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
Demonstrate understanding involves: • providing an explanation of: − 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.	*Demonstrate in-depth understanding* involves: • providing a detailed explanation of: − 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.	*Demonstrate comprehensive understanding* involves: • comparing and / or contrasting: − 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)	(i) See **Appendix One**. (ii) See **Appendix One**. (iii) See **Appendix One**.	(i) Demand curve shifted to the right with new price and quantity labelled. (ii) **MR = AR** line shifted up and **Q₁** correctly labelled. (iii) Supernormal profit correctly shaded and identified.		
(b)	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 **AR$_1$** and **MR$_1$**, which means that at the original quantity **Q**, the firm is missing marginal profits, as **MR$_1$** is greater than **MC**. The firm will increase output to **Q$_1$** where **MR$_1$ = 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. See **Appendix Two**. In the long run, the market equilibrium price will decline back to **P$_m$** as more firms enter the market (**S** to **S$_1$**), 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 **Q$_1$**, **MC** is now greater than **MR** and the firm is making marginal losses, so they will reduce their output. This process will continue until	Shifts the market supply curve to the right, causing a return to the original price. Explains: Short run: • The firm will increase output, as **MR$_1$** no longer equals MC at current output Q or no longer at P$_m$ • The firm will earn supernormal profits.	Explains in detail: Short run: • The price, **AR** and **MR** will increase for each firm. • The firm will increase output to **Q$_1$** as **MR$_1$** is greater than **MC** at Q • The firm is earning supernormal profits at **Q$_1$**, as **TR/AR** is greater than **TC/AC**, *OR*	Explains in detail: Short run: • The price, **AR**, and **MR** will increase for each firm, as they are a price taker. • The firm will increase output to **Q$_1$**, as **MR$_1$** is greater than **MC**, so they are missing marginal profits if they keep producing at **Q**. • The firm is earning supernormal profits at **Q$_1$**, as **TR/AR** is greater than **TC/AC** so they are earning more than enough to stay in the market. *AND* Long run:

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.	Long run: • 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.	Long run: • 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**	• 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 Q_1. • 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.

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. Some detailed explanations for short run *OR* Some detailed explanations for long run *AND* Refers to both graphs.	Most Merit evidence. Most detailed explanations for short run *OR* Most detailed explanations for long run *AND* Refers to both graphs.	Excellence evidence. One part may be weaker. *AND* Integrates relevant information from both graphs into the explanation.	All points covered. *AND* Integrates relevant information from both graphs into the explanation.

N**0** = 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)	See **Appendix Three**. 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. 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. **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_2 and Q_2 correctly labelled. Explains: • 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.	Explains in detail: • 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.)	Explains in detail: • 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.** *AND* • 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. *AND* Refers to Graph Three.	Most Merit evidence. *AND* Refers to Graph Three.	Excellence evidence. One part may be weaker. *AND* Integrates relevant information from Graph Three into the explanation. Must have comparison between **AC** pricing and the profit-maximising equilibrium.	All points covered. *AND* 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. P_1 and Q_1 correctly labelled.		
(b)	Wages are a variable cost, so the increase in the minimum wage will increase marginal costs and shift **MC** upwards to MC_1. At **Q**, MC_1 is now greater than **MR**, so the monopoly is making marginal losses. Hence, output will be reduced to Q_1 where $MR = MC_1$ and profits are maximised. As output has declined, the monopolist will increase the price level to P_1, which is the level of **AR** at Q_1.	Explains that output will decline to Q_1 OR price will increase to P_1, as MC_1 no longer equals **MR** at Q.	Explains in detail that output will decline to Q_1 AND price will increase to P_1, as MC_1 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 Q_2 with a price of P_2, as this is where $MR_2 = MC$ 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 Q_2, then the price level will stay at P_2.	AC_1 drawn above **AR**, and intersects MC_1 at its lowest point. MR_2 and AR_2 downward sloping with $MR_2 = MC$ at Q_2 and P_2. Explains: • 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 P_2 and Q_2, as this is where profits are maximised.	Explains in detail: • 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: • 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. *AND* • 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	and profits. Must have an example of barriers to entry. *AND* • The monopolist will maintain the price and quantity at P_2 and Q_2, as this is where profits are maximised. *AND* • Includes consequences of changing the output or price level.

| 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. *AND* Refers to either graph.	Most Merit evidence. *AND* Refers to either graph.	Excellence evidence. One part may be weaker AND Integrates relevant information from both graphs into the explanation.	All points covered. AND Integrates relevant information from both graphs into the explanation.

