Assessment Schedule – 2017

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

Evidence

Question	Sample Evidence	Achievement	Achievement with Merit	Achievement with Excellence
ONE				
(a)	*(See Appendix.)*	TWO of: • $\mathbf{P_1}$ and $\mathbf{Q_1}$ correctly identified on Graph One. • Deadweight loss correctly shaded on Graph One. • $\mathbf{P_2}$ and $\mathbf{Q_2}$ correctly identified on Graph Two.		
(b)	A firm operating in a perfectly competitive market will produce at $\mathbf{Q_2}$ because this is where profits are maximised, as MR = MC. The price will be $\mathbf{P_2}$ because this equals the average revenue at $\mathbf{Q_2}$. $\mathbf{P_2}$ is an allocatively efficient price because it is determined by where market demand equals market supply. Because the firm is too small to influence the market price, the firm must accept this price (price taker), as any amount can be sold at this price and it becomes the **MR, AR**, and demand curve for the firm. The output is allocatively efficient because the profit-maximising quantity ($\mathbf{Q_2}$) occurs where the individual demand curve for the firm equals the supply curve (= **MC**). At $\mathbf{Q_2}$, consumer surplus plus producer surplus is maximised and there is no deadweight loss.	Explains that a perfectly competitive firm is allocative efficient because: • the firm must accept the market price (price taker idea) • the firm maximises profits (or producers / operates) where AR = MR = MC OR where supply = demand OR where market equilibrium occurs • there is no deadweight loss OR total surpluses are maximised	Explains in detail that a perfectly competitive firm is allocative efficient because: • the firm must accept the market price (price taker idea) because of ONE of: - it is too small to influence the market price - of no barriers to entry or exit - homogeneous / identical product sold • the firm maximises profits (or producers / operates) where AR = MR = MC which is where demand = supply OR where market equilibrium occurs • there is no deadweight loss because total surpluses are maximised	Explains in detail that a perfectly competitive firm is allocative efficient because: • the firm must accept the market price (price taker idea) because of ONE of: - it is too small to influence the market price - of no barriers to entry or exit - homogeneous/identical product sold • the firm maximises profits (or producers/ operates) where AR = MR = MC which is where demand = supply OR where market equilibrium occurs • there is no deadweight loss because total surpluses are maximised

Question	Sample Evidence	Achievement	Achievement with Merit	Achievement with Excellence
One (b) cont'd	The monopolist's equilibrium is not allocatively efficient because the monopolist will restrict output to $\mathbf{Q_1}$ where **MR = MC** and profits are maximised. This is less than the allocatively efficient output that occurs where the monopolist's market supply curve (**MC**) = their market demand curve (**AR**). Because the monopolist is the only seller in the market with no competition (as a result of strong barriers to entry), they can charge a higher price of $\mathbf{P_1}$, which equals their average revenue at $\mathbf{Q_1}$. This price is higher than the allocatively efficient price that occurs where their market supply curve (**MC**) = their market demand curve **(AR).** A deadweight loss occurs (see shaded area in **Appendix One**) because the loss of consumer surplus due to the higher price and lower quantity is greater than the gain in producer surplus, so consumer surplus plus producer surplus is not maximised.	*OR* Explains that a monopoly firm: is not allocatively efficient because: • the firm can set their own price or quantity (or the firm will set a higher price or lower quantity) • the firm maximises profits (or produces / operates) where AR does not equal MC OR where supply doesn't equal demand or market equilibrium doesn't occur • a deadweight loss exists OR total surpluses are not maximised.	*OR* Explains in detail that a monopoly firm is not allocative efficient because: • the firm can set their own price or quantity (or the firm will set a higher price or lower quantity) as they are the only seller in the market OR as a result of strong barriers to entry • the firm maximises profits (or produces / operates) where AR does not equal MC so demand does not equal supply OR the market is not in equilibrium • a deadweight loss exists because total surpluses are not maximised.	*AND* Explains in detail that a monopoly firm is not allocative efficient because: • the firm can set their own price(or the firm will set a higher price or lower quantity) as they are the only seller in the market OR as a result of strong barriers to entry • the firm maximises profits (or produces / operates) where AR does not equal MC so demand does not equal supply OR the market is not in equilibrium • a deadweight loss exists because total surpluses are not maximised.

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 AND refers to Graph One OR Graph Two.	Most Merit evidence AND refers to Graph One OR Graph Two.	Excellence evidence AND integrates relevant information from BOTH graphs into the explanation. One part may be weaker.	All points covered AND integrates relevant information from BOTH graphs into the explanation.

