

Assessment Schedule – 2015

Economics: Demonstrate understanding of the efficiency of different market structures using marginal analysis (91400)

Assessment criteria

Achievement	Achievement with Merit	Achievement with Excellence
<p><i>Demonstrate understanding</i> involves:</p> <ul style="list-style-type: none"> providing an explanation of: <ul style="list-style-type: none"> pricing and output decisions for perfectly competitive and /or monopolist firms using marginal analysis efficiency of a market structure impact of a change in a market on the short- and /or long-run pricing and /or output decisions of a firm using marginal analysis a government policy to improve the efficiency of a monopoly market using an economic model(s) to illustrate concepts relating to the efficiency of different market structures. 	<p><i>Demonstrate in-depth understanding</i> involves:</p> <ul style="list-style-type: none"> providing a detailed explanation of: <ul style="list-style-type: none"> pricing and output decisions for perfectly competitive and /or monopolist firms using marginal analysis the efficiency of a market structure the impact of a change in a market on the short- and /or long-run pricing and /or output decisions of a firm using marginal analysis a government policy to improve the efficiency of a monopoly market using an economic model(s) to illustrate complex concepts and /or support detailed explanations relating to the efficiency of different market structures. 	<p><i>Demonstrate comprehensive understanding</i> involves:</p> <ul style="list-style-type: none"> comparing and /or contrasting: <ul style="list-style-type: none"> the efficiency of market structures the impact of a change in a market on the short- and long-run pricing and /or output decisions of a firm using marginal analysis the effectiveness of government policies to improve the efficiency of a monopoly market integrating an economic model(s) into explanations relating to the efficiency of different market structures.

Each question should be read as a whole before awarding a grade.

Note: *Explanation* involves giving a reason for the answer.

Detailed explanation involves giving an explanation with breadth (more than one reason for the answer) and /or depth (e.g. using flow-on effects to link the main cause to the main result).

Evidence

Question One	Sample answers / Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	<p>(i) See Appendix One.</p> <p>(ii) See Appendix One.</p> <p>(iii) See Appendix One.</p>	<p>(i) Demand curve shifted to the right with new price and quantity labelled.</p> <p>(ii) MR = AR line shifted up and Q₁ correctly labelled.</p> <p>(iii) Supernormal profit correctly shaded and identified.</p>		
(b)	<p>The increase in market demand will increase the market equilibrium price to P_{m1}. Hence, as the individual firm is a price taker, the price for the firm will increase to P_{m1}. So AR and MR will increase to AR₁ and MR₁, which means that at the original quantity Q, the firm is missing marginal profits, as MR₁ is greater than MC. The firm will increase output to Q₁ where MR₁ = MC and profits are maximised. The profit earned has gone from normal to supernormal, as total revenue is now greater than total cost, so the firm is earning more than sufficient to stay in the market.</p> <p>See Appendix Two.</p> <p>In the long run, the market equilibrium price will decline back to P_m as more firms enter the market (S to S₁), attracted by the opportunity to earn supernormal profits. As the market price declines, the individual firm will suffer a drop in their price, MR and AR. At Q₁, MC is now greater than MR and the firm is making marginal losses, so they will reduce their output. This process will continue until</p>	<p>Shifts the market supply curve to the right, causing a return to the original price.</p> <p>Explains: Short run:</p> <ul style="list-style-type: none"> The firm will increase output, as MR₁ no longer equals MC at current output Q or no longer at P_m The firm will earn supernormal profits. 	<p>Explains in detail: Short run:</p> <ul style="list-style-type: none"> The price, AR and MR will increase for each firm. The firm will increase output to Q₁ as MR₁ is greater than MC at Q The firm is earning supernormal profits at Q₁, as TR/AR is greater than TC/AC, <p>OR</p>	<p>Explains in detail: Short run:</p> <ul style="list-style-type: none"> The price, AR, and MR will increase for each firm, as they are a price taker. The firm will increase output to Q₁, as MR₁ is greater than MC, so they are missing marginal profits if they keep producing at Q. The firm is earning supernormal profits at Q₁, as TR/AR is greater than TC/AC so they are earning more than enough to stay in the market. <p>AND</p> <p>Long run:</p>

