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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 3 Economics 2024

91400 Demonstrate understanding of the efficiency of different market structures using marginal analysis

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of the efficiency of different market structures using marginal analysis.	Demonstrate in-depth understanding of the efficiency of different market structures using marginal analysis.	Demonstrate comprehensive understanding of the efficiency of different market structures using marginal analysis.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–15 in the correct order and that none of these pages is blank.

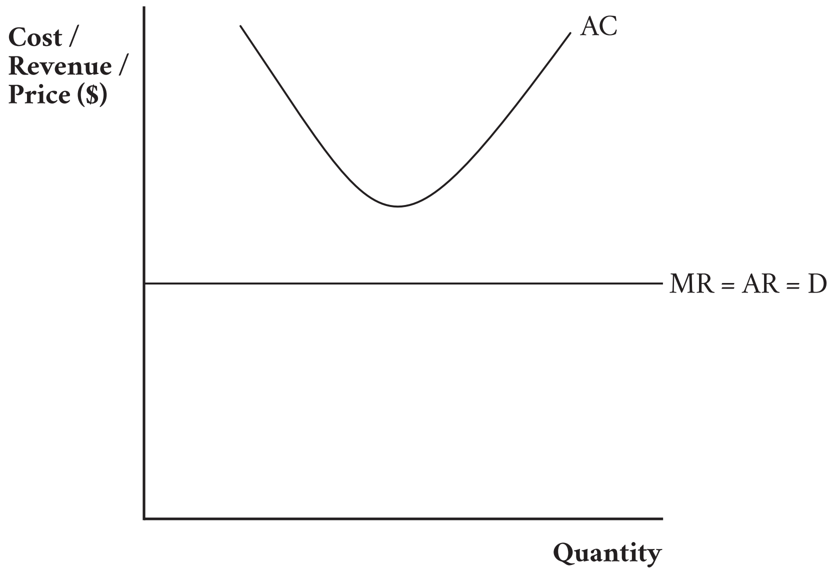
Do not write in the margins (). This area will be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

QUESTION ONE: Perfect competition in the short and long run

Graph One below shows a perfect competition firm making a subnormal profit.

Graph One: Perfect competitor earning subnormal profit in the short run



(a) (i) On Graph One above:

- add and label the MC curve showing the firm minimising losses
- identify and label the loss minimising price (P_e), and quantity (Q_e)
- shade and label the subnormal profit.

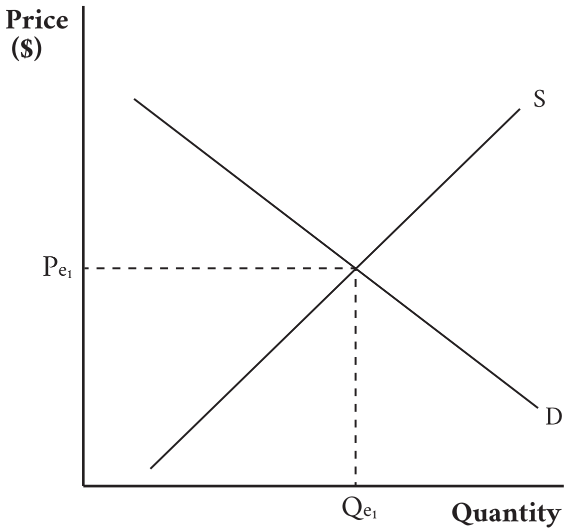
(ii) On Graph One, show the long run profit maximising price (label P_1) and output (label Q_1) for the perfect competitor.

(iii) Explain how the perfect competitor reaches its long-run equilibrium.
In your answer, refer to marginal analysis, characteristics of perfect competition, and Graph One to explain what happens to the:

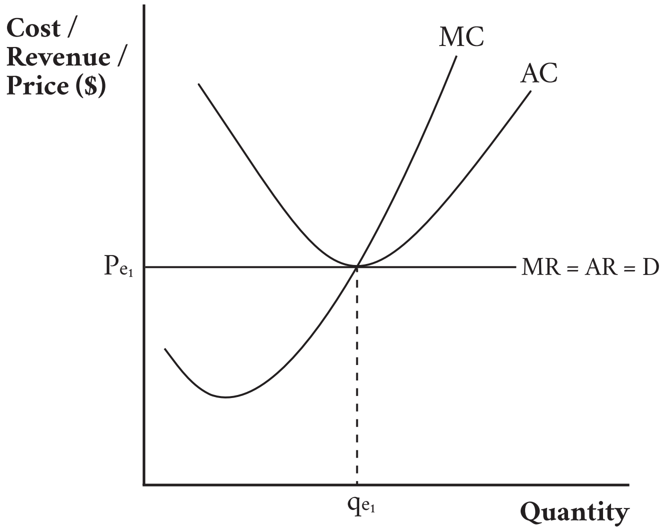
- price
- output
- profit.

