

Assessment Schedule – 2020

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

Assessment Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<p>Demonstrating understanding of the efficiency of different market structures using marginal analysis involves:</p> <ul style="list-style-type: none"> • providing an explanation of: <ul style="list-style-type: none"> - 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 - pricing and output decisions for perfectly competitive and / or monopolist firms using marginal analysis • using an economic model(s) to illustrate concepts relating to the efficiency of different market structures. 	<p>Demonstrating in-depth understanding of the efficiency of different market structures using marginal analysis involves:</p> <ul style="list-style-type: none"> • providing a detailed explanation of: <ul style="list-style-type: none"> - 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 - pricing and output decisions for perfectly competitive and / or monopolist firms using marginal analysis • using an economic model(s) to illustrate complex concepts and / or support detailed explanations relating to the efficiency of different market structures. 	<p>Demonstrating comprehensive understanding of the efficiency of different market structures using marginal analysis 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.

Evidence

Q1	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	See Appendix.	TWO of: <ul style="list-style-type: none"> - Subnormal profit shaded and labelled. - Market demand curve shifted left and labelled, AND lower price and quantity labelled. - MR = AR line shifted down and labelled. - Lower price and quantity labelled for the firm. 		
(b)	<p>Short run:</p> <p>A decrease in demand decreases the market price to P_1. Firms in perfect competition are price takers because they are too small to influence the market, hence they have to accept the lower market price, $P_1 = P_{SR}$.</p> <p>The perfect competitor's $MR = AR = D$ shifts down to $MR_1 = AR_1 = D_1$. At the original output of Q, $MC > MR_1$, the firm is no longer profit maximising as the additional cost in producing one more unit is greater than the additional revenue gained from selling it. Therefore the firm is making marginal losses, and this is true for all units between Q_{SR} and Q. In the short run, the perfect competitor will respond by decreasing output to Q_{SR} where $MC = MR_1$ and profit is maximised (loss minimised).</p> <p>In the short run, at output level Q_{SR}, a subnormal profit is being made (shaded "grey" on Graph Two). As its $TC > TR$ (or $AC > AR$), the firm is earning less than sufficient to keep it in the market in the long run.</p>	<p>Explains:</p> <ul style="list-style-type: none"> • The short-run price decreases due to the perfect competitor being a price taker. • The short-run output decreases as the MC is greater than MR_1, OR firm is making marginal losses, OR to $MC = MR_1$ where profit is maximised / loss minimised. • The short-run economic profit earned is subnormal because AC is greater than the AR, OR TC is greater than TR, OR the perfect competitor is making less than sufficient to stay in the market. 	<p>Explains, in detail:</p> <ul style="list-style-type: none"> • The short-run price decreases due to the perfect competitor being a price taker, too small to influence the market. • The short-run output decreases as the MC is greater than MR_1 AND the firm is making marginal losses AND the firm will reduce output to $MC = MR_1$ where profit is maximised / loss minimised. • The short-run economic profit earned is subnormal because AC is greater than AR, OR as TC is greater than TR AND the perfect competitor is making less than sufficient to stay in the market. 	<p>Explains, in detail:</p> <ul style="list-style-type: none"> • The short-run price decreases due to the perfect competitor being a price taker, too small to influence the market. • The short-run output decreases as the MC is greater than MR_1 AND the firm is making marginal losses AND the firm will reduce output to $MC = MR_1$ where profit is maximised / loss minimised. • The short-run economic profit earned is subnormal because AC is greater than AR, OR as TC is greater than TR AND the perfect competitor is making less than sufficient to stay in the market.