	all firms earn a normal profit at Q , total revenue equals total costs, and the incentive for more firms to enter the market has been removed.	<p>Long run:</p> <ul style="list-style-type: none"> The firm will reduce output in the long run, as MR no longer equals MC or no longer at P_{m1}. The firm will earn a normal profit. 	<p>Long run:</p> <ul style="list-style-type: none"> The price, AR, and MR will decrease for the firm in the long run, as more firms will enter the market to earn supernormal profits. The individual firm will reduce output in the long run, as MR is less than MC. The firm will earn a normal profit in the long run as TR/AR = TC/AC 	<ul style="list-style-type: none"> The price, AR, and MR will decrease for the firm in the long run, as more firms will enter the market to earn supernormal profits. The firm will reduce output in the long run, as MR is less than MC, so they are making marginal losses at Q₁. The individual firm will earn a normal profit in the long run, as TR/AR = TC/AC and there is no incentive for more firms to enter the market.
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N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence, partial explanations.	Some Achievement evidence.	Most Achievement evidence.	Nearly all Achievement evidence.	<p>Some Merit evidence.</p> <p>Some detailed explanations for short run</p> <p>OR</p> <p>Some detailed explanations for long run</p> <p>AND</p> <p>Refers to both graphs.</p>	<p>Most Merit evidence.</p> <p>Most detailed explanations for short run</p> <p>OR</p> <p>Most detailed explanations for long run</p> <p>AND</p> <p>Refers to both graphs.</p>	<p>Excellence evidence. One part may be weaker.</p> <p>AND</p> <p>Integrates relevant information from both graphs into the explanation.</p>	<p>All points covered.</p> <p>AND</p> <p>Integrates relevant information from both graphs into the explanation.</p>

N0 = No response; no relevant evidence.

Question Two	Sample answers / Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	See Appendix Three .	P_1 and Q_1 correctly labelled.		
(b)	<p>See Appendix Three.</p> <p>Consumers of rail transport would benefit from paying lower prices (P_2) and having more rail services available to them (Q_1 to Q_2). Hence, consumer surplus would increase, as they would be consuming more units from which they can gain a surplus and the difference between what they are willing to pay and what they actually pay has increased.</p> <p>KiwiRail's economic profits would decline from supernormal to normal, as AC pricing would mean average cost would equal average revenue at Q_2 so $TC = TR$, OR KiwiRail is no longer maximising profits, as MC is greater than MR at Q_2, so they are making marginal losses on each unit sold.</p> <p>AC pricing is more allocatively efficient as, at P_2 and Q_2, the deadweight loss will be lower compared to the DWL at P_1 and Q_1, and consumer surplus and hence net surpluses will be greater.</p>	<p>P_2 and Q_2 correctly labelled.</p> <p>Explains:</p> <ul style="list-style-type: none"> • Consumers would benefit due to lower prices or greater quantity or increased consumer surplus. • KiwiRail's profits would decline to normal OR KiwiRail is no longer maximising profits at Q_2. • Allocative efficiency will be greater with AC pricing as consumer surplus OR net surpluses is greater OR because the DWL is less. 	<p>Explains in detail:</p> <ul style="list-style-type: none"> • Consumers would benefit due to lower prices, greater quantity and hence greater consumer surplus. • KiwiRail's economic profits would decline from supernormal to normal as $TR/AR = TC/AC$ at Q_2 OR KiwiRail is no longer maximising profits at Q_2, as MC is greater than MR. • Allocative efficiency will be greater with AC pricing as consumer surplus/net surpluses are greater AND the deadweight loss is lower (Must answer in the context of KiwiRail.) 	<p>Explains in detail:</p> <ul style="list-style-type: none"> • Consumers would benefit due to lower prices, greater quantity and hence greater consumer surplus. • KiwiRail's economic profits would decline from supernormal to normal as $TR/AR = TC/AC$ at Q_2 OR KiwiRail is no longer maximising profits at Q_2, as MC is greater than MR. <p><i>AND</i></p> <ul style="list-style-type: none"> • Allocative efficiency will be greater with AC pricing as consumer surplus/net surpluses are greater AND the deadweight loss is lower compared to the profit maximising equilibrium, which has lower CS/net surpluses and a greater DWL (Must answer in the context of KiwiRail.)

