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Level 3 Economics, 2015

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

2.00 p.m. Wednesday 18 November 2015
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 2–10 in the correct order and that none of these pages is blank.

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

TOTAL

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QUESTION ONE: PERFECT COMPETITION

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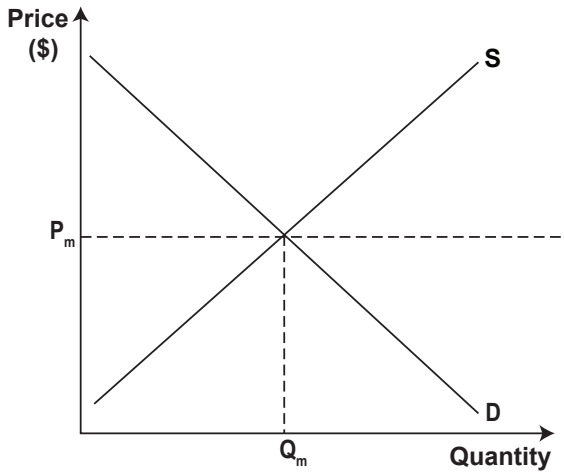
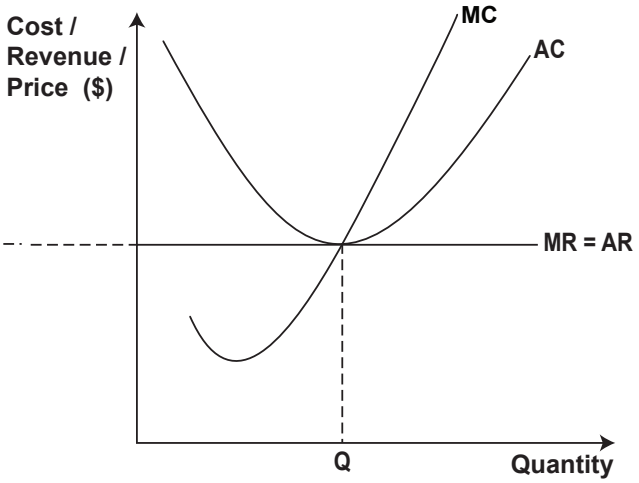
Graph One: The market



Graph Two: The individual perfectly competitive firm



(a) (i) Complete Graph One to show the impact of an increase in market demand on the market equilibrium price and quantity. Label the new price $\mathbf{P_{m1}}$ and the new quantity $\mathbf{Q_{m1}}$.

(ii) Complete Graph Two to show the impact of an increase in market demand on the short-run profit maximising level of output for the individual firm. Label the new level of output as $\mathbf{Q_1}$.

(iii) On Graph Two, clearly shade and label the new level of economic profit that will be earned by the individual firm at $\mathbf{Q_1}$. Identify the economic profit as normal, subnormal, or supernormal.

(b) Use **marginal analysis** to compare and contrast the short-run and long-run profit and output decisions of a perfect competitor after an increase in market demand.
In your answer:

- explain in detail the changes to the short-run level of output and profit for the individual firm as a result of the increase in market demand
- make changes to Graph One to show how the market equilibrium price and quantity will be affected in the long run
- explain how the long-run changes in the market will affect the long-run levels of output and profit for the individual firm
- refer to Graph One and Graph Two.

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QUESTION TWO: NATURAL MONOPOLY

