

**assessment Schedule – 2023**

**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>Demonstrating <b>understanding</b> of the efficiency of different market structures using marginal analysis involves:</i></p> <ul style="list-style-type: none"> <li>• providing an explanation of:                             <ul style="list-style-type: none"> <li>- the efficiency of a market structure</li> <li>- 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</li> <li>- a government policy to improve the efficiency of a monopoly market</li> <li>- pricing and output decisions for perfectly competitive and / or monopolist firms using marginal analysis</li> </ul> </li> <li>• using an economic model(s) to illustrate concepts relating to the efficiency of different market structures.</li> </ul>	<p><i>Demonstrating <b>in-depth understanding</b> of the efficiency of different market structures using marginal analysis involves:</i></p> <ul style="list-style-type: none"> <li>• providing a detailed explanation of:                             <ul style="list-style-type: none"> <li>- the efficiency of a market structure</li> <li>- 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</li> <li>- a government policy to improve the efficiency of a monopoly market</li> <li>- pricing and output decisions for perfectly competitive and / or monopolist firms using marginal analysis</li> </ul> </li> <li>• using an economic model(s) to illustrate complex concepts and / or support detailed explanations relating to the efficiency of different market structures.</li> </ul>	<p><i>Demonstrating <b>comprehensive understanding</b> of the efficiency of different market structures using marginal analysis involves:</i></p> <ul style="list-style-type: none"> <li>• comparing and / or contrasting:                             <ul style="list-style-type: none"> <li>- the efficiency of market structures</li> <li>- 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</li> <li>- the effectiveness of government policies to improve the efficiency of a monopoly market</li> </ul> </li> <li>• integrating an economic model(s) into explanations relating to the efficiency of different market structures.</li> </ul>

**Evidence**

Q1	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a) (i) (iii)	See Appendix.	<ul style="list-style-type: none"> <li>• TWO of:                             <ul style="list-style-type: none"> <li>- <math>Q_e</math> labelled</li> <li>- <math>Q_{LR}</math> labelled</li> <li>- <math>P_{LR}</math> labelled</li> <li>- new <math>MR_1 = AR_1 = D_1</math>.</li> </ul> </li> </ul>		
(ii)	<p>At output level <math>Q_1</math> the firm's <math>MR &gt; MC</math>, meaning the additional revenue generated from selling the last / additional unit is greater than the additional cost incurred in producing it. This means the perfect competitor is missing out on marginal profits. This is true for all units between <math>Q_e</math> and <math>Q_1</math>. To profit maximise, the perfect competitor will increase output to <math>Q_e</math> where <math>MC = MR</math>, so will not produce at <math>Q_1</math>.</p> <p>At output level <math>Q_2</math> the firm's <math>MC &gt; MR</math>, meaning the additional cost incurred in producing the last / additional 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 <math>Q_e</math> and <math>Q_2</math>. To profit maximise, the firm will decrease output to <math>Q_e</math> where <math>MC = MR</math>, so will not produce at <math>Q_2</math>.</p>	<ul style="list-style-type: none"> <li>• Explains that the perfect competitor will not produce at output level <math>Q_1</math> due to ONE of:                             <ul style="list-style-type: none"> <li>- <math>MR</math> is greater than <math>MC</math></li> <li>- missing out on marginal profits</li> <li>- <math>Q_e</math> is / <math>Q_1</math> is not where <math>MC = MR</math> and profits are maximised.</li> </ul> </li> </ul> <p>OR</p> <p>Explains that the perfect competitor will not produce at output level <math>Q_2</math> due to ONE of:</p> <ul style="list-style-type: none"> <li>- <math>MC</math> is greater than <math>MR</math></li> <li>- marginal losses being made</li> <li>- <math>Q_e</math> is / <math>Q_2</math> is not where <math>MC = MR</math> and profits are maximised.</li> </ul>	<ul style="list-style-type: none"> <li>• Explains in detail that the perfect competitor will not produce at output level <math>Q_1</math> due to TWO of:                             <ul style="list-style-type: none"> <li>- <math>MR</math> is greater than <math>MC</math></li> <li>- missing out on marginal profits</li> <li>- <math>Q_e</math> is / <math>Q_1</math> is not where <math>MC = MR</math> and profits are maximised.</li> </ul> </li> </ul> <p>OR</p> <p>Explains in detail that the perfect competitor will not produce at output level <math>Q_2</math> due to TWO of:</p> <ul style="list-style-type: none"> <li>- <math>MC</math> is greater than <math>MR</math></li> <li>- marginal losses being made</li> <li>- <math>Q_e</math> is / <math>Q_2</math> is not where <math>MC = MR</math> and profits are maximised.</li> </ul>	<ul style="list-style-type: none"> <li>• Explains in detail that the perfect competitor will not produce at output level <math>Q_1</math> due to ALL of:                             <ul style="list-style-type: none"> <li>- <math>MR</math> is greater than <math>MC</math></li> <li>- missing out on marginal profits.</li> </ul> </li> </ul> <p>AND</p> <p>Explains in detail that the perfect competitor will not produce at output level <math>Q_2</math> due to ALL of:</p> <ul style="list-style-type: none"> <li>- <math>MC</math> is greater than <math>MR</math></li> <li>- marginal losses being made</li> <li>- <math>Q_e</math> is where <math>MC = MR</math> and profits are maximised.</li> </ul>
(b)	See Appendix.	<ul style="list-style-type: none"> <li>• TWO of:                             <ul style="list-style-type: none"> <li>- <math>Q_e</math> labelled</li> <li>- <math>Q_{LR}</math> labelled (= <math>Q_e</math>)</li> <li>- supernormal profit shaded and labelled.</li> </ul> </li> </ul>		