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence, partial explanations.	Some Achievement evidence.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence. <i>AND</i> Refers to Graph Three.	Most Merit evidence. <i>AND</i> Refers to Graph Three.	Excellence evidence. One part may be weaker. <i>AND</i> Integrates relevant information from Graph Three into the explanation. Must have comparison between AC pricing and the profit-maximising equilibrium.	All points covered. <i>AND</i> Integrates relevant information from Graph Three into the explanation. Must have comparison between AC pricing and the profit-maximising equilibrium.

N0 = No response; no relevant evidence.

Question Three	Sample answers / Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	See Appendix Four .	MC shifted up. P₁ and Q₁ correctly labelled.		
(b)	Wages are a variable cost, so the increase in the minimum wage will increase marginal costs and shift MC upwards to MC₁ . At Q , MC₁ is now greater than MR , so the monopoly is making marginal losses. Hence, output will be reduced to Q₁ where MR = MC₁ and profits are maximised. As output has declined, the monopolist will increase the price level to P₁ , which is the level of AR at Q₁ .	Explains that output will decline to Q₁ OR price will increase to P₁ , as MC₁ no longer equals MR at Q .	Explains in detail that output will decline to Q₁ AND price will increase to P₁ , as MC₁ is now greater than MR , at Q .	
(c)	See Appendix Four . In the long run, the monopolist will leave the industry, as total revenue is less than total economic costs so they are earning less than sufficient to keep them in the market. See Appendix Five . Because of strong barriers to entry (such as technological barriers, high set up costs, patents), other firms are prevented from entering the market, reducing the market price and lowering the supernormal profits. Hence, supernormal profits can be maintained in the long run. The monopolist will continue to produce at Q₂ with a price of P₂ , as this is where MR₂ = MC and profits are maximised. If they change their level of output, then MR will be lower or greater than MC and they will either be making marginal losses or missing out on marginal profits. Given that output will stay at Q₂ , then the price level will stay at P₂ .	AC₁ drawn above AR , and intersects MC₁ at its lowest point. MR₂ and AR₂ downward sloping with MR₂ = MC at Q₂ and P₂ . Explains: <ul style="list-style-type: none"> The monopolist will leave the industry, as they are earning subnormal profits. The monopolist can continue to earn supernormal profits because of strong barriers to entry. The monopolist will maintain the price and quantity at P₂ and Q₂, as this is where profits are maximised. 	Explains in detail: <ul style="list-style-type: none"> The monopolist will leave the industry, as they are earning subnormal profits, which means TC/AC is greater than TR/AR The monopolist can continue to earn supernormal profits because of strong barriers to entry, which prevents other firms entering the market, reducing the price and profits. Must have an example of barriers to entry. The monopolist will 	Explains in detail: <ul style="list-style-type: none"> The monopolist will leave the industry as they are earning subnormal profits, which means TC/AC is greater than TR/AR and they are earning less than sufficient to keep them in the market. <i>AND</i> The monopolist can continue to earn supernormal profits because of strong barriers to entry, which prevents other firms entering the market, reducing the price

			maintain the price and quantity at P_2 and Q_2 , as this is where profits are maximised	<p>and profits. Must have an example of barriers to entry.</p> <p><i>AND</i></p> <ul style="list-style-type: none"> The monopolist will maintain the price and quantity at P_2 and Q_2, as this is where profits are maximised. <p><i>AND</i></p> <ul style="list-style-type: none"> Includes consequences of changing the output or price level.
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N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence, partial explanations.	Some Achievement evidence.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence. <i>AND</i> Refers to either graph.	Most Merit evidence. <i>AND</i> Refers to either graph.	Excellence evidence. One part may be weaker <i>AND</i> Integrates relevant information from both graphs into the explanation.	All points covered. <i>AND</i> Integrates relevant information from both graphs into the explanation.

