



KIBABII UNIVERSITY
(KNOWLEDGE FOR DEVELOPMENT)

UNIVERSITY EXAMINATIONS
SPECIAL/SUPPLEMENTARY EXAMS

2020/2021 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER

**FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION**

COURSE CODE: MBA 810

COURSE TITLE: MANAGERIAL ECONOMICS

DATE: 13/01/2022

TIME: 8.00 A.M

INSTRUCTIONS TO CANDIDATES

Answer Question ONE (compulsory) and ANY OTHER THREE questions

SECTION A (COMPULSORY)

QUESTION ONE

- a. Define 'Managerial Economics' and outline its main characteristics. (5 marks)
- b. A bottling plant employs three different types of labour: unskilled manual workers, technicians and supervisors. It has estimated that the marginal product of the last manual worker is 200 units per week, the marginal product of the last technician is 275 units per week and the marginal product of the last supervisor is 300 units per week. The workers earn £300, £400 and £500 per week respectively.
- Is the firm using the optimal combination of inputs? (3 marks)
 - If not, advise the firm on how to reallocate its resources. (2 marks)
- c. Describe the main conditions for perfect competition to exist. (5 marks)
- d. Given the following functions about a monopoly firm;

$$Q = 16 - 20P \quad \text{Demand function}$$

$$MC = 0.44 + 0.04Q \quad \text{Marginal cost function}$$

$$TC = 0.08 + 0.44Q + 0.02Q^2 \quad \text{Total cost function}$$

Find the profit maximizing level of output, price and profit. (5 marks)

SECTION B (CHOOSE ANY THREE QUESTIONS)

QUESTION TWO

(a) A firm has the following short-run production function:

$$Q = 150L + 18L^2 - 1.5L^3$$

where Q = quantity of output per week

L = number of workers employed.

- When does the law of diminishing returns take effect? (2 marks)
- Calculate the range of values for labour over which stages I, II and III occur. (4 marks)
- Assume that each worker is paid £15 per hour for a 40-hour week, and that the output is priced at £5. How many workers should the firm employ? (4 marks)

(b) Based on the Ordinal Utility Theory, explain with the help of an appropriate diagram the concept of consumer's equilibrium. What are the limitations of the indifference analysis?

(10 marks)

QUESTION THREE

(a) Midwest Cable TV has estimated the demand for its service to be given by the following function:

$$Q = 9.83P^{-1.2}A^{2.5}Y^{1.6}P_0^{-1.4}$$

where

Q = monthly sales in units

P = price of the service in \$

A = promotional expenditure in \$'000

Y = average income of the market in \$'000

P₀ = price of 'home movies' in \$

The current price of Midwest is \$60, promotional expenditure is

\$120,000, average income is \$28,000, and the price of 'homemovies' is \$45.

Indicate whether the following statements are true or false, giving your reasons and making the necessary corrections. (10 marks)

- If Midwest increases its price this will reduce the number of its customers.
- If Midwest increases its price this will reduce its revenues.
- People's expenditure on the cable TV service as a proportion of their income will increase when their income increases.
- If Midwest increases its price this will increase the sales of 'home movies'.
- 'Home movies' are a substitute for cable TV.
- A 5 per cent increase in income will increase demand by 16 per cent.
- A 10 per cent increase in price will reduce demand by 12 per cent.
- Current sales are over a million units a month.
- The demand curve for Midwest is given by: $Q = 9.83P^{-1.2}$
- Midwest's sales are more affected by the price of 'home movies' than by the price of its own service.

(b) Describe the barriers to entry or exit that make a monopoly a firm that has the power to earn supernormal profit in the long run. (10 marks)

QUESTION FOUR

(a) Explain what is meant by the basic profit-maximizing model (BPM) and its assumptions; what are the main criticisms of the BPM? (15 marks)

(b) Explain the importance of price elasticity of demand to both a producer and a consumer. (5 marks)

QUESTION FIVE

(a) By the help of a well labeled diagram, explain the Income and substitution effects when the price of a product changes. (10 marks)

(b) Given;

$$C = 100 + 100Q - 15Q^2 + Q^3$$

as the Total Cost equation for the production of bacon at a hypothetical factory, where C represents the cost in shillings and Q represents the quantity in kilograms, compute the Total and Average costs at the output levels of 10kg and 11kg. What is the Marginal Cost of the 12th kg? (5 Marks)

(c) What are the necessary conditions for a pareto optimal allocation of resources? (5 marks)