<p>(c) (i)</p>	<p>In the long run, the perfect competitor's output level decreases from <math>Q_e</math> to <math>Q_{LR}</math> where <math>MC = MR_1</math> and profit is maximised, while the monopoly's output level remains the same at <math>Q_e = Q_{LR}</math> where <math>MC = MR</math> and profit is maximised.</p> <p>In the long run, the perfect competitor makes normal profit. The short run supernormal profit attracts new firms to the industry and due to there being no barriers to entry more firms will enter, increasing market supply. This will reduce the price and, because perfect competitors are price takers, they will accept the new lower price and their <math>MR = AR = D</math> decreases to <math>MR_1 = AR_1 = D_1</math>. At the long run output level of <math>Q_{LR}</math> where its <math>MC = MR_1</math> and profit is maximised, the perfect competitor makes normal profit as its <math>AR = AC</math> (or <math>TR = TC</math>).</p> <p>In the long run, the monopoly will continue to make supernormal profit. Due to strong barriers to entry, new firms will be prevented from entering the market even though the short run supernormal profit might be enticing. This will prevent the price from falling so the monopoly will be able to maintain the high price in the long run and at output level of <math>Q_{LR}</math> where <math>MC = MR</math>, profit is maximised, and the monopoly makes supernormal profit as its <math>AR &gt; AC</math> (or <math>TR &gt; TC</math>).</p>	<p>Explains:</p> <ul style="list-style-type: none"> <li>output decreases OR output remains the same for monopoly.</li> </ul> <p>Explains that in the long run:</p> <ul style="list-style-type: none"> <li>the perfect competitor makes normal profit due to ONE of: <ul style="list-style-type: none"> <li>no barriers to entry</li> <li>market supply increasing</li> <li>price taker accepting lower price</li> <li><math>AR = AC</math> (or <math>TR = TC</math>)</li> </ul> </li> <li>the monopoly continues to make supernormal profit due to ONE of: <ul style="list-style-type: none"> <li>strong barriers to entry</li> <li>examples of barriers</li> <li>new firms cannot enter</li> <li>prevent price from falling</li> <li><math>AR &gt; AC</math> (or <math>TR &gt; TC</math>).</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>output decreases to / produces at <math>Q_{LR}</math> for the perfect competitor as they are operating where <math>MR = MC</math> / profits are maximised OR output remains the same for monopoly / produces at <math>Q_e</math> as they are operating where <math>MC = MR</math> / profit is maximised.</li> </ul> <p>Explains in detail that in the long run:</p> <ul style="list-style-type: none"> <li>perfect competitor makes normal profit due to TWO of: <ul style="list-style-type: none"> <li>no barriers to entry</li> <li>market supply increasing</li> <li>price taker accepting lower price</li> <li><math>AR = AC</math> (or <math>TR = TC</math>)</li> </ul> </li> <li>the monopoly continues to make supernormal profit due to TWO of: <ul style="list-style-type: none"> <li>strong barriers to entry</li> <li>examples of barriers</li> <li>new firms cannot enter</li> <li>prevent price from falling</li> <li><math>AR &gt; AC</math> (or <math>TR &gt; TC</math>).</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>output decreases to / produces at <math>Q_{LR}</math> for the perfect competitor AND output remains the same for monopoly / produces at <math>Q_e</math> AND as they are both operating where <math>MC = MR</math> / profit is maximised.