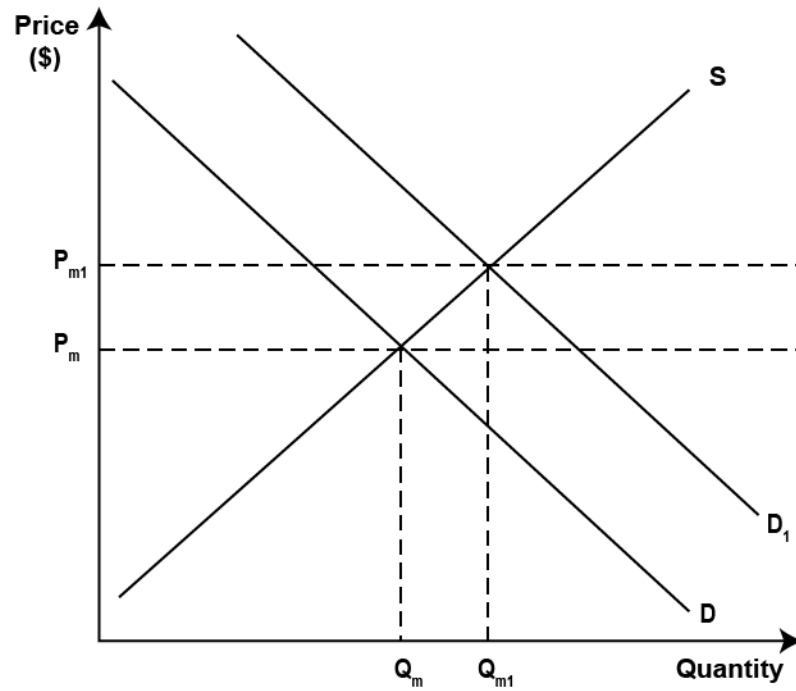
N0 = No response; no relevant evidence.

Cut Scores

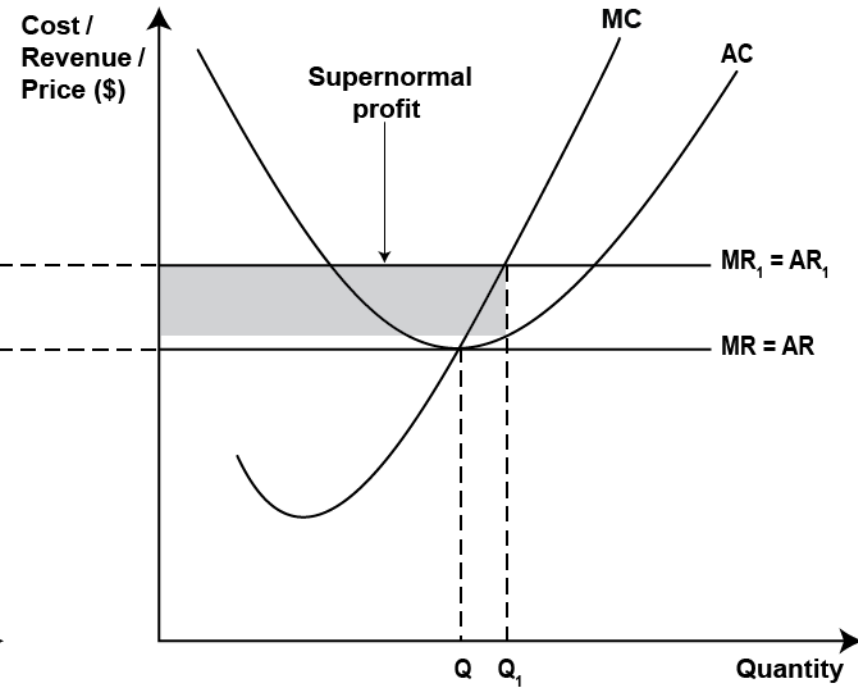
Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
0 – 6	7 – 13	14 – 18	19 – 24

Appendix One – Question One (a)