Severe weather events in the past year have disrupted firms' ability to maintain their normal output levels. Many firms are struggling, some have had to close down business, while others are hanging on in hope of better market conditions, which will increase their profitability.

Graph Two: The market



Graph Three: The perfect competition firm



(b) (i) On Graph Two above, show the impact of the severe weather events on the market by:

- adding and labelling one new curve
- identifying and labelling the new market equilibrium price (P_{e2}) and quantity (Q_{e2}).

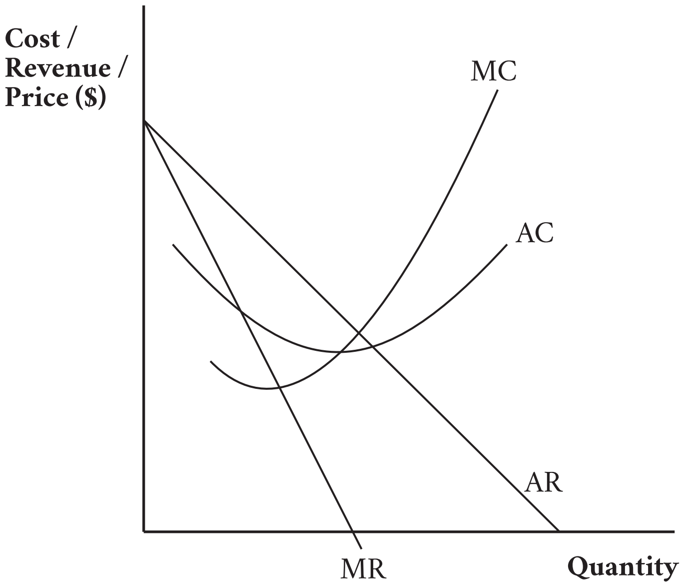
(ii) On Graph Three above, show the impact of the severe weather events on the perfect competition firm by:

- adding and labelling one new curve
- identifying and labelling the new profit maximising/loss minimising price (P_{e2}), and quantity (q_{e2})
- shading and labelling the type of profit made.

(c) Referring to Graph Two, Graph Three, and the resource material above, compare and contrast the impact of the severe weather events on the market and the perfect competition firm.
In your answer, explain in detail why the market quantity decreases while the firm's output increases.

QUESTION TWO: Monopoly in the short and long run

Graph Four: Monopoly in the short and long run



(a) (i) On Graph Four above:

- identify the profit maximising output level (label Q_e) for the monopoly in the short run
- identify and label the price (label P_e)
- shade in and label the type of economic profit made.

(ii) On Graph Four above, identify the long run profit maximising output level (label Q_{LR}) and price (label P_{LR}).

(iii) State the type of economic profit made by the monopoly in the:

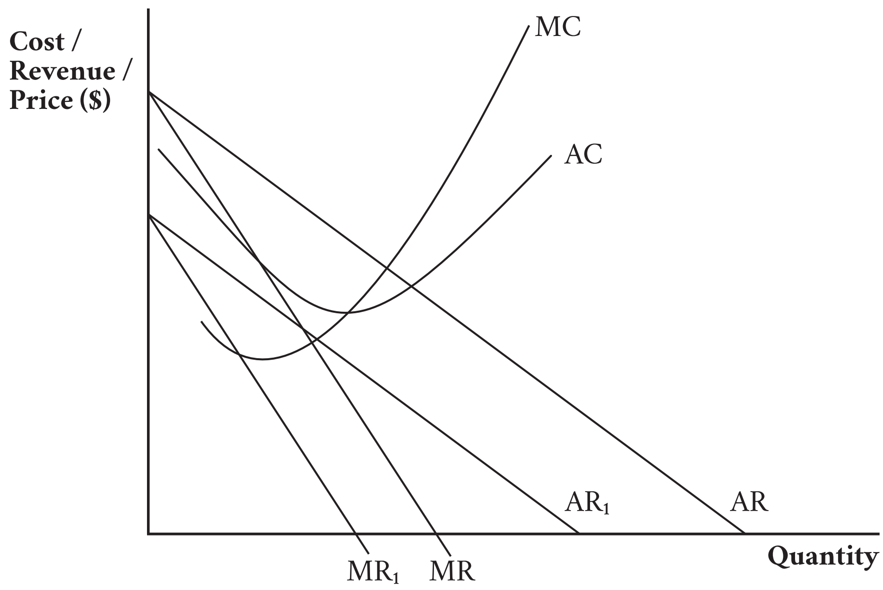
- short run: ______________________
- long run: ______________________

(b) Compare and contrast the short and long run profit maximising positions for the monopoly. In your answer, refer to:

- Graph Four and the characteristics of monopoly
- output, price, and profit.