Q1	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(c)	See Appendix.	TWO of: <ul style="list-style-type: none"> - MR = AR line shifted up and labelled - Market supply curve shifted left and labelled AND higher price and lower quantity labelled. - Higher price and quantity labelled for the firm 		
(d)	<p>Long run:</p> <p>In the long run, as there are no barriers to entry or exit, some firms will leave, reducing market supply (from S to S_1).</p> <p>This results in market price increasing (from P_1 to P_2), and because firms in perfect competition are price takers, they will now accept the higher price $P_2 = P_{LR}$, and their $MR_1 = AR_1 = D_1$ shifts up to $MR_2 = AR_2 = D_2$.</p> <p>This means that at the short run output level q_{SR}, the firm is no longer profit maximising as $MR_2 > MC$, meaning that the additional revenue generated from selling one more unit is greater than the additional cost incurred in making it. Therefore there are marginal profits to be made, and this is true for all units between Q_{SR} and Q_{LR}. To profit maximise, the firm will increase output from Q_{SR} to Q_{LR} where $MC = MR_2$.</p> <p>At this output level, the firm makes normal profit as its $TC = TR$ (or $AC = AR$), meaning they are earning just sufficient to keep them in the market in the long run, and there is no more incentive to enter or exit the market.</p>	<p>Explains:</p> <ul style="list-style-type: none"> • The subnormal profit means some firms will leave due to no barriers to exit, OR reducing market supply. • The perfect competitor accepts the higher price as they are price takers. • The long-run output increases as the MR_2 is greater than MC, OR the firm is missing out on marginal profits, OR the firm will increase output to where the $MC = MR_2$ where profit is maximised. • In the long run the perfect competitor makes normal profit because $AC = AR$ (or $TC = TR$), OR the perfect competitor is making just sufficient to stay in the market, OR there is no more incentive to enter / exit the market. 	<p>Explains, in detail:</p> <ul style="list-style-type: none"> • The subnormal profit means some firms will leave due to no barriers to exit AND reducing market supply. • The higher price means that the perfect competitor's $MR = AR = D$ shifts up as they are price takers. • The long-run output increases as the MR_2 is greater than MC AND the firm is missing out on marginal profits, AND the firm will increase output to where the $MC = MR_2$ where profit is maximised. • In the long run the perfect competitor makes normal profit because $AC = AR$, (or $TC = TR$), AND the perfect competitor is making just sufficient to stay in the market, OR there is no more incentive to enter / exit the market. 	<p>Explains, in detail:</p> <ul style="list-style-type: none"> • The subnormal profit means some firms will leave due to no barriers to exit AND reducing market supply. • The higher price means that the perfect competitor's $MR = AR = D$ shifts up as they are price takers. • The long-run output increases as the MR_2 is greater than MC, AND the firm is missing out on marginal profits, AND the firm will increase output to where the $MC = MR_2$ where profit is maximised. • In the long run the perfect competitor makes normal profit because $AC = AR$, (or $TC = TR$), AND the perfect competitor is making just sufficient to stay in the market, OR there is no more incentive to enter / exit the market.

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 for short run OR long run. Must refer to Graph One or Two.	Most Merit evidence for short run OR long run. Must refer to Graph One or Two.	Excellence evidence. One part may be weaker. AND Integrates relevant information from both graphs into answer.	All points covered. AND Integrates relevant information from both graphs into answer.

N0 = No response; no relevant evidence.

Q2	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	See Appendix.	(i) 3 of 4 correct from Table One. (ii) 5 of 6 correct from Table Two.		
(b)	<p>Impact on consumer surplus</p> <p>Consumers benefit the most under MC pricing as indicated by the largest area of consumer surplus AFP₄. This is because consumers pay the lowest price of P₄ (compared to P₃ and P₂ respectively under AC pricing and profit maximisation), meaning the difference between what the consumers are willing to pay and what they actually pay is the largest.</p> <p>Under MC pricing, consumers consume the greatest quantity, Q₄, giving consumers the greatest number of units from which to gain surplus (compared to Q₃ and Q₂ respectively under AC pricing and profit maximisation), therefore this is the most beneficial to consumers of all three options.</p> <p>AC pricing and profit maximisation are both less beneficial to consumers, although AC pricing is more beneficial than profit maximisation because the price paid by consumers under AC pricing, P₃, is lower than P₂ under profit maximisation. Also, consumers consume more units under AC pricing, Q₃, compared to Q₂ under profit maximisation, so the consumer surplus for AC pricing is larger than the consumer surplus for profit maximisation.</p>	<p>Explains:</p> <p>Consumers benefit the most under MC pricing because this is the largest area of consumer surplus, AND because consumers pay the lowest price, OR consumers consume the most units.</p> <p>Consumers benefit more under AC pricing than profit maximisation, due to consumer surplus area being larger than profit maximisation, AND because consumers pay a lower price under AC pricing compared to profit maximisation, OR consume more units compared to under profit maximisation.</p>	<p>Explains, in detail:</p> <p>Consumers benefit the most under MC pricing as indicated by the largest area of consumer surplus, AND because consumers pay the lowest price, AND consumers consume the most units.</p> <p>Under AC pricing consumers benefit less than MC pricing but more than profit maximisation, AND the consumer surplus area is larger than profit maximisation (but smaller than MC pricing), AND consumers pay a lower price under AC pricing compared to profit maximisation (but a higher price compared to MC pricing), AND consume more units compared to under profit maximisation.</p>	<p>Explains, in detail:</p> <p>Consumers benefit the most under MC pricing as indicated by the largest area of consumer surplus, AND because consumers pay the lowest price, AND consumers consume the most units.</p> <p>Under AC pricing consumers benefit less than MC pricing but more than profit maximisation, AND the consumer surplus area is larger than profit maximisation (but smaller than MC pricing), AND consumers pay a lower price under AC pricing compared to profit maximisation (but a higher price compared to MC pricing), AND consume more units compared to under profit maximisation.</p>