Graph One: The market

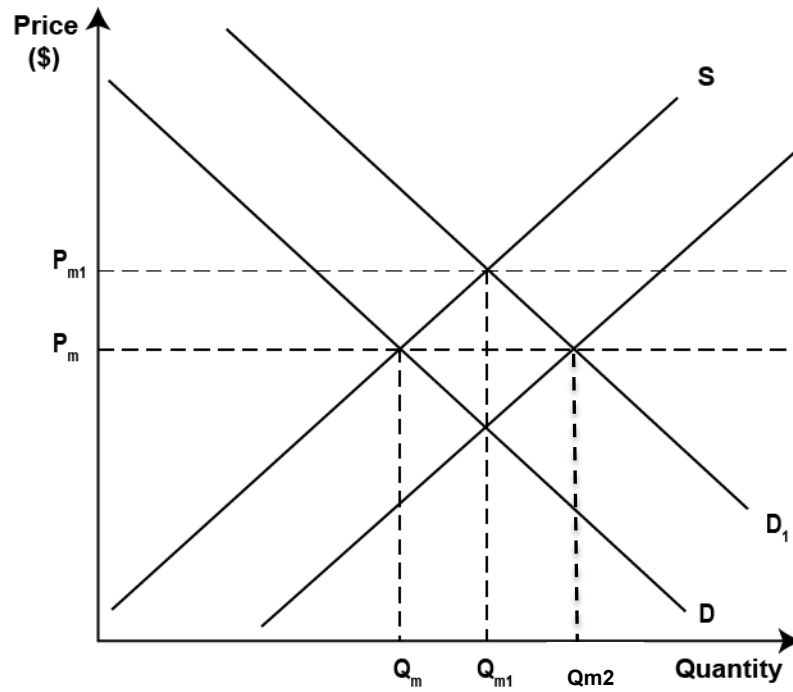


Graph Two: The individual perfectly competitive firm

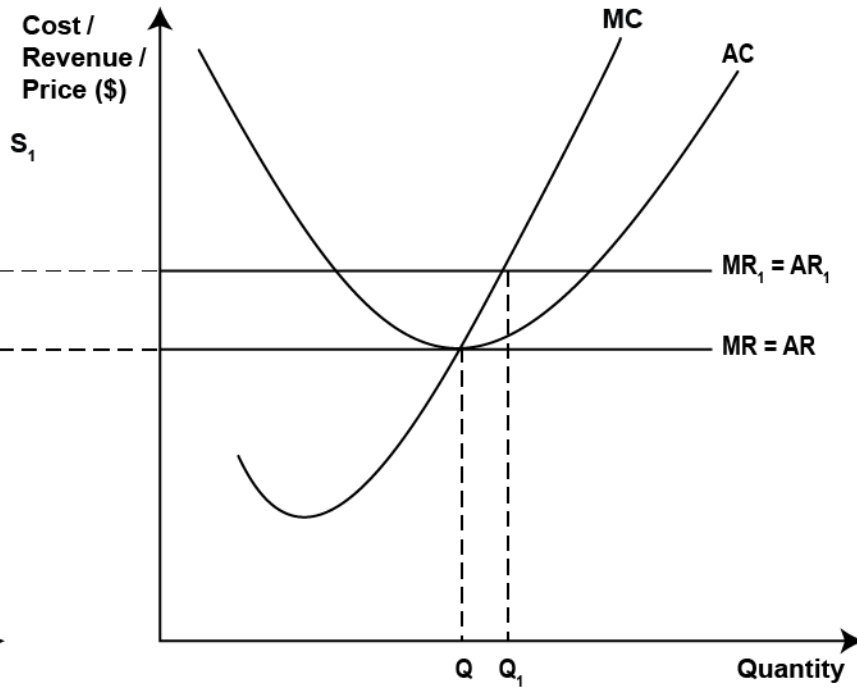


Appendix Two – Question One (b)