</li> </ul> <p>Explains in detail that in the long run:</p> <ul style="list-style-type: none"> <li>perfect competitor makes normal profit due to ALL of: <ul style="list-style-type: none"> <li>no barriers to entry</li> <li>market supply increasing</li> <li>price taker accepting lower price</li> <li><math>AR = AC</math> (or <math>TR = TC</math>)</li> </ul> </li> <li>the monopoly continues to make supernormal profit due to THREE of: <ul style="list-style-type: none"> <li>strong barriers to entry</li> <li>examples of barriers</li> <li>new firms cannot enter</li> <li>prevent price from falling</li> <li><math>AR &gt; AC</math> (or <math>TR &gt; TC</math>).</li> </ul> </li> </ul>
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(ii)	<p>The perfect competitor is allocatively efficient because at the profit maximising output level it is operating at <math>MC = AR</math>, meaning <math>S = D</math> because its <math>MR</math> is also its <math>AR</math> or <math>D</math>. This is because perfect competitors are price takers and are too small to influence the market so they will sell as many or as few units at the price set by the market. In the case of the perfect competitor the sum of consumer surplus and producer surplus is maximised.</p> <p>The monopoly is allocatively inefficient because at the profit maximising output level it is not operating at <math>MC = AR</math>, meaning <math>S \neq D</math>. This is because the monopoly is a price maker and is the only seller in the market so they can command a higher price by restricting output or reduce price to increase sales. Therefore, in the case of a monopoly, there is a deadweight loss.</p>	<p>Explains:</p> <ul style="list-style-type: none"> <li>• PC is allocatively efficient due to ONE of: <ul style="list-style-type: none"> <li>- operating at <math>S = D</math></li> <li>- the sum of CS and PS is maximised / no DWL</li> <li>- being a price taker OR too small to influence the market.</li> </ul> </li> <li>• monopoly is allocatively inefficient due to ONE of: <ul style="list-style-type: none"> <li>- operating where <math>S \neq D</math></li> <li>- there is a DWL / CS plus PS not maximised</li> <li>- sole seller OR price maker OR overpriced / under produced idea.</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• PC is allocatively efficient due to TWO of: <ul style="list-style-type: none"> <li>- operating at <math>S = D</math></li> <li>- the sum of CS and PS is maximised / no DWL</li> <li>- being a price taker OR too small to influence the market.</li> </ul> </li> <li>• monopoly is allocatively inefficient due to TWO of: <ul style="list-style-type: none"> <li>- operating where <math>S \neq D</math></li> <li>- there is a DWL / CS plus PS not maximised</li> <li>- sole seller OR price maker OR overpriced / under produced idea.</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• PC is allocatively efficient due to ALL of: <ul style="list-style-type: none"> <li>- operating at <math>S = D</math></li> <li>- the sum of CS and PS is maximised / no DWL</li> <li>- being a price taker OR too small to influence the market.</li> </ul> </li> <li>• monopoly is allocatively inefficient due to TWO of: <ul style="list-style-type: none"> <li>- operating where <math>S \neq D</math></li> <li>- there is a DWL / CS plus PS not maximised</li> <li>- sole seller OR price maker OR overpriced / under produced idea.</li> </ul> </li> </ul>
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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 Graph Two.	Most Merit evidence.	Excellence evidence.  One part may be weaker.  Integrates relevant information from Graph One and Graph Two into answer.	All points covered.