Q2	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
	<p>Profit maximisation is the least beneficial for consumers as they pay the highest price (P_2) and consume the lowest quantity (Q_2) out of the three options, hence the consumer surplus is lowest.</p> <p>Impact on allocative efficiency</p> <ul style="list-style-type: none"> • MC pricing is allocatively efficient, with no deadweight loss, therefore the most efficient of all three options. It is allocatively efficient also because that is where demand (AR) equals supply (MC). • AC pricing and profit maximisation are not allocatively efficient as each results in DWL, although AC pricing with a smaller deadweight loss area of EFG is more efficient. Profit maximisation is the least efficient, indicated by the largest DWL area of CFJ. • Another indication why both AC pricing and profit maximisation are not allocatively efficient is that they are at points where demand (AR) does not equal supply (MC) (or demand is greater than supply). 	<p>Profit maximisation is the least beneficial for consumers due to the smallest consumer surplus, as they pay the highest price, OR consume the lowest quantity out of the three options.</p> <p>Explains:</p> <ul style="list-style-type: none"> • MC pricing is most allocatively efficient as there is no deadweight loss, OR it is where demand (AR) equals supply (MC). • AC pricing is not allocatively efficient as DWL exists, OR it is where demand (AR) does not equal supply (MC). • Profit maximisation is not allocatively efficient as DWL exists, OR it is where demand does not equal supply (or demand is greater than supply). 	<p>Profit maximisation is the least beneficial for consumers due to the smallest consumer surplus, as they pay the highest price, AND consume the lowest quantity out of the three options.</p> <p style="text-align: center;">OR</p> <p>Explains, in detail:</p> <ul style="list-style-type: none"> • MC pricing is the most allocatively efficient as there is no deadweight loss, AND it is where demand (AR) equals supply (MC). • AC pricing is not allocatively efficient as DWL exists, but more efficient compared to profit maximisation as shown by a smaller DWL area, AND it is where demand (AR) does not equal supply (MC). • Profit maximisation is the least efficient, indicated by the largest DWL area, AND it is where demand (AR) does not equal supply (MC). 	<p>Profit maximisation is the least beneficial for consumers due to the smallest consumer surplus, as they pay the highest price, AND consume the lowest quantity out of the three options.</p> <p style="text-align: center;">AND</p> <p>Explains, in detail:</p> <ul style="list-style-type: none"> • MC pricing is the most allocatively efficient as there is no deadweight loss, AND it is where demand (AR) equals supply (MC). • AC pricing is not allocatively efficient as DWL exists, but more efficient compared to profit maximisation as shown by a smaller DWL area, AND it is where demand (AR) does not equal supply (MC). • Profit maximisation is the least efficient, indicated by the largest DWL area, AND it is where demand (AR) does not equal supply (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. Must refer to Graph Three or Table One or Two	Most Merit evidence. Must refer to Graph Three or Table 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.

