

Assessment Schedule – 2024**Economics: Demonstrate understanding of the efficiency of market equilibrium (91399)****Assessment Criteria**

Achievement	Achievement with Merit	Achievement with Excellence
<i>Demonstrating understanding of the efficiency of market equilibrium involves:</i> • providing an explanation of market equilibrium and / or changes in market equilibrium, and of efficiency in the market • using an economic model(s) to illustrate concepts relating to the efficiency of market equilibrium.	<i>Demonstrating in-depth understanding of the efficiency of market equilibrium involves:</i> • providing a detailed explanation of market equilibrium and / or changes in market equilibrium, and the impact of changes in markets on efficiency in the market • using an economic model(s) to illustrate complex concepts and / or support detailed explanations relating to the efficiency of market equilibrium.	<i>Demonstrating comprehensive understanding of the efficiency of market equilibrium involves:</i> • analysing the impact of a change in a market on efficiency by comparing and / or contrasting the different impacts on participants (i.e. consumer, producer, and, where appropriate, government) in that market • integrating an economic model(s) into explanations relating to the efficiency of market equilibrium that compare and / or contrast the different impacts.

Evidence

Q1	Sample evidence			Achievement	Achievement with Merit	Achievement with Excellence
(a)(i)		Before	After	8 of 12 labels correct.	10 of 12 labels correct.	
	Price NZ consumers pay	P_w	P_{w_1}			
	Price NZ producers receive	P_w	P_{w_1}			
	Quantity consumed by NZ consumers	Q_d	Q_{d_1}			
	Quantity supplied by NZ producers	Q_s	Q_{s_1}			
		Before	After			
	Consumer surplus	ACP _w	ABP _{w₁}			
	Producer surplus	P _w FE	P _{w₁} GE			
	Deadweight loss (if any)	None (answer not included in tally)	None (answer not included in tally)			
(iii)	The world price is horizontal (e.g. SW and SW ₁) because New Zealand is a price taker in the global market. This is because New Zealand is small in relation to the rest of the world and therefore cannot influence the world price but has to 'take' the price dictated by its trading partners or the global market.			Explains: the world price is horizontal because New Zealand is a price taker or is too small.	Explains in detail: the world price is horizontal because New Zealand is a price taker as it is too small in relation to the global market to influence or accept price dictated by trading partners.	
(b)	New Zealand consumers are worse off as a result of the increase in the world price. CS decreases as consumers now pay a higher price of P_{w_1} instead of P_w, meaning that the difference between the price that they are willing to pay and the price they actually pay becomes smaller. CS also decreases because consumers consume a lower quantity of Q_{d_1} instead of Q_d, giving them fewer units from which to gain a surplus. New Zealand producers are better off as a result of the increase in the world price. PS increases as New Zealand producers now receive a higher price of P_{w_1} instead of P_w, meaning that the difference between the price that they are willing to accept and the price they actually receive becomes larger. Also, they now sell a greater quantity of Q_{s_1} instead of Q_s giving them more units from which to gain a surplus.			Explains: - CS decreases due to either higher price or lower quantity OR - PS increases due to either higher price or higher quantity.	Explains in detail: - CS decreases due to higher price and lower quantity OR - PS increases due to higher price and higher quantity AND - refers to data.	Explains in detail: - CS decreases due to higher price and lower quantity (and reasons fully explained to include CS definition) AND - PS increases due to higher price and higher quantity (and reasons fully explained to include PS definition) AND - refers to data.

(c)	Allocative efficiency (AE) is achieved before and after the increase in the world price because, in both instances, the sum of CS and PS is maximised, and there is no DWL. While CS has decreased, PS has increased, and the increase in PS outweighs the decrease in CS (i.e. $Pw_1GFPw > Pw_1BCPw$) resulting in an increase in overall net welfare (by BGFC), and there is still no DWL, hence there is still AE. (Also accept AE increases or is maintained instead of AE is achieved).	Explains: • AE is when the sum of CS and PS is maximised, or there is no DWL OR • AE is achieved before and after the increase in the world price.	Explains in detail: • AE is achieved before and after the increase in the world price because the sum of CS and PS is maximised AND there is no DWL AND • refers to data.	Explains in detail: • AE is achieved before and after the increase in the world price because the sum of CS and PS is maximised AND there is no DWL AND • gain in PS outweighs loss in CS leading to overall increase in net welfare / still no DWL AND • refers to data.
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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, Table One, or Table Two.	Most Merit evidence.	Excellence evidence. One part may be weaker. Integrates relevant information from Graph One, Table One, and Table Two.	All points covered.

N0 = No response; no relevant evidence.

Q2	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)(i)	See Appendix.	TWO of: • supply curve shifted left by \$2 vertical distance, and labelled • P_1, Q_1 • shortage correctly labelled.		
(ii)	Increasing indirect tax on alcoholic drinks will decrease the quantity supplied at each and every price, hence decreasing supply and shifting the supply curve to the left from S to S_t. At the original price of \$6.50 ($P_e$), there will be a shortage of 30 million alcoholic drinks as the quantity demanded is greater than the quantity supplied (i.e. $52.5m > 22.5m$). Consumers will bid the price up to secure the limited amount of alcoholic drinks. As the price increases, producers will increase their quantity supplied as supplying alcoholic drinks becomes more profitable. On the other hand, the higher price will discourage consumption as alcoholic drinks become less affordable, so the quantity demanded for them will decrease. As the price continues to increase, QS will continue to rise while QD will continue to fall until $QS = QD$ and equilibrium will be restored at a higher price of \$8 (or P_1), and a lower quantity of 45 million (or Q_1) drinks.	Explains: • Equilibrium will be restored at a higher price and lower quantity with THREE of: - shortage created at original price - consumers bid up the price - QD decreases - QS increases - equilibrium restored where $QS = QD$.	Explains in detail: • Equilibrium will be restored at a higher price and lower quantity with FOUR of: - shortage created at original price - consumers bid up the price - QD decreases - QS increases - equilibrium restored where $QS = QD$ AND • refers to data.	Explains in detail: • Equilibrium will be restored at a higher price and lower quantity with ALL of: - shortage created at original price - consumers bid up the price - QD decreases - QS increases - equilibrium restored where $QS = QD$ AND • refers to data and context of alcoholic drinks.
(b)	Change in CS: \$73.125 million (decrease) Change in PS: \$24.375 million (decrease) Total tax revenue: \$90 million Deadweight loss: \$7.5 million	Two correct values.		