**N0** = No response; no relevant evidence.

Q2	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a) (i)	See Appendix.	<ul style="list-style-type: none"> <li>• TWO of:                             <ul style="list-style-type: none"> <li>- <math>P_e</math> and <math>Q_e</math> labelled</li> <li>- supernormal profit shaded and labelled</li> <li>- consumer surplus shaded and labelled</li> <li>- DWL shaded and labelled.</li> </ul> </li> </ul>		
(ii)	<p>Natural monopoly is a single seller with high initial set-up costs (which are strong barriers preventing other firms from entering) and because of that, it gains economies of scale due to spreading of these fixed costs over larger outputs decreasing its average costs, as represented by its downward sloping AC curve. Because of this, the natural monopoly can sell at a lower price than if there are two or more sellers in the market.</p> <p>Also accept: Having other firms competing would lead to wasteful duplication of resources which will increase inefficiency / cost and restricts the firm's ability to benefit from economies of scale. This is why, despite the inefficiency indicated by the deadweight loss, it is still desirable to have the natural monopoly supplying to the entire market rather than encouraging competition.</p>	<p>Explains:</p> <ul style="list-style-type: none"> <li>• the natural monopoly can supply to the entire market at a lower price (than if there are two or more firms) with ONE of, as it:                             <ul style="list-style-type: none"> <li>- gains from economies of scale</li> <li>- has high initial set-up costs</li> <li>- has strong barriers to entry</li> <li>- has a downward sloping AC curve.</li> </ul> </li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• the natural monopoly avoids duplication of resources.</li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• the natural monopoly can supply to the entire market at a lower price (than if there are two or more firms) with TWO of:                             <ul style="list-style-type: none"> <li>- gains from economies of scale</li> <li>- high initial set-up costs</li> <li>- strong barriers to entry</li> <li>- downward sloping AC curve.</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• the natural monopoly can supply to the entire market at a lower price (than if there are two or more firms) with THREE of:                             <ul style="list-style-type: none"> <li>- gains from economies of scale</li> <li>- high initial set-up costs</li> <li>- strong barriers to entry</li> <li>- downward sloping AC curve.</li> </ul> </li> </ul>
(iii)	See Appendix.	<ul style="list-style-type: none"> <li>• TWO of:                             <ul style="list-style-type: none"> <li>- <math>P_{ac}</math> and <math>Q_{ac}</math> labelled</li> <li>- consumer surplus shaded and labelled</li> <li>- DWL shaded and labelled.</li> </ul> </li> </ul>		