Graph One: The market

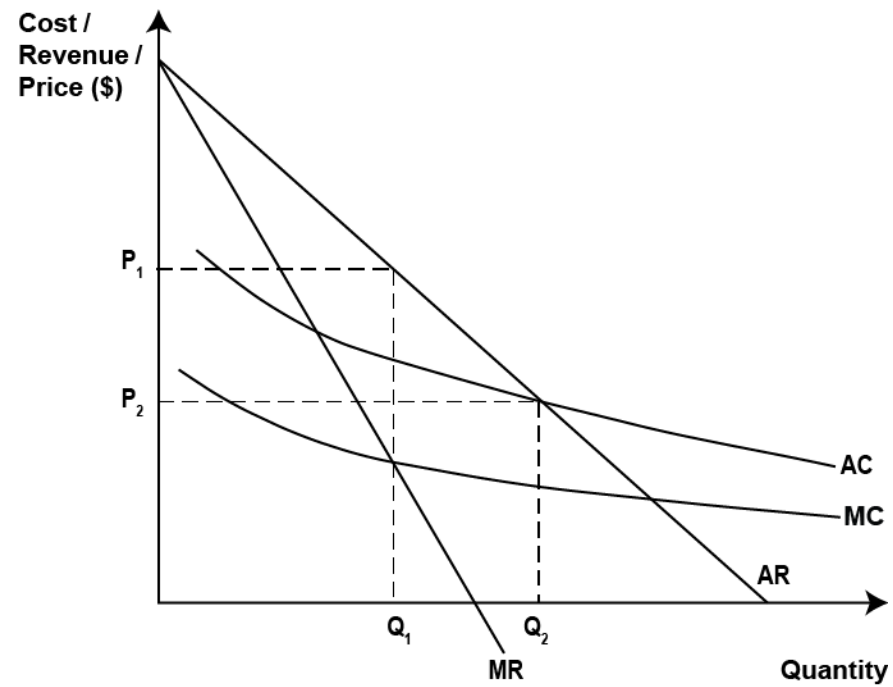


Graph Two: The individual perfectly competitive firm



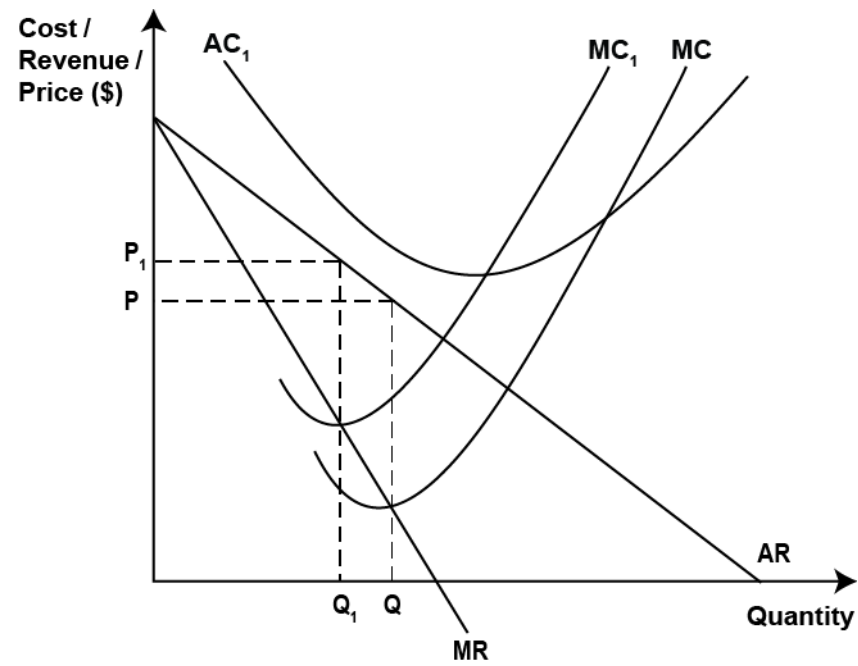
Appendix Three – Question Two (a) and Question Two (b)

Graph Three: The New Zealand market for rail transport



Appendix Four – Question Three (a)

Graph Four: A monopoly market



Appendix Five – Question Three (c)

Graph Five: A monopoly market

