



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION

DEPARTMENT OF ECONOMICS, ACCOUNTING AND FINANCE

QUALIFICATION: BACHELOR OF ECONOMICS HONOURS	
QUALIFICATION CODE: 08BECH	LEVEL: 8
COURSE CODE: IEC820S	COURSE NAME: INDUSTRIAL ECONOMICS
SESSION: JANUARY 2025	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	Ms K. Kavezeri
MODERATOR:	Dr E. Tingum

INSTRUCTIONS
1. Answer ALL the questions. 2. Write clearly and neatly. 3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Pens/pencils
2. Calculator
3. Ruler

THIS QUESTION PAPER CONSISTS OF 4 PAGES (including this front page)

QUESTION 1 [25 MARKS]

1. If the firm's total cost function is $C = 50 + 6Q + 2Q^2$, derive:

a) The firm's marginal cost function (1)

b) The firm's average cost function (1)

2. Consider two identical firms (no. 1 and no. 2) that face a linear market demand curve. Each firm has a marginal cost of **zero** and the two firms face demand:

$$P = 50 - 0.5Q,$$

$$\text{where } Q = Q_1 + Q_2.$$

a) Find the Cournot profit maximizing quantity for each firm. (12)

b) Compute the resulting market price and total output. (3)

3. An oligopolist faces a kinked demand curve with segments given by:

$$P = 100 - Q \text{ and } P = 120 - 2Q.$$

The firm has a constant marginal cost,

$$MC = N\$45.$$

Determine the profit-maximizing level of output and price at the "kink" of the demand curve.

(3)

4. Briefly explain why monopolies are economically inefficient. (2)

5. Define Industrial Economics. (2)

6. What is the dilemma in the prisoners' dilemma? (1)

QUESTION 2 [25 Marks]

1. In a perfectly competitive market, industry demand is:

$$P = 850 - 2Q,$$

and industry supply is:

$$P = 250 + 4Q.$$

- (a) Determine the industry price and output under perfect competition. [6]
 - (b) Now suppose that all the firms collude to form a single monopoly. (There is no change in the demand or cost conditions of the industry). What price and total output would the monopoly set? [7]
 - (c) Compare the monopoly outcome with the competitive outcome in part (a) and (b) above. [2]
2. Why do monopolistic competitors have a tendency to advertise much more than perfectly competitive firms? [5]
3. What are the assumptions of the kinked demand curve model? What is its main conclusion about oligopoly behavior? [5]

QUESTION 3 [30 Marks]

1. Your firm produces two products, the demands for which are independent. Both products are produced at zero marginal cost. You face four consumers (or groups of consumers) with the following reservation prices:

Consumer	Good 1 (N\$)	Good 2 (N\$)
<i>A</i>	25	100
<i>B</i>	40	80
<i>C</i>	80	40
<i>D</i>	100	25

- (a) Consider three alternative pricing strategies: (i) selling the goods separately; (ii) pure bundling; (iii) mixed bundling. For *each strategy*, determine the optimal prices to be charged and the resulting profits. Which strategy would be best? (11)
 - (b) Compare pure bundling and mixed bundling. (4)
2. Discuss the three broad forms of price discrimination. (15)

QUESTION 4 [20 Marks]

1. Two major networks are competing for viewer ratings in the 8:00-9:00 pm and 9:00-10:00 pm slots on a given weeknight. Each has two shows to fill these time periods and is juggling its lineup. Each can choose to put its “bigger” show first or to place it second in the 9:00–10:00 pm slot. The combination of decisions leads to the following “ratings points” results:

		Network 2	
		First	Second
Network 1	First	20, 30	18, 18
	Second	15, 15	30, 10

- (a) Define and find the Nash equilibria for this game, if both networks make their decisions at the same time. (5)
- (b) Suppose the network managers meet to coordinate schedules and Network 1 promises to schedule its big show first. Is this promise credible? What would be the likely outcome? (5)
2. Discuss the Bertrand and Stakelberg models of oligopoly. (10)

TOTAL = 100 MARKS