<p>(b)</p>	<p>Under average cost pricing, consumers pay a lower price (<math>P_{ac}</math> instead of <math>P_e</math>), and consume a larger quantity (<math>Q_{ac}</math> instead of <math>Q_e</math>), resulting in a larger consumer surplus (as shown by the larger shaded area in Graph Four). Under AC pricing, because consumers are paying a lower price, this means that the difference between the price actually paid and the price consumers are willing to pay is larger compared to that created under profit maximising. Under AC pricing, consumers consume a greater quantity, so there are more units from which to gain a surplus compared to profit maximising. Consumers are thus better off under AC pricing compared to profit maximising.</p> <p>Under AC pricing, the natural monopoly is producing where <math>AC = AR</math>, which is not where <math>S = D</math>. This results in DWL as shaded in Graph Four, which indicates that the natural monopoly is not allocatively efficient and the sum of consumer surplus and producer surplus is not maximised.</p> <p>At profit maximising, the natural monopoly is producing where <math>MC = MR</math>, which is not where <math>S = D</math>. This results in DWL as shaded in Graph Three, which indicates that the natural monopoly is not allocatively efficient and the sum of consumer surplus and producer surplus is not maximised.</p> <p>Both options are not allocatively efficient, however at profit maximising, the natural monopoly is more inefficient – indicated by the larger DWL area in Graph Three.</p>	<p>Explains:</p> <ul style="list-style-type: none"> <li>• consumer surplus under AC pricing is greater due to the lower price OR the higher quantity OR the difference between the price paid and the price consumers are willing to pay is higher (OK to explain CS for profit max lower...)</li> <li>• the natural monopoly is not allocatively efficient under AC pricing OR profit maximisation due to ONE of:             <ul style="list-style-type: none"> <li>- they are not operating where <math>S = D</math> (or <math>MC = AR</math>)</li> <li>- there is DWL (or the sum of consumer surplus and producer surplus is not maximised).</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• consumer surplus under AC pricing is greater due to the lower price AND the higher quantity</li> <li>• the natural monopoly is not allocatively efficient under AC pricing AND profit maximisation due to BOTH of:             <ul style="list-style-type: none"> <li>- they are not operating where <math>S = D</math> (or <math>MC = AR</math>)</li> <li>- there is DWL (or the sum of consumer surplus and producer surplus is not maximised).</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• consumer surplus under AC pricing is greater due to the lower price AND the higher quantity. So, there are more units from which to gain a surplus OR the difference between the price paid and the price consumers are willing to pay has increased more than profit maximising</li> <li>• the natural monopoly is not allocatively efficient under AC pricing AND profit maximisation due to BOTH of:             <ul style="list-style-type: none"> <li>- they are not operating where <math>S = D</math> (or <math>MC = AR</math>)</li> <li>- there is DWL (or the sum of consumer surplus and producer surplus is not maximised).</li> </ul> </li> </ul> <p>AND</p> <ul style="list-style-type: none"> <li>- at profit maximising, the natural monopoly is more inefficient than at AC pricing due to higher DWL.</li> </ul>
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<p>The natural monopolist makes a supernormal profit under profit maximising. This is because at <math>P_e</math> and <math>Q_e</math>, average revenue is greater than average cost (or TR is greater than TC). This means that they are earning more than sufficient to keep them in the industry. The targeted tax will reduce the net after tax profit and the supernormal profit will become smaller.</p> <p>Under AC pricing, the natural monopolist makes a normal profit because at <math>P_{ac}</math> and <math>Q_{ac}</math>, average cost = average revenue (or TC = TR). This means that they are earning sufficient to keep them in the industry, so the Government will not have to intervene or pay a subsidy. The benefit to the Government of this option is that no intervention is needed.</p> <p>Accept also: The government receives additional tax revenue from the targeted tax on the supernormal profit under profit maximisation.</p>	<p>Explains that:</p> <ul style="list-style-type: none"> <li>the natural monopoly makes a supernormal profit under profit maximising as average revenue is greater than average cost (or TR is greater than TC)</li> <li>the natural monopoly makes a normal profit under AC pricing as average cost = average revenue (or TC = TR)</li> <li>under profit maximising – extra tax revenue for the Government OR a valid impact of AC pricing (e.g. the Government has to enforce it, no subsidy / intervention needed).</li> </ul>	<p>Explains in detail that:</p> <ul style="list-style-type: none"> <li>the natural monopoly makes a supernormal profit under profit maximising as average revenue is greater than average cost (or TR is greater than TC) AND earning more than sufficient to keep them in the industry OR net after tax profit will be reduced due to the targeted tax (or supernormal profits will be reduced)</li> <li>the natural monopoly makes a normal profit under AC pricing as average cost = average revenue (or TC = TR) AND earning sufficient to keep them in the industry</li> <li>under profit maximising, the Government will gain tax revenue that can be spent on other areas of the economy.</li> </ul>	<p>Explains in detail that:</p> <ul style="list-style-type: none"> <li>the natural monopoly makes a supernormal profit under profit maximising as average revenue is greater than average cost (or TR is greater than TC) AND earning more than sufficient to keep them in the industry AND net after tax profit will be reduced due to the targeted tax (or supernormal profits will be reduced)</li> <li>the natural monopoly makes a normal profit under AC pricing as average cost = average revenue (or TC = TR) AND earning sufficient to keep them in the industry</li> <li>under profit maximising, the Government will gain tax revenue that can be used in other areas of the economy AND valid comparison with AC.</li> </ul>
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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 Four.	Most Merit evidence.	Excellence evidence. One part may be weaker.  One part may be weaker.  Integrates relevant information from graphs and resource material into answer.	All points covered.