N0 = No response; no relevant evidence.

Question	Sample Evidence	Achievement	Achievement with Merit	Achievement with Excellence
TWO				
(a)	*(See Appendix.)*	Identifies **P**, **Q, P_1**,**Q_1** on Graph Three and Graph Four.		
(b)	The increase in variable costs has increased marginal costs to **MC_1**. Hence, at the original output of **Q**, **MR** is now less than **MC**, so the firm is making marginal losses on each unit produced. Hence, the firm will reduce their output to **Q_1**, where **MR** = **MC_1** and profits are maximised.	Explains that the firm will reduce output because of ONE of: • **MC** is greater than **MR** (at **Q**) • marginal losses made • **MR** = **MC_1** at lower output (of **Q_1**)	Explains in detail that the firm will reduce output because of ALL of: • **MC** is greater than **MR** (at **Q**) • marginal losses made • **MR** = **MC_1** at lower output (of **Q_1**)	Explains in detail that the firm will reduce output because of ALL of: • **MC** is greater than **MR** (at **Q**) • marginal losses made • **MR** = **MC_1** at lower output (of **Q_1**)
(c)	*(See Appendix.)*	Identifies **P_2**, **Q_2**, **P_3**, **Q_3** on Graph Four.		
(d)	Marginal cost pricing would be more beneficial for the consumer because the price is lower than average cost pricing (**P_3** less than **P_2**) and the quantity produced is higher (**Q_3** greater than **Q_2**). Hence, the consumer surplus would be greater for marginal cost pricing because more units are available from which to gain a surplus and the difference between what the consumer is willing to pay and actually pays is greater. Marginal cost pricing will result in an allocatively efficient outcome because at **P_3**, **Q_3**, **AR** = **MC** and hence market supply (**MC**) = market demand (**AR**). No deadweight loss exists, and total surpluses are maximised.	Explains that marginal cost pricing is more beneficial than AC pricing for the consumer because: • the price is lower OR the quantity produced is higher OR the consumer surplus is higher. Explains that marginal cost pricing is allocatively efficient because: • no deadweight loss exists OR total surpluses are maximised OR price/quantity set where AR = MC (supply = demand).	Explains in detail that marginal cost pricing is more beneficial than AC pricing for the consumer because: • the consumer surplus is higher because of a lower price OR higher quantity *AND EITHER* Explains in detail that marginal cost pricing is allocatively efficient because: • no deadweight loss exists because EITHER total surpluses are maximised OR price / quantity set where AR = MC (supply = demand)	Explains in detail that marginal cost pricing is more beneficial than AC pricing for the consumer because: • the consumer surplus is higher because of a lower price OR higher quantity *AND* Explains in detail that marginal cost pricing is allocatively efficient because: • no deadweight loss exists because EITHER total surpluses are maximised OR price / quantity set where AR = MC (supply = demand)

Question	Sample Evidence	Achievement	Achievement with Merit	Achievement with Excellence
Two (d) cont'd	Average cost pricing will not result in an allocatively efficient outcome because at **P_2**, **Q_2**, **AR = AC** and hence **AR** does not equal **MC**, so market demand does not equal market supply and the price is higher than the allocatively efficient price, **P_3**. At this price **Q_2** is produced which is less than the allocatively efficient quantity, **Q_3**. A deadweight loss exists, and total surpluses are not maximised.	Explains that average cost pricing is not allocatively efficient because: • a deadweight loss exists OR total surpluses are not maximised OR price / quantity set where AC = AR OR AR does not equal MC (supply does not equal demand).	*OR* Explains in detail that average cost pricing is not allocatively efficient because: • a deadweight loss exists because EITHER total surpluses are not maximised OR price/ quantity set where AC = AR OR AR does not equal MC (supply does not equal demand).	*AND* Explains in detail that average cost pricing is not allocatively efficient because: a deadweight loss exists because EITHER total surpluses are not maximised OR price / quantity set where AC = AR OR AR does not equal MC (supply does not equal demand).

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 AND refers to Graph Three OR Graph Four.	Most Merit evidence AND refers to Graph Three OR Graph Four.	Excellence evidence AND integrates relevant information from Graph Four into the explanation. One part may be weaker.	All points covered AND integrates relevant information from Graph Four into the explanation.

N0 = No response; no relevant evidence.

