Assessment Schedule – 2018

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. *Explanation* involves giving a **reason** for the answer.	*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. *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).	*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.

Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
0 – 6	7 – 12	13 – 18	19 – 24

Question	Sample answers / Evidence
ONE (a)	See **Appendix One**.
(b)	See **Appendix Two**.
(c)	**Monopoly** In the long run, the monopolist can maintain earning the supernormal profit shaded in Graph One because of strong barriers to entry that prevent other firms from entering the market, increasing the market supply and driving down the price received. Hence, the monopolist will continue to produce $\mathbf{Q_1}$ and charge a price of $\mathbf{P_1}$ because it is the only seller and can set the price or quantity in the market, and this is where profits are maximised as MC = MR. **Perfect Competitor** In the long run, the perfect competitor's profits will reduce from supernormal to normal, since more firms will enter the industry because of an absence of barriers to entry and the attraction of an opportunity to earn supernormal profits (TR>TC). As more firms enter the industry, the market supply will increase and hence, market price will decline, reducing the price the firm receives from $\mathbf{P_2}$ to $\mathbf{P_3}$. (The perfect competitor is a price taker because it's too small to influence the market price.) This process continues until all firms earn a normal profit (TR = TC) and the incentive to enter the industry has been removed. At $\mathbf{Q_2}$, MC is now greater then MR, so the firm is making marginal losses on each unit produced. Hence, they will lower their output to $\mathbf{Q_3}$, where MC equals MR_1 and profits are maximised.

Achievement	Achievement with Merit	Achievement with Excellence
(a) Supernormal profit shaded on Graph One (b) Supernormal profit shaded on Graph Two (c) Explains for the monopolist: • The monopolist earns a supernormal profit in the long run because of strong barriers to entry • The monopolist will continue to produce Q_1 and charge a price of P_1 because this is where profits are maximised (MC = MR) OR because they are the only seller and can set the price or quantity. Explains for the perfect competitor: • The firm earns a normal profit in the long run as: - there are no barriers to entry so more firms can enter the market, increasing market supply OR - the price received declines as each firm is a price taker OR - TR now equals TC (or AR = AC). • The firm produces less as MC is greater than the new MR OR it will reduce output to where the new MR = MC.	(c) Explains in detail for the monopolist: • The monopolist earns a supernormal profit in the long run because of strong barriers to entry that prevent other firms entering the market and driving down prices • The monopolist will continue to produce Q_1 and charge a price of P_1 because this is where profits are maximised (MC = MR) and because they are the only seller and can set the price or quantity **OR** Explains in detail for the perfect competitor: • The firm earns a normal profit in the long run as: - there are no barriers to entry so more firms can enter the market, increasing market supply AND - the price received declines as each firm is a price taker AND - TR now equals TC (or AR = AC). • The firm produces less as MC is greater than the new MR, so it is making marginal losses and will reduce output to Q_3, where the new MR = MC (new MR = AR curve must be correctly drawn and labelled).	(c) Explains in detail for the monopolist: • The monopolist earns a supernormal profit in the long run because of strong barriers to entry that prevent other firms entering the market and driving down prices • The monopolist will continue to produce Q_1 and charge a price of P_1 because this is where profits are maximised (MC = MR) and because they are the only seller and can set the price or quantity **AND** Explains in detail for the perfect competitor: • The firm earns a normal profit in the long run as: - there are no barriers to entry so more firms can enter the market, increasing market supply AND - the price received declines as each firm is a price taker AND - TR now equals TC (or AR = AC). • The firm produces less as MC is greater than the new MR, so it is making marginal losses and will reduce output to Q_3, where the new MR = MC (new MR = AR curve must be correctly drawn and labelled).