**N0** = No response; no relevant evidence.

Q3	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a) (i)	<p>An increase in the insurance cost increases average cost because it is a fixed cost. This means it is independent of output as it is not directly affected by the amount produced. For example, if the firm produces 1 unit or 100 units of output, the insurance premium will stay the same. Therefore, it does not affect the cost of another unit of output so marginal cost is not affected.</p>	<ul style="list-style-type: none"> <li>• Explains it increases average cost as it is ONE of:                             <ul style="list-style-type: none"> <li>- a fixed cost</li> <li>- independent of output</li> <li>- does not affect the cost of producing one more unit.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Explains in detail it increases average cost as it is TWO of:                             <ul style="list-style-type: none"> <li>- a fixed cost</li> <li>- independent of output</li> <li>- does not affect the cost of producing one more unit.</li> </ul> </li> </ul>	
(ii)	<p>See Appendix.</p>	<ul style="list-style-type: none"> <li>• TWO of:                             <ul style="list-style-type: none"> <li>- <math>P_1</math> and <math>Q_1</math> labelled</li> <li>- subnormal profit shaded and labelled</li> <li>- <math>P_{LR}</math> and <math>Q_{LR}</math> labelled.</li> </ul> </li> </ul>		
(iii)	<p>In the short run, the firm's price remains at <math>P_1</math>, which equals the market equilibrium price of <math>P_e</math> because they are price takers and too small to influence the market. The firm maximises profits (or minimises losses) where <math>MC = MR</math>. In the short run, the perfect competitor makes a subnormal profit as its <math>AC &gt; AR</math> (or <math>TC &gt; TR</math>), and it is making less than sufficient to stay in the industry, some will begin to leave. They can do so as there are no barriers to exit. As they leave, market supply decreases due to fewer firms supplying in the market and this results in an increase in the market price (from <math>P_e</math> to <math>P_{e1}</math>).</p> <p>Firms in perfect competition are price takers so will take this new higher price and their <math>MR = AR = D</math> increases to <math>MR_1 = AR_1 = D_1</math>.</p> <p>At this higher price, the perfect competitor maximises profits at <math>MC = MR_1</math> at output level <math>Q_{LR}</math>. In the long run, at output <math>Q_{LR}</math>, the perfect competitor makes a normal profit as its <math>AC = AR</math> (or <math>TC = TR</math>), and it is making just sufficient to stay in the industry, and there is no more incentive for firms to enter or leave.</p>	<p>Explains:</p> <ul style="list-style-type: none"> <li>• In the short run, ONE of:                             <ul style="list-style-type: none"> <li>- subnormal profits are made as <math>AC &gt; AR</math> (<math>TC &gt; TR</math>)</li> <li>- the firm is not earning enough to stay in the market</li> <li>- price remains the same as each firm is a price taker.</li> </ul> </li> <li>• In the long run, normal profits are made due to ONE of:                             <ul style="list-style-type: none"> <li>- subnormal profit leads to some firms leaving due to no barriers to exit</li> <li>- market supply decreases leading to price increasing</li> <li>- <math>AC = AR</math> (<math>TC = TR</math>)</li> <li>- each firm is earning just sufficient to stay in the market / no more incentive to leave market.</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• In the short run, TWO of:                             <ul style="list-style-type: none"> <li>- subnormal profits are made as <math>AC &gt; AR</math> (<math>TC &gt; TR</math>)</li> <li>- the firm is not earning enough to stay in the market</li> <li>- price remains the same as each firm is a price taker.</li> </ul> </li> <li>• In the long run, normal profits are made due to TWO of:                             <ul style="list-style-type: none"> <li>- subnormal profit leads to some firms leaving due to no barriers to exit</li> <li>- market supply decreases leading to price increasing</li> <li>- <math>AC = AR</math> (<math>TC = TR</math>)</li> <li>- each firm is earning just sufficient to stay in the market / no more incentive to leave market.</li> </ul> </li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>• In the short run, ALL of:                             <ul style="list-style-type: none"> <li>- subnormal profits are made as <math>AC &gt; AR</math> (<math>TC &gt; TR</math>)</li> <li>- the firm is not earning enough to stay in the market</li> <li>- price remains the same as each firm is a price taker.</li> </ul> </li> <li>• In the long run, normal profits are made due to THREE of:                             <ul style="list-style-type: none"> <li>- subnormal profit leads to some firms leaving due to no barriers to exit</li> <li>- market supply decreases leading to price increasing</li> <li>- <math>AC = AR</math> (<math>TC = TR</math>)</li> <li>- each firm is earning just sufficient to stay in the market / no more incentive to leave market.</li> </ul> </li> </ul>