Q3	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	See Appendix.	(i) BOTH of: - P_e and Q_e labelled. - Supernormal profit shaded and labelled. (ii) BOTH of: - P_1 and Q_1 labelled. - Subnormal profit shaded and labelled.		
(b)	An increase in variable cost increases both MC and AC, shifting both curves up. This means that at the original output of Q_e , the monopoly is no longer profit maximising as $MC_1 > MR$ i.e. the additional cost of making the last unit is greater than the additional revenue gained from selling it, which means the monopoly is making marginal losses. This is true for all units between Q_e and Q_1 . The monopoly will reduce output to Q_1 where $MC_1 = MR$ and profit is maximised.	Explains that the monopolist will reduce output because of ONE of: - The new MC is greater than the MR. - It is making marginal losses. - To profit maximise, it will decrease output to where $MC_1 = MR$.	Explains, in detail: At the original output of Q_e , the monopoly is no longer profit maximising as $MC_1 > MR$, AND the monopoly is making marginal losses, AND the monopoly will reduce output to Q_1 where $MC_1 = MR$ and profit is maximised.	Explains, in detail At the original output of Q_e , the monopoly is no longer profit maximising as $MC_1 > MR$, AND the monopoly is making marginal losses, AND the monopoly will reduce output to Q_1 where $MC_1 = MR$ and profit is maximised.
(c)	Before increase in variable cost Prior to the increase in variable cost, the monopolist's profit maximisation price is at P_e . At profit maximisation, where $MC = MR$, the monopoly is a price maker/able to control price or quantity and is able to charge a high price of P_e (which equals AR at Q_e). This is due to it being the sole seller in the market and supplying the entire market, meaning the AR curve represents the market demand. It makes a supernormal profit (shaded "pink" on Graph Four), as its operating where $AR > AC$ (or $TR > TC$), meaning they are earning more than sufficient return to keep them in the market.	Explains: <ul style="list-style-type: none"> The price is set at P_e because at profit maximising output Q_e (where $MC = MR$) the AR equals P_e, OR the monopoly is a price maker / able to control price or quantity. a supernormal profit is being made as $AR > AC$ (or $TR = TC$), OR the monopoly is earning more than sufficient to keep them in the market. 	Explains, in detail: <ul style="list-style-type: none"> The price is set at P_e because at profit maximising output Q_e (where $MC = MR$) the AR equals P_e, AND the monopoly is a price maker / able to control price or quantity. It makes a supernormal profit because $AR > AC$, (or $TR > TC$) AND the monopolist is earning more than sufficient to keep them in the market. 	Explains, in detail: <ul style="list-style-type: none"> The price is set at P_e because at profit maximising output Q_e (where $MC = MR$) the AR equals P_e, AND the monopoly is a price maker / able to control price or quantity. It makes a supernormal profit because $AR > AC$, (or $TR > TC$) AND the monopolist is earning more than sufficient to keep them in the market.

Q3	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
	<p>In the long run, the supernormal profit will remain as there are strong barriers to entry (such as patents, technological know-how, high set up costs) that will prevent new firms entering the market to increase supply and therefore preventing them from pushing down the price.</p> <p>After increase in variable cost</p> <p>An increase in variable cost raises both MC and AC. Profit maximisation price increases from P_e to P_1 (which equals AR at Q_1) as the monopoly is a price maker. Being the only seller in the market, it has strong control over the price or quantity. In this instance, by reducing quantity from Q_e to Q_1, it is able to charge a higher price of P_1.</p> <p>However, due to the increase in variable cost, the monopolist now makes a subnormal profit, (shaded “blue” on Graph Five), as its $TC > TR$ (or $AC > AR$).</p> <p>In the long run, if costs and revenue do not change, the monopolist will leave the industry, as total revenue is less than total economic costs, so they are earning less than is sufficient to keep them in the market.</p>	<ul style="list-style-type: none"> The supernormal profit will remain due to strong barriers to entry. <p>Explains:</p> <ul style="list-style-type: none"> The price increases because it is a price maker / has strong control over price or quantity OR by reducing quantity from Q_e to Q_1, it is able to charge a higher price of P_1. A subnormal profit is being made as its $AC > AR$ (or $TC > TR$), OR the monopolist is earning less than sufficient to keep them in the market OR in the long run, if costs do not change, the monopolist will leave the industry. 	<ul style="list-style-type: none"> In the long run, the supernormal profit will remain as there are strong barriers to entry (such as patents, technological know-how, high set up costs) that will prevent new firms entering the market to increase supply and pushing down the price. <p style="text-align: center;">OR</p> <p>Explains, in detail:</p> <ul style="list-style-type: none"> The price increases because it is a price maker / has strong control over price or quantity AND by reducing quantity from Q_e to Q_1, it is able to charge a higher price of P_1. However, due to the increase in variable cost, the monopolist now makes a subnormal profit, as its $AR < AC$ (or $TC > TR$), OR the monopolist is earning less than sufficient to keep them in the market, AND in the long run, if costs do not change, the monopolist will leave the industry. 	<ul style="list-style-type: none"> In the long run, the supernormal profit will remain as there are strong barriers to entry (such as patents, technological know-how, high set up costs) that will prevent new firms entering the market to increase supply and pushing down the price. <p style="text-align: center;">AND</p> <p>Explains, in detail:</p> <ul style="list-style-type: none"> The price increases because it is a price maker / has strong control over price or quantity AND by reducing quantity from Q_e to Q_1, it is able to charge a higher price of P_1. However, due to the increase in variable cost, the monopolist now makes a subnormal profit, as its $AR < AC$ (or $TC > TR$), AND the monopolist is earning less than sufficient to keep them in the market, AND in the long run, if costs do not change, the monopolist will leave the industry.