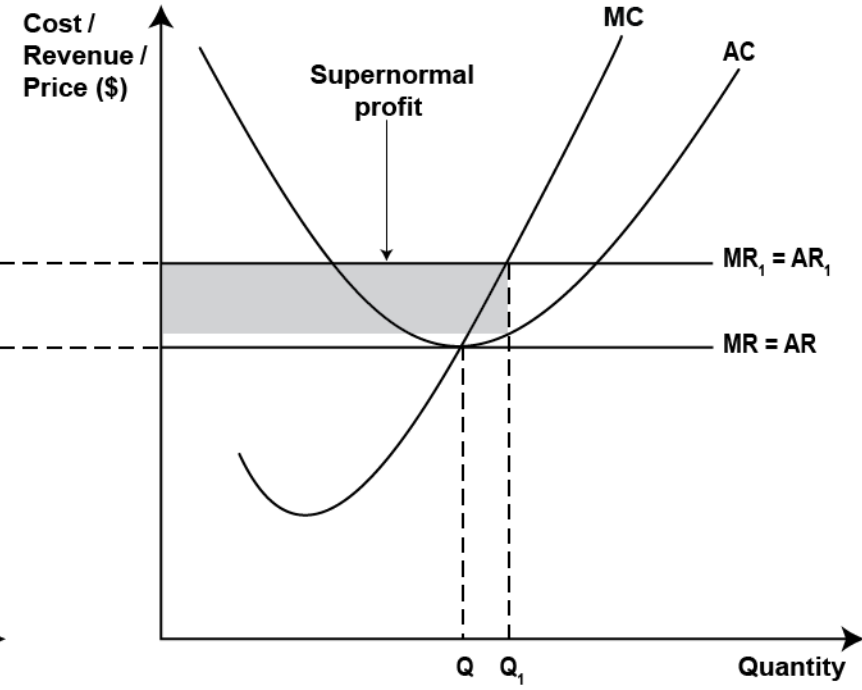N0 = No response; no relevant evidence.