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence.	Some Achievement evidence, partial explanations.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence. Must refer to Graph One or Two.	Most Merit evidence. Must refer to Graph One or Two.	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

Question	Sample answers / Evidence
TWO (a)	See **Appendix Three**.
(b)	See **Appendix Four**.
(c)	**The monopolist operating at the profit-maximising equilibrium is less beneficial for the consumer** because the consumer is paying a higher price (**P_1**) and purchasing a lower quantity (**Q_1**) compared to the natural monopolist with MC pricing. Hence, the consumer surplus is lower because the difference between what consumers are willing to pay and what they actually pay is smaller, and there are fewer units from which to gain a surplus. The natural monopolist with marginal cost pricing has a higher consumer surplus because of the lower price paid by consumers and the higher quantity purchased. **The natural monopolist with marginal cost pricing is allocatively efficient** because the firm is operating at the point where MC = AR. The AR curve is the market demand curve for the firm because they are the only seller in the market, and the MC curve is the market supply curve. Hence, the price (**P_1**) and the quantity produced (**Q_1**) are the allocatively efficient price and quantity because market demand equals market supply and there is no deadweight loss. The profit-maximising monopolist is not allocatively efficient because they are operating where MR = MC, so AR (demand) does not equal MC (supply). **The natural monopolist with marginal cost pricing has the biggest impact on the Government** because the firm is making a subnormal profit, since AC is greater than AR and, therefore, TC is greater than TR. The Government will need to subsidise the firm up to the amount of the subnormal profit; otherwise, the firm will leave the industry. The profit-maximising monopolist is making a supernormal profit so is earning more than enough to stay in the industry, so no Government subsidy is required.

Achievement	Achievement with Merit	Achievement with Excellence
(a) Consumer Surplus AND deadweight loss shaded on Graph Three (b) Supernormal profit shaded on Graph Four AND no deadweight loss shaded (c) • Explains that the profit-maximising monopolist is the less beneficial as the consumer surplus is lower because a higher price OR lower quantity • Explains that the natural monopolist with MC pricing is allocatively efficient as the firm is operating where market supply = market demand OR there is no deadweight loss • Explains that the natural monopolist with MC pricing has the bigger impact on the Government because a subsidy will be required.	(c) • Explains in detail that the profit-maximising monopolist is the less beneficial because the consumer surplus is lower because of a higher price AND lower quantity • Explains that the natural monopolist with MC pricing is allocatively efficient as the firm is operating where market supply = market demand AND there is no deadweight loss • Explains that the natural monopolist with MC pricing has the bigger impact on the Government because a subsidy will be required because the firm is making a subnormal profit.	(c) • Explains in detail that the profit-maximising monopolist is the less beneficial because the consumer surplus is lower because of a higher price AND lower quantity **compared to** natural monopolist with MC pricing, which has a higher consumer surplus because of a lower price and higher quantity • Explains that the natural monopolist with MC pricing is allocatively efficient because the firm is operating where market supply = market demand AND there is no deadweight loss **compared to** the profit-maximising monopolist, which is not allocatively efficient because it is operating where market supply does not equal market demand and there is a deadweight loss • Explains that the natural monopolist with MC pricing has the bigger impact on the Government because a subsidy will be required because the firm is making a subnormal profit **compared to** the profit-maximising monopolist, which is making a supernormal profit so no Government subsidy is required.

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence.	Some Achievement evidence, partial explanations.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence. Must refer to Graph Three or Graph Four.	Most Merit evidence. Must refer to Graph Three or Graph Four.	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.

Question	Sample answers / Evidence
THREE (a)	See **Appendix Five**.
(b)	See **Appendix Six**.
(c)	**Increase in global vegetable consumption** This event would increase the market demand for New Zealand vegetables, which would increase the market price and hence the price received by the individual New Zealand vegetable grower in the short-run to $\mathbf{P_2}$ because they are a price taker and too small to influence the market price. Hence, AR and MR would increase and MR is now greater than MC, so the firm is missing marginal profits if they keep producing at $\mathbf{Q_1}$. The firm will increase output in the short run to $\mathbf{Q_2}$, where MC equals the new MR and profits are maximised. **Increase in variable costs** This event will increase MC and AC for the individual New Zealand vegetable grower, shifting up both the MC and AC curves to MC_1 and AC_1, respectively. At $\mathbf{Q_2}$, MC is greater than MR, so the firm is making marginal losses on each unit produced. Hence, the firm will reduce output to $\mathbf{Q_3}$ in the short run where MR equals the new MC and losses are minimised. Because the individual New Zealand vegetable grower is a price taker and there is no change in market demand and average revenue, the increase in variable costs will have no impact on the short-run price level and it will remain at $\mathbf{P_2}$.