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 Four or Five	Most Merit evidence. Must refer to Graph Four or Five	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.

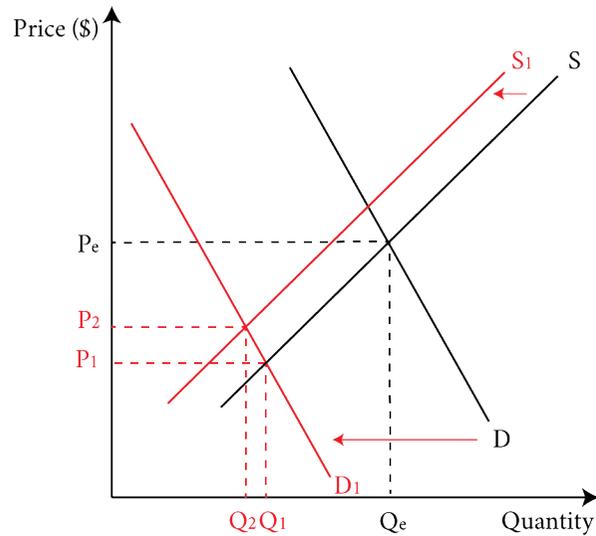
Cut Scores

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

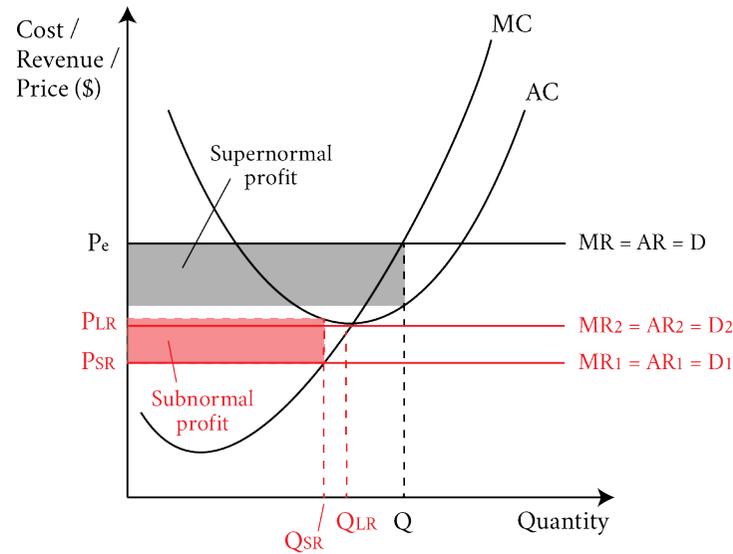
Appendix

Question One (a)(i), (ii), (iii) and (c)(i) and (ii)

Graph One: Perfect competition market



Graph Two: A perfectly competitive firm



Question Two (a)(i)

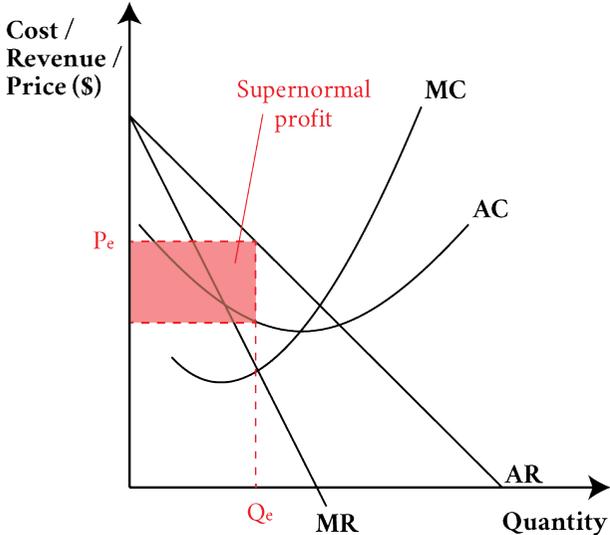
Type of pricing	Consumer surplus	Deadweight loss
Profit maximisation	a c P2	c f j
Average cost pricing	a e P3	e f g
Marginal cost pricing	a f P4	None (zero)

Question Two (a)(ii)

Type of pricing	Price	Output	Type of profit
Profit maximisation	P2	Q2	Supernormal
Average cost pricing	P3	Q3	Normal
Marginal cost pricing	P4	Q4	Subnormal

Question Three (a)(i) and (ii)

Graph Four: Monopoly before an increase in variable costs



Graph Five: Monopoly after an increase in variable costs