Question	Sample Evidence	Achievement	Achievement with Merit	Achievement with Excellence
THREE				
(a)	*(See Appendix.)*	ONE of: • **AC** curve shifted upwards on Graph Six. • Subnormal profit correctly shaded and identified on Graph Six.		
(b)	*(See Appendix.)*	ONE of: • Market supply curve shifted to the left on Graph Five, and increase in market price shown • **MR** = **AR** curve shifted up to the normal profit position on Graph Six, and increase in quantity for the perfect competitor shown.		
(c)	The level of output in the short run will not change because fixed costs such as rent are independent of output, so the increase in fixed costs has not affected marginal costs and the firm is still maximising profits (or minimising losses) at **Q**. The economic profit has declined from normal to subnormal because the increase in average costs will increase total costs for the firm; so at **Q**, total cost is now greater than total revenue and the firm is earning less than sufficient to keep them in the industry.	Explains for the short run: • output will not change because marginal cost doesn't change OR because the firm is maximising profits (or minimising losses) at **Q** where **MR** = **MC** • economic profit declined to subnormal because of an increase in total (or average) costs OR because **TR** is now less than **TC** (or **AR** less than $\mathbf{AC_1}$) OR because the firm is earning less than sufficient to keep them in the industry	Explains in detail for the short run: • output will not change because marginal cost hasn't changed AND the firm would still be maximising profits (or minimising losses) at **Q** where **MR** = **MC** • economic profit declined to subnormal because of an increase in total (or average) costs AND EITHER because **TR** is now less than **TC** (or **AR** less than $\mathbf{AC_1}$) OR because the firm is earning less than sufficient to keep them in the industry	Explains in detail for the short run: • output will not change because marginal cost hasn't changed AND the firm would still be maximising profits (or minimising losses) at **Q** where **MR** = **MC** • economic profit declined to subnormal because of an increase in total (or average) costs AND EITHER because **TR** is now less than **TC** (or **AR** less than $\mathbf{AC_1}$) OR because the firm is earning less than sufficient to keep them in the industry

Question	Sample Evidence	Achievement	Achievement with Merit	Achievement with Excellence
Three (c) cont'd	Because subnormal profits are being earned, some firms will leave the industry, since they are earning less than is sufficient to keep them in the industry. This will result in a decrease in market supply (**S** to $\mathbf{S_1}$) and, hence, an increase in the market price ($\mathbf{P_m}$ to $\mathbf{P_1}$). In perfect competition, each firm is a price taker and has to accept the market price so the price, marginal revenue, and average revenue for each firm will increase to ($\mathbf{P_1 = AR_1 = MR_1}$). At this price, the remaining firms are all earning a normal profit because total revenue = total costs (or $\mathbf{AR_1 = AC_1}$) and the incentive to leave the industry has been removed. Because marginal revenue has increased, each remaining firm is missing out on marginal profits at **Q**, since $\mathbf{MR_1}$ is greater than **MC**. Hence, they can increase profits by increasing output to $\mathbf{Q_1}$, where $\mathbf{MR_1}$ equals **MC** and profits are maximised.	Explains for the long run: • market price will increase because of a decrease in market supply • **MR** = **AR** will increase because of an increase in market price • economic profit will increase to normal as **TR** = **TC** (or $\mathbf{AR_1 = AC_1}$) for remaining firms OR as the firm is earning just enough to stay in the industry • output increases for remaining firms to where ($\mathbf{MR_1}$ = **MC**) and profits are maximised OR output increases because if they remain at **Q** $\mathbf{MR_1}$ is greater than **MC**.	*OR* Explains in detail for the long run: • market price will increase because of a decrease in market supply, as some firms leave the industry • **MR** = **AR** will increase because of an increase in market price, and each firm is a price taker • economic profit will increase to normal as **TR** = **TC** (or $\mathbf{AR_1 = AC_1}$) for remaining firms, AND EITHER the firm is earning just enough to stay in the industry OR the incentive to leave the industry is removed • output increases to $\mathbf{Q_1}$ for remaining firms to where ($\mathbf{MR_1}$ = **MC**) and profits are maximised, since they are missing out on marginal profits if they remain at **Q** as $\mathbf{MR_1}$ is greater than **MC**.	*AND* Explains in detail for the long run: • market price will increase because of a decrease in market supply, as some firms leave the industry • **MR** = **AR** will increase because of an increase in market price, and each firm is a price taker • economic profit will increase to normal as **TR** = **TC** (or $\mathbf{AR_1 = AC_1}$) for remaining firms, AND EITHER the firm is earning just enough to stay in the industry OR the incentive to leave the industry is removed • output increases to $\mathbf{Q_1}$ for remaining firms to where ($\mathbf{MR_1}$ = **MC**) and profits are maximised, since they are missing out on marginal profits if they remain at **Q** as $\mathbf{MR_1}$ is greater than **MC**.