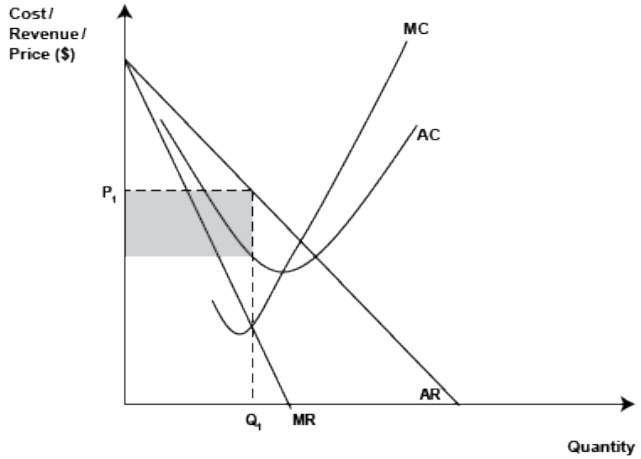
Achievement	Achievement with Merit	Achievement with Excellence
(a) • TWO of: - MR = AR line shifted up and labelled - Higher price and quantity labelled - Supernormal profit shaded (b) • ONE of: - MC and AC curves shifted up and labelled - Lower quantity labelled and no change in price - Subnormal profit labelled (c) Explains for an increase in global vegetable consumption: • The short-run price level will increase because of an increase in market demand OR because the firm is a price taker • The short-run level of output will increase because the new MR is greater than MC OR because the firm will increase output to where the new MR equals MC. Explains for an increase in variable costs: • The short-run price level will not change because the firm is a price taker OR as there is no change in AR / demand • The short-run level of output will decrease because the new MC is greater than MR OR because the firm will reduce output to where the new MC = MR.	(c) Explains in detail for an increase in global vegetable consumption: • The short-run price level will increase because of an increase in market demand, AND the firm is a price taker • The short-run level of output will increase because the new MR is greater than MC AND the firm will increase output to where the new MR equals MC **OR** Explains for an increase in variable costs: • The short-run price level will not change because the firm is a price taker AND there is no change in AR / demand • The short-run level of output will decrease because the new MC is greater than MR AND the firm will reduce output to where the new MC = MR.	(c) Explains in detail for an increase in global vegetable consumption: • The short-run price level will increase because of an increase in market demand, AND the firm is a price taker • The short-run level of output will increase because the new MR is greater than MC AND the firm will increase output to where the new MR equals MC **AND** Explains for an increase in variable costs: • The short-run price level will not change because the firm is a price taker AND there is no change in AR / demand • The short-run level of output will decrease because the new MC is greater than MR AND the firm will reduce output to where the new MC = MR.

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence.	Some Achievement evidence, partial explanations.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence. Must refer to Graph Five or Graph Six.	Most Merit evidence. Must refer to Graph Five or Graph Six.	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.

