembly operations. The cost of each machine is $140,000 and neither is expected to have a salvage value at the end of a 5-year useful life. L Company's required rate of return is 12% and the company prefers that a project return its initial outlay within the first half of the project's life. The annual after-tax cash savings for each machine are provided in the following table:

Year	ProjectA Sh.	Project B
1	50,000	80000
2	50,000	60000
3	50,000	40000
4	50,000	20000
5	50,000	15000

Required:

Compute the following:

i)   Payback period   (3 marks)

ii)   Net present value of each machine.   (6 marks)

iii)   Internal Rate of Return   (5 marks)

QUESTION FIVE (20 MARKS)

a) An engineering firm has applied for patents on two new products and has just learned that only one application has been successful. Briefly explain the various pricing practices that a firm can use (10 marks)

b) A company is trying to decide whether to bid for a certain contract or not. They estimate that merely preparing the bid will cost £10,000. If their company bid then they estimate that there is a 50% chance that their bid will be put on the "short-list", otherwise their bid will be rejected. Once "short-listed" the company will have to supply further detailed information (entailing costs estimated at £5,000). After this stage their bid will either be accepted or rejected. The company estimate that the labour and material costs associated with the contract are £127,000. They are considering three possible bid prices, namely £155,000, £170,000 and £190,000. They estimate that the probability of these bids being accepted (once they have been short-listed) is 0.90, 0.75 and 0.35 respectively. What should the company do and what is the expected monetary value of your suggested course of action? (10 marks)