Cut Scores

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

Appendix One – Question One (a)
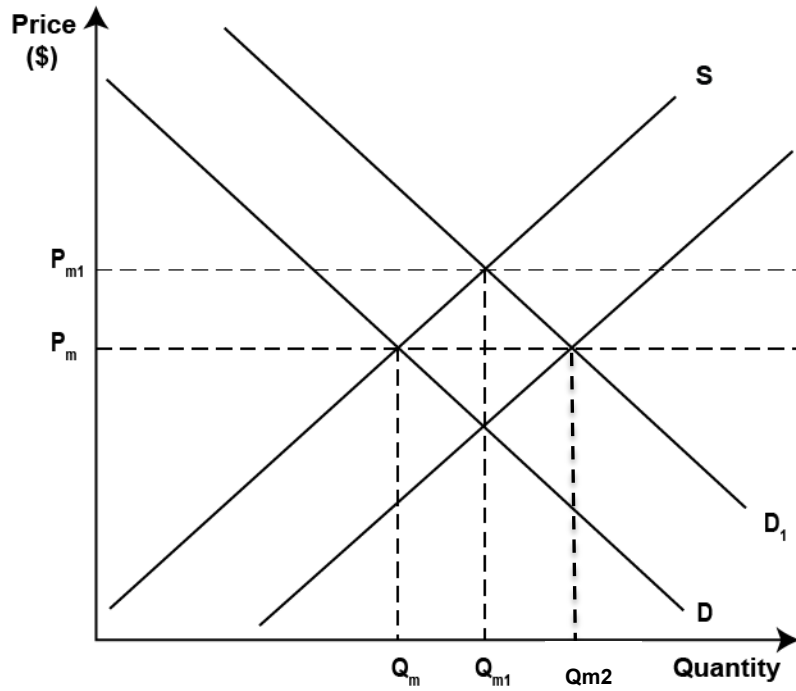
Graph One: The market
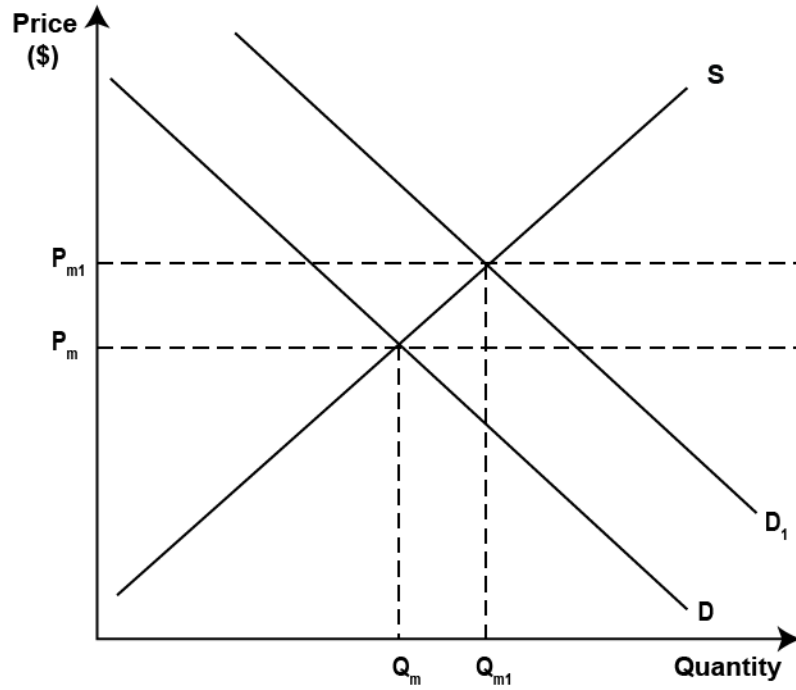
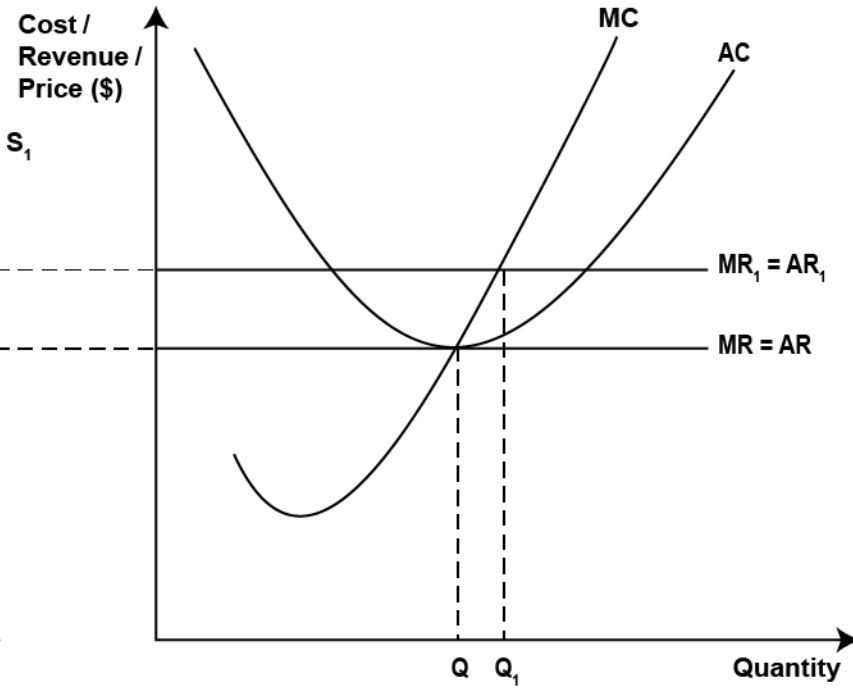**Graph Two: The individual perfectly competitive firm**