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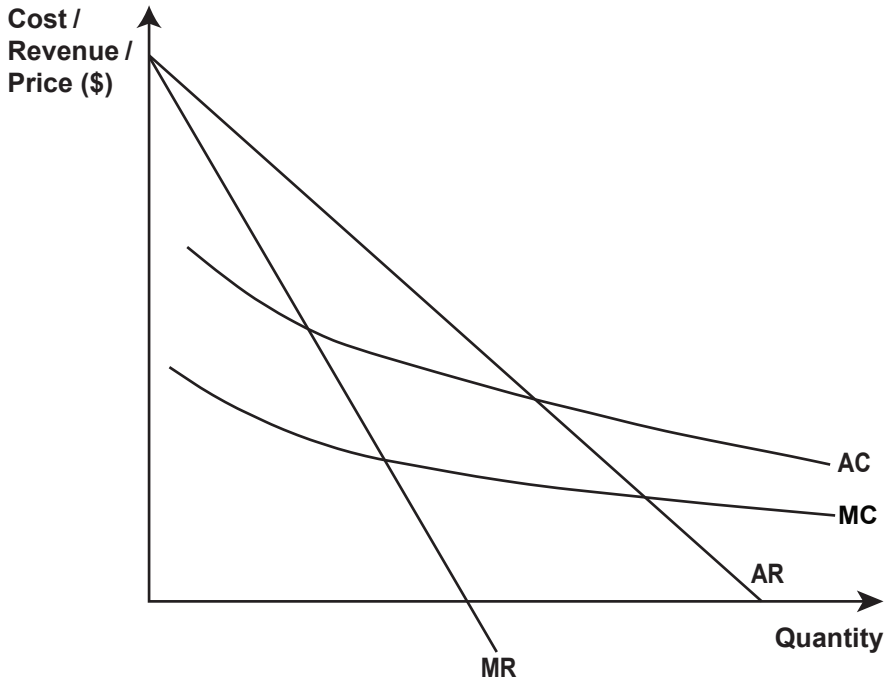
KiwiRail is a state-owned enterprise that was nationalised (bought back by the Government) in 2008. It can be considered an example of a natural monopoly in the New Zealand market for rail transport.

Graph Three: The New Zealand market for rail transport



(a) On Graph Three, label the profit maximising price (P_1) and quantity (Q_1).

One of the main benefits of KiwiRail being nationalised is that the Government can regulate a price that will encourage greater use of rail transport. Average cost pricing would be one method of achieving this objective.

(b) Compare and contrast the impact on consumers, KiwiRail, and allocative efficiency of regulating average cost pricing. Assume KiwiRail is initially at the profit maximising equilibrium of P_1 and Q_1.
In your answer:

- on Graph Three, identify the price (P_2) and quantity (Q_2) of rail services that would be provided if regulated average cost pricing was used by KiwiRail
- explain in detail the impact of regulated average cost pricing on consumers of rail transport and consumer surplus
- explain in detail the impact of regulated average cost pricing on KiwiRail's economic profit
- explain in detail why regulated average cost pricing would result in a more allocatively efficient outcome compared to the profit maximising equilibrium
- refer to Graph Three.

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QUESTION THREE: MONOPOLY

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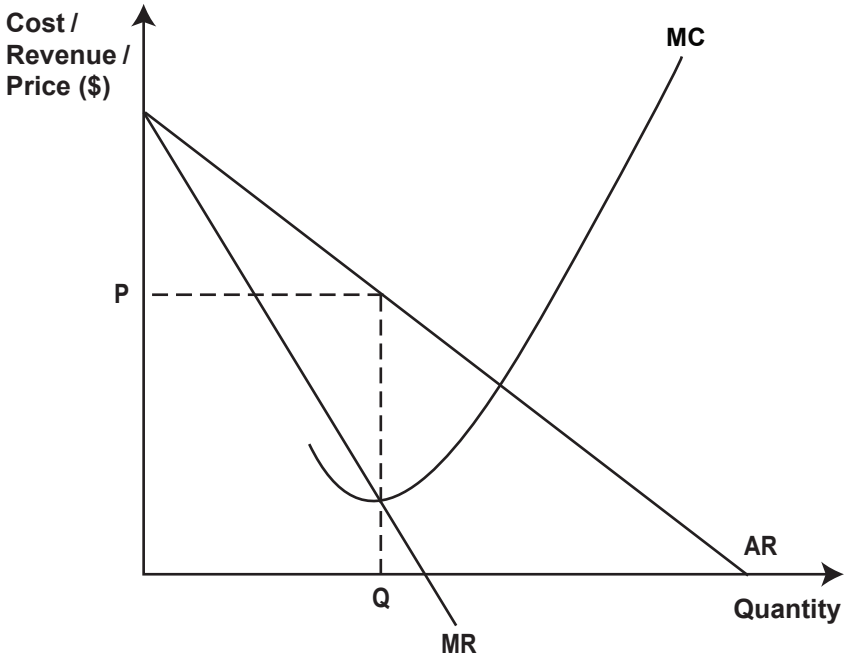
On 1 April 2014, the New Zealand minimum wage was increased to $14.25. This would have resulted in a significant increase in labour costs for firms that were paying workers the previous figure of $13.75.