<p>(b)</p>	<p>The market quantity in both scenarios has decreased (<math>Q_{e3}</math> and <math>Q_{e1}</math> respectively) because the number of individual firms supplying to the market has decreased, driven out by the subnormal profit. Each individual firm is supplying a greater output (<math>Q_{LR}</math> instead of <math>Q_1</math> and <math>Q_{LR1}</math> instead of <math>Q_2</math>) due to the higher price that they are receiving (more profitable) but this is outweighed by the decrease in output due to a smaller number of firms in the market, hence overall there is a decrease in the market quantity.</p> <p>Under a recession, the decrease in market quantity is greater than the decrease due to an increase in average cost (i.e. <math>Q_e Q_{e3} &gt; Q_e Q_{e1}</math>). Both scenarios result in a subnormal profit that leads to some firms leaving the industry, which reduces the market supply. In the case of a recession, this decrease is greater because of the decrease in demand as well. Overall market quantity decreases to <math>Q_{e3}</math> in a recession while an increase in average cost decreases it to <math>Q_{e1}</math>.</p>	<p>Explains that:</p> <ul style="list-style-type: none"> <li>market quantity decreased for both events.</li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>market quantity decreases more for a recession due to demand and supply both decreasing.</li> </ul>	<p>Explains in detail:</p> <ul style="list-style-type: none"> <li>market quantity decreases more for a recession due to demand and supply both decreasing AND specific comparison between Graphs 7 and 5 (e.g. demand and supply both decrease for a recession, reducing market quantity from <math>Q_e</math> to <math>Q_{e3}</math> on Graph 7 whereas the increase in AC only decreases supply resulting in a lower decrease in market quantity, <math>Q_e</math> to <math>Q_{e1}</math> on Graph 5).</li> </ul>
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N1	N2	A3	A4	M5	M6	E7	E8
<p>Very little Achievement evidence.</p>	<p>Some Achievement evidence, partial explanations.</p>	<p>Most Achievement evidence.</p>	<p>Nearly all Achievement evidence.</p>	<p>Some Merit evidence.</p> <p style="text-align: center;">Must refer to graphs.</p>	<p>Most Merit evidence.</p>	<p>Excellence evidence.</p> <p>One part may be weaker.</p> <p>Integrates relevant information from graphs into answer.</p>	<p>All points covered.</p>

**N0** = No response; no relevant evidence.

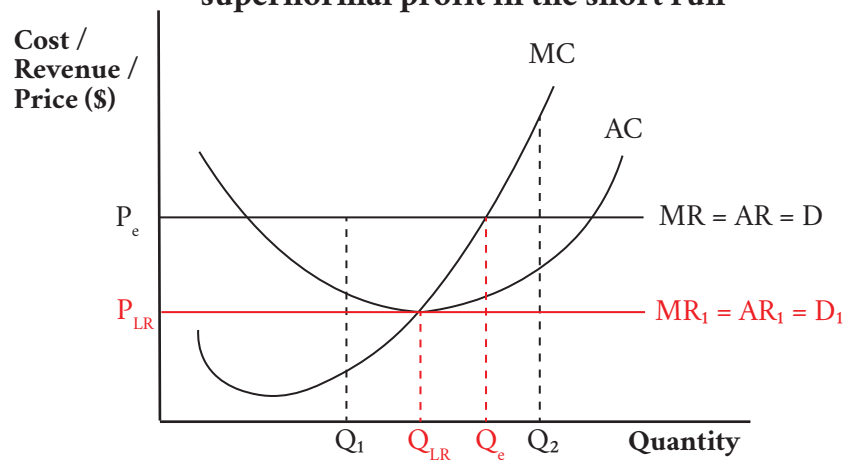
### Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
<p>0 – 6</p>	<p>7 – 13</p>	<p>14 – 18</p>	<p>19 – 24</p>