(c)	Consumer surplus will decrease by \$73.125m as consumers will pay a higher price (\$8 instead of \$6.50) making the difference between the price they are willing to pay and what they actually pay smaller. Consumers also consume a smaller quantity (45m instead of 52.5m drinks) giving them fewer units from which to gain surplus. Producer surplus will decrease by \$24.375m as producers will receive a lower price (\$6 instead of \$6.50) making the difference between the price they are willing to accept and what they actually receive smaller. They also sell a lower quantity (45m instead of 52.5m drinks) giving them fewer units from which to gain surplus. There is a loss of allocative efficiency, represented by the deadweight loss of \$7.5m. This is because the combined loss of consumer surplus and producer surplus of \$97.5m (\$73.125m + 24.375m) is not fully offset by the gain in tax revenue by the Government (\$90m), leading to a net welfare loss, which is the deadweight loss of \$7.5m. This means the sum of consumer surplus and producer surplus is not maximised.	Explains TWO of: - CS will decrease due to either higher price or lower quantity - PS will decrease due to either lower price or lower quantity - AE will decrease as the sum of CS and PS is not maximised or there is a DWL.	Explains in detail TWO of: - CS will decrease due to higher price and lower quantity - PS will decrease due to lower price and lower quantity - AE will decrease as the sum of CS and PS is not maximised and there is a DWL AND - refers to data.	Explains in detail ALL of: - CS will decrease due to higher price and lower quantity (and reasons fully explained to include CS definition) - PS will decrease due to lower price and lower quantity (and reasons fully explained to include PS definition) - AE will decrease as the sum of CS and PS is not maximised and there is a DWL AND - refers to data and context.
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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 Two or calculated figures.	Most Merit evidence.	Excellence evidence. One part may be weaker. Integrates relevant information from Graph Two and calculated figures.	All points covered.

N0 = No response; no relevant evidence.

Q3	Sample evidence			Achievement	Achievement with Merit	Achievement with Excellence
(a)(i)		Graph Three (inelastic)	Graph Four (elastic)	THREE of FIVE from either column.		
	Consumer surplus before maximum price control	1 + 2	6 + 7			
	Consumer surplus after maximum price control	1 + 3	6 + 8			
	Producer surplus before maximum price control	3 + 4 + 5	8 + 9 + 10			
	Producer surplus after maximum price control	5	10			
	Deadweight loss	2 + 4	7 + 9			
(ii)	Price elasticity of demand (PED) measures the extent of change in the quantity demanded of an item in response to a price change. An item might be elastic if there are many substitutes available or if it is considered a luxury (accept other valid reasons). This means that a price change will result in a proportionately greater change in quantity demanded.			PED defined.	PED defined and one reason for elastic demand.	

(b)	The maximum price control causes consumer surplus to increase from $1 + 2$ to $1 + 3$ when the item is inelastic, and from $6 + 7$ to $6 + 8$ if the item is elastic. CS increases because consumers pay a lower price of P_{max} instead of P_e making the difference between the price that they are willing to pay and what they actually pay larger. Although they lose some surplus due to consuming a lower quantity, Q_s instead of Q_e when inelastic or Q_{s1} instead of Q_e when elastic, the increase in surplus due to the lower price outweighs this loss of surplus due to lower quantity consumed resulting in an overall increase in CS. The increase in CS is more when the item is elastic rather than inelastic, i.e. $8 - 7$ is larger than $3 - 2$, as the loss in CS due to lower quantity is smaller for the elastic item, i.e. $7 < 2$. On the other hand, the maximum price control causes producer surplus to decrease from $3 + 4 + 5$ to 5 when the item is inelastic, and from $8 + 9 + 10$ to 10 if the item is elastic. PS decreases because producers receive a lower price of P_{max} instead of P_e making the difference between the price that they are willing to accept and what they actually receive smaller. They also sell a lower quantity, Q_s instead of Q_e when inelastic or Q_{s1} instead of Q_e when elastic, giving them fewer units from which to gain surplus. The decrease in PS is the same regardless of whether the item is elastic or inelastic in demand, i.e. $(3 + 4)$ is the same as $(8 + 9)$.	Explains ONE of: • CS increases due to lower price • CS increases more on elastic item (or CS increases less on inelastic item) • PS decreases due to either lower price or lower quantity • decrease in PS is the same for both elastic and inelastic items.	Explains in detail that CS increases while PS decreases with EITHER of: • CS increases due to lower price and CS increases more on elastic item (or CS increases less on inelastic item) OR • PS decreases due to lower price and lower quantity and decrease in PS is the same for both elastic and inelastic items. AND • refers to data.	Explains in detail that CS increases while PS decreases with ALL of: • CS increases due to lower price and, although CS decreases due to lower quantity, this is offset by