



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY
EXAMINATIONS
2018/2019 ACADEMIC YEAR
SECOND YEAR SECOND SEMESTER**

**SCHOOL OF BUSINESS AND
ECONOMICS
BACHELOR OF AGRIBUSINESS
MANAGEMENT**

COURSE CODE: ECO 2207

**COURSE TITLE: MANAGERIAL
ECONOMICS**

INSTRUCTIONS TO CANDIDATES

Answer Question **ONE** and any other **THREE** questions

*This paper consists of **three** printed pages. Please turn over.*

Question One

(a) A discriminating monopolist producing a single product is faced with the following two demand functions from each market:

$$P_1 = 25 - 2Q_1$$

$$P_2 = 40 - 3/2 Q_2$$

The monopolist has the following total cost function:

$$C = 60 + 4Q, \quad Q = Q_1 + Q_2$$

- i. Find the profit level of outputs and prices in the two markets.

(6 marks)

- ii. In the absence of discrimination, what would be the profit maximising level of output and price?

(4 marks)

(b) Explain the following pricing techniques:

- i. Peak- Load pricing **(5 marks)**

- ii. Cost - Plus pricing **(5 marks)**

(c) Using mathematical illustration, explain the law of diminishing marginal rate of substitution

(5 marks)

Question Two

(a) Given project A and B with initial cost of KSh. 4000 and KSh. 2000 respectively, and the following cash flow:

Year	Cash Flow (KSh)	
	Project A	Project B
1	400	1200
2	1200	1600
3	1600	2000
4	2400	1200
5	1600	800

Assume 10% return on capital, compute the profitability of the projects and make your recommendations.

(8 marks)

(b) Discuss the objectives of demand forecasting **(7 marks)**

Question Three

(a) Consider a competitive market for which the quantity demanded and supplied are given below:

Price	Quantity demanded	Quantity supplied
60	22	14
80	20	16
100	18	18
120	16	20

i. Calculate the price elasticity of demand **(4 marks)**

ii. Derive the linear demand equation **(3 marks)**

(b) Discuss the sources of risk in business **(8 marks)**

Question Four

(a) Given the following:

$$\text{Maximize } \Pi = 50X - 2X^2 - XY - 3Y^2 + 95Y$$

$$\text{Subject to: } X + Y = 25$$

Find the value of X and Y that maximizes profit. **(7 marks)**

(b) Discuss the **FIVE** elements of the external business environment that a business manager must be conversant with.
(8 marks)

Question Five

Suppose the Naroks Cola estimates that sales of its drink is a function of the amounts of advertisement expenditure (measured in '000 of KSh.) in two different media, television and newspaper. If X stands for advertisement expenditure in KSh on advertisement on television and Y stands for expenditure in KSh on advertisement on newspaper and sales of Naroks Cola is given by:

$$S = 200X + 100Y - 10X^2 - 20Y^2 + 20XY$$

Assume that advertising budget is restricted to KSh 20, 000.

- i. Using Lagrangian multiplier technique, find the amount of expenditure incurred on television and newspaper advertising separately to maximise sales.
(6 marks)
- ii. Prove that this expenditure maximises sales **(6 marks)**
- iii. Calculate the sales of the firm at this constrained optimum level
(3 marks)

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