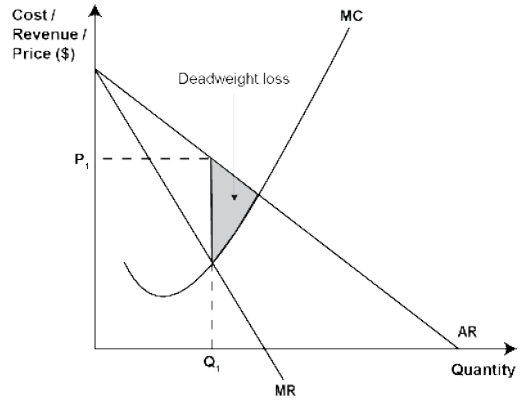
N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence.	Some Achievement evidence, partial explanations.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence AND refers to Graph Five OR Graph Six.	Most Merit evidence AND refers to Graph Five OR Graph Six.	Excellence evidence AND integrates relevant information from BOTH graphs into the explanation. One part may be weaker.	All points covered AND integrates relevant information from BOTH graphs into the explanation.

N0 = No response; no relevant evidence.

Appendix: Graphs

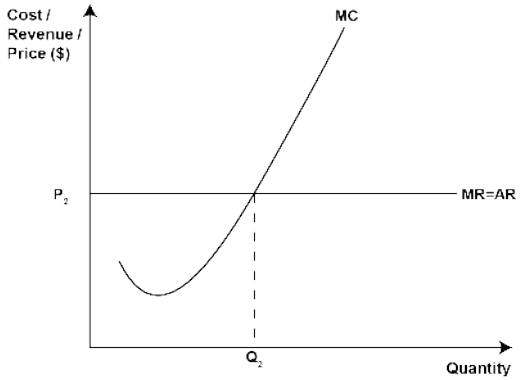
Question One

Graph One: A firm operating in a monopoly market



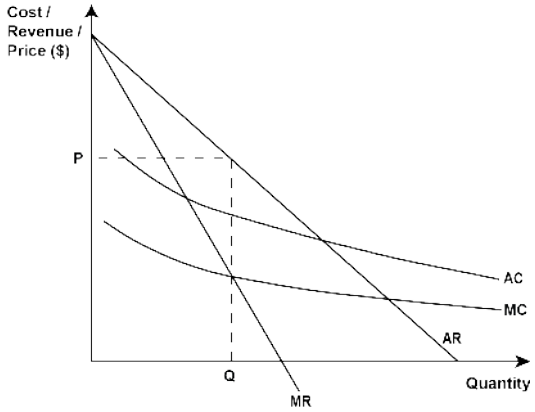
Question One

Graph Two: A firm operating in a perfect competition market



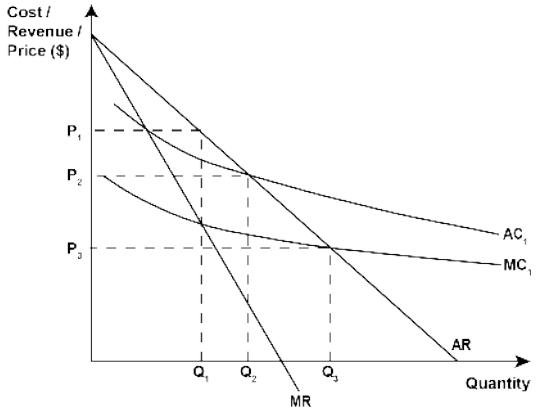
Question Two

Graph Three: A natural monopoly



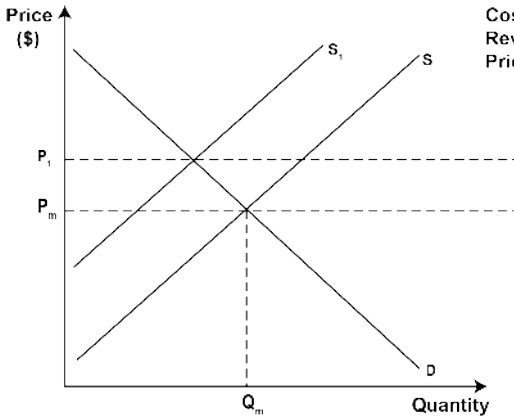
Question Two

Graph Four: A natural monopoly after an increase in variable costs



Question Three

Graph Five: The market



Graph Six: The individually perfectly competitive firm