Appendix Two – Question One (b)
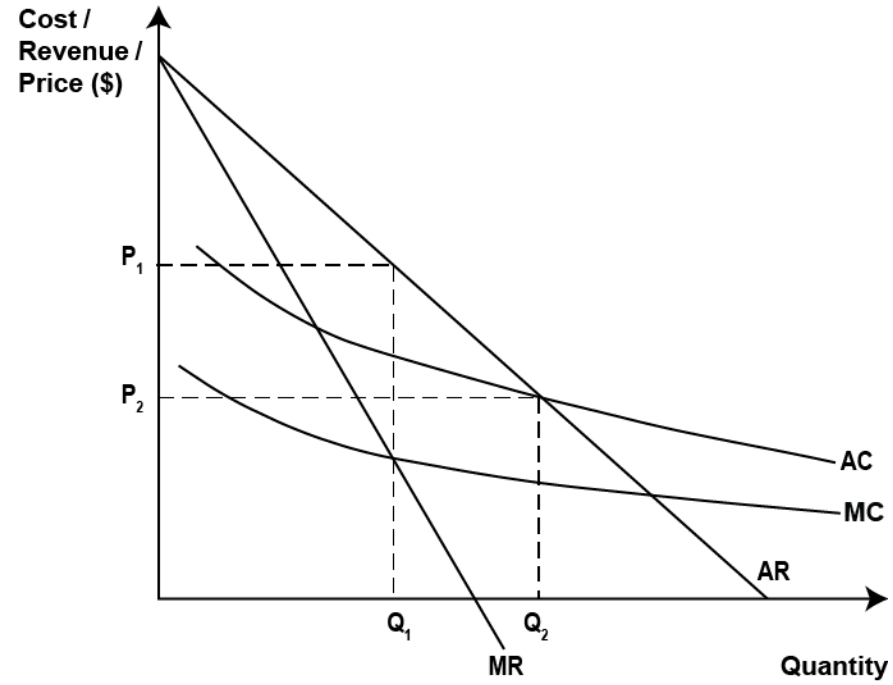
Graph One: The market

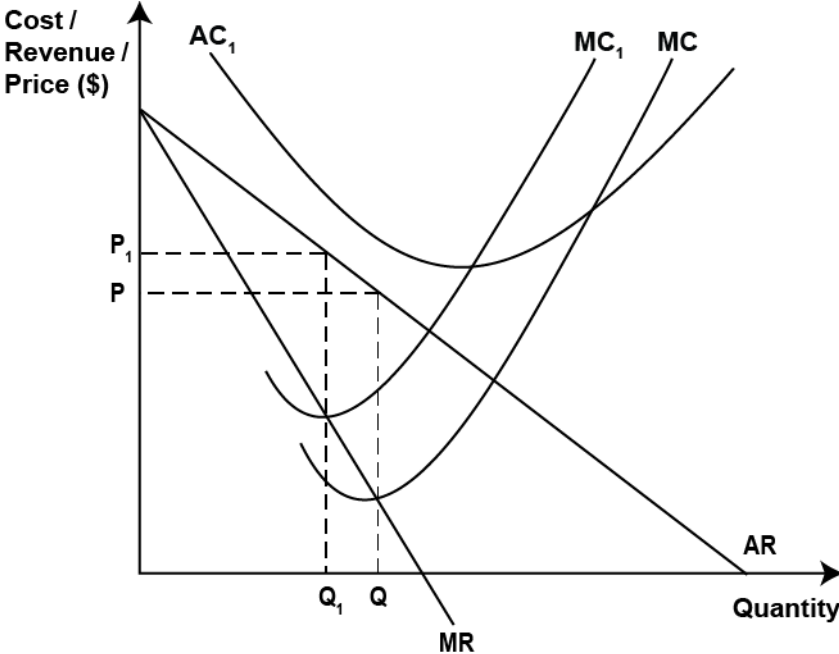**Graph Two: The individual perfectly competitive firm**

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