Graph Four: A monopoly market



(a) Complete Graph Four to show the impact of increased labour costs for a monopoly. Clearly label any changes.

(b) Explain in detail, using **marginal analysis**, the change in the profit maximising price and quantity as a result of increased labour costs.

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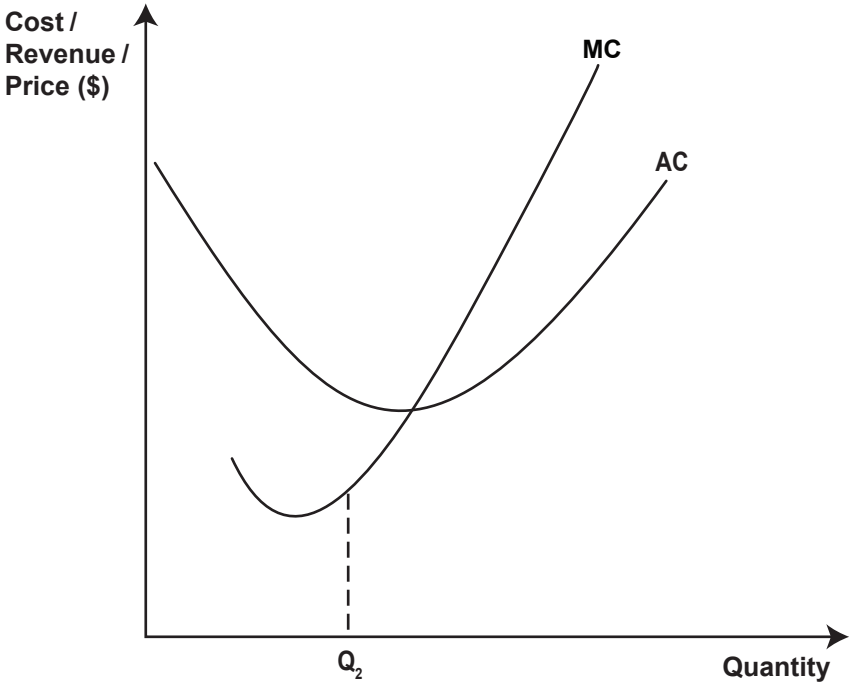
(c) Compare and contrast the long-run price and output decisions of a monopolist earning a subnormal profit with a monopolist earning a supernormal profit.
In your answer:

- on **Graph Four** on the previous page, draw and label the average cost curve for the monopolist if the increase in labour costs results in a **subnormal** profit being earned. Label the curve $\mathbf{AC_1}$.
- explain in detail what the monopolist will do in the long run if **subnormal** profits continue to be earned and there are no other changes in costs or revenue
- on **Graph Five** below, draw and label the revenue curves for a profit maximising monopolist earning a **supernormal** profit at $\mathbf{Q_2}$. Label the curves $\mathbf{MR_2}$ and $\mathbf{AR_2}$, and the price $\mathbf{P_2}$
- explain in detail why the monopolist producing at $\mathbf{Q_2}$ can continue to earn **supernormal** profits in the long run
- explain in detail why the price and output decisions of the monopolist will remain unchanged in the long run if **supernormal** profits continue to be earned.

Graph Five: A monopoly market



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