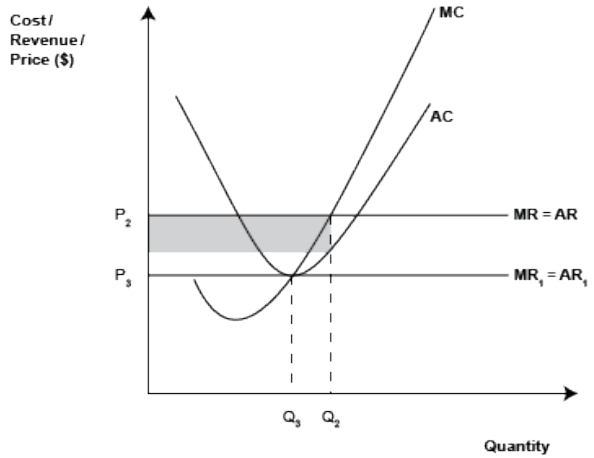
Appendix One – Question One (a)

Graph One: A monopolist earning a supernormal profit in the short run



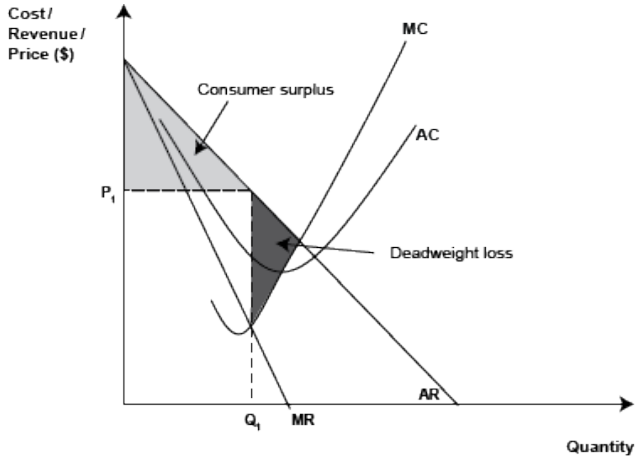
Appendix Two Question One (b)

Graph Two: A perfect competitor earning a supernormal profit in the short run



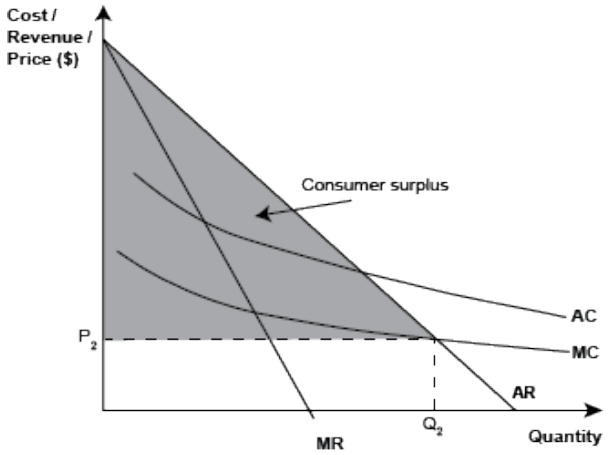
Appendix Three Question Two (a)

Graph Three: A monopolist operating at the profit maximising equilibrium



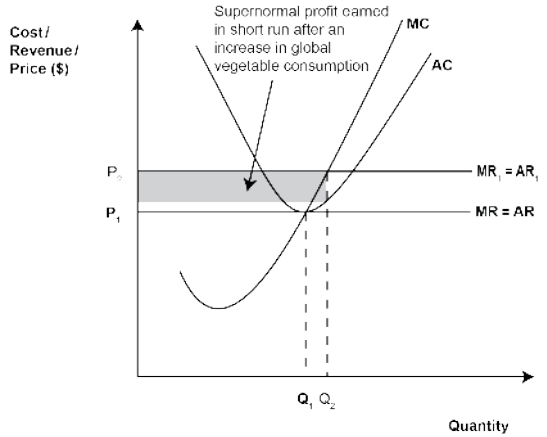
Appendix Four – Question Two (b)

Graph Four: A natural monopolist operating with a marginal cost pricing regulation



Appendix Five – Question Three (a)

Graph Five: A New Zealand vegetable grower as a perfect competitor earning a normal profit in the short run



Appendix Six – Question Three (b)

Graph Six: A New Zealand vegetable grower as a perfect competitor earning a normal profit in the short run