Graph Five below shows cost and revenue curves of a monopoly initially earning supernormal profits.

Graph Five: Monopoly – impact of falling demand



Despite being the only firm monopolising the market, falling demand can threaten the survival of the monopoly.

(c) (i) Complete Graph Five above to show the impact of falling demand for the monopoly's product. The new AR_1 and MR_1 curves have been done for you.

- Identify and label the original profit maximising output (Q_e) and price (P_e).
- Shade in the supernormal profit made initially.
- Identify and label the new profit maximising output (Q_1) and price (P_1).
- Shade in and label the type of economic profit made following the fall in demand.

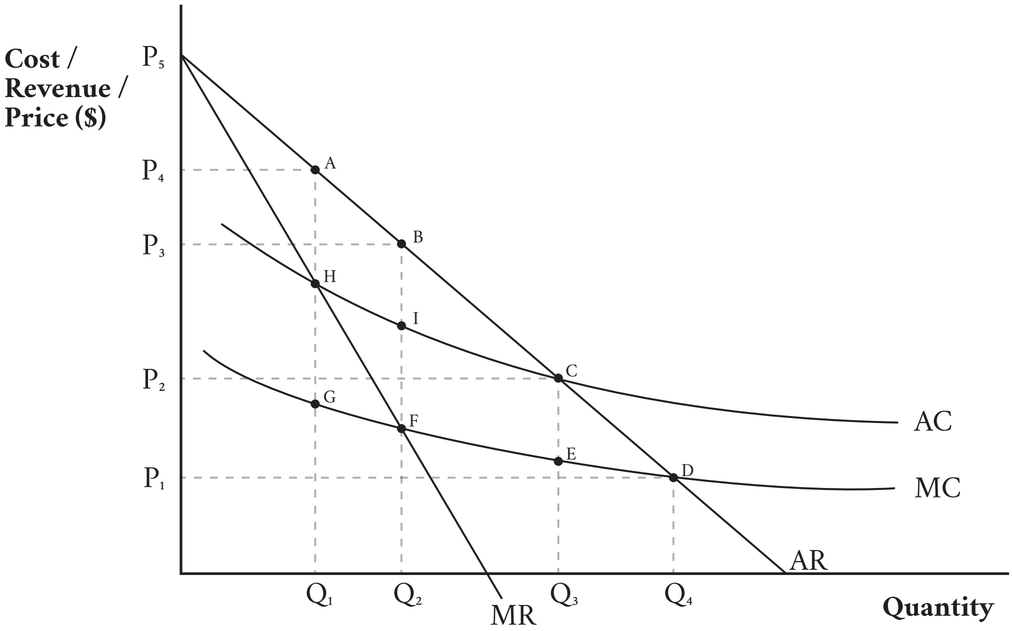
(ii) Explain why the fall in demand threatens the survival of the monopoly in the long run. In your answer:

- refer to Graph Five and the concept of marginal analysis
- include the impact on the monopoly's output and profit.

QUESTION THREE: Natural monopoly

A natural monopoly is a single seller that can supply a good or service at a lower price than if there were two or more sellers in the market competing.

Graph Six: Natural monopoly



When making output and pricing decisions, an unregulated natural monopoly is most likely to profit-maximise. However, the Government could regulate the natural monopoly to price at average cost or marginal cost.

(a) (i) Use the labels in Graph Six to complete Table One below.

Table One

	Profit maximising	Average cost pricing	Marginal cost pricing
Price			
Output			
Consumer surplus			
Deadweight loss (if any)			

(ii) State the type of profit made under:

- profit maximising: ____________________
- average cost pricing: ____________________
- marginal cost pricing: ____________________

Refer to Graph Six and Table One in your answer to part (b) below.

(b) Analyse the impacts of the three pricing options in part (a)(ii) on consumers, the natural monopolist, the Government, and allocative efficiency.

(i) When considering the impact on consumers, explain in detail the pricing option that results in consumers being best off and the pricing option that results in them being worst off.

Question Three (b) continues on page 12 ➤

(ii) When considering the impact on allocative efficiency, explain in detail the pricing option that results in the most efficient outcome and the one that results in the least efficient outcome.

(iii) Explain in detail the profit made by the natural monopolist under each of the three pricing options, and how the Government is affected.

Extra space if required.
Write the question number(s) if applicable.

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