**Appendix**

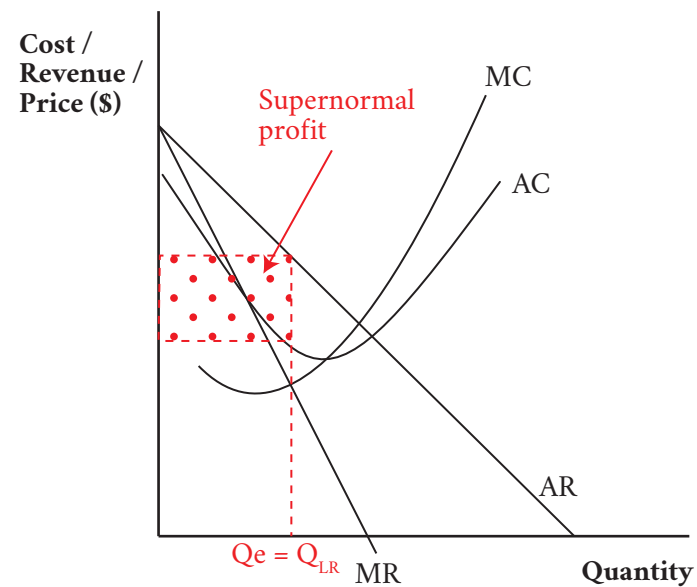
**Question One (a)(i) and (iii)**

**Graph One: Perfect competitor earning supernormal profit in the short run**



**Question One (b)**

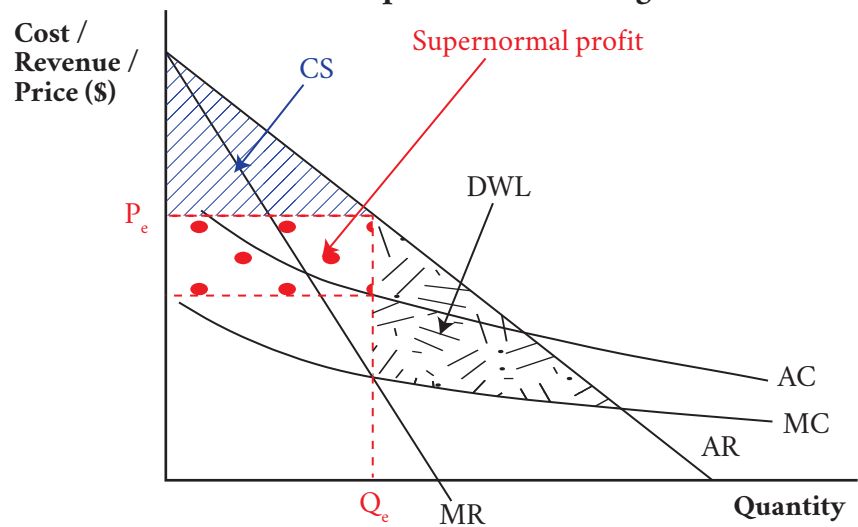
**Graph Two: Monopoly earning supernormal profit in the short run**



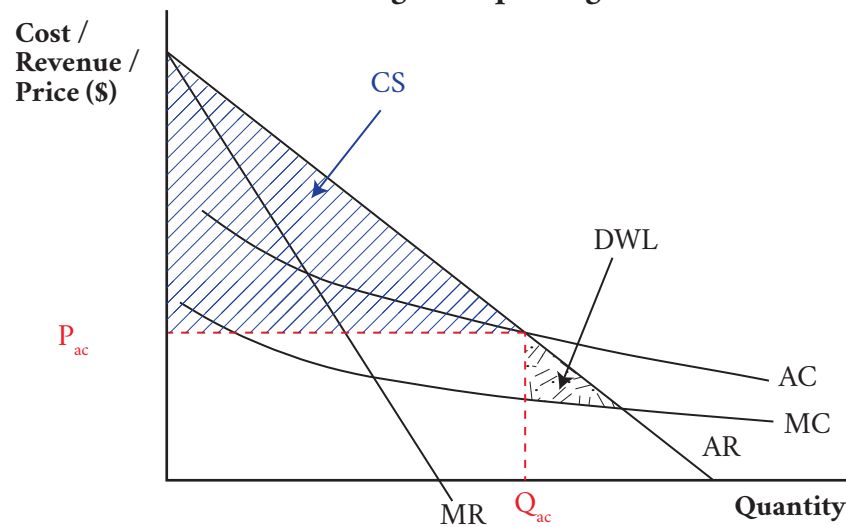
Question Two (a)(i)

Question Two (a)(iii)

**Graph Three: Natural monopoly operating at profit maximising**

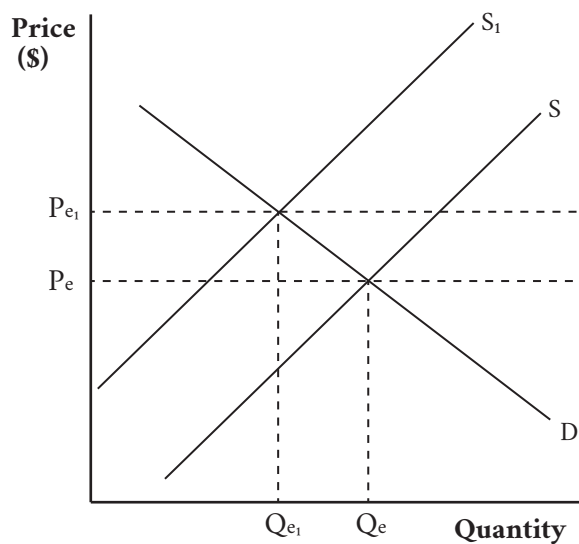


**Graph Four: Natural monopoly operating at average cost pricing**



Question Three (a)(ii)

Graph Five: The market



Graph Six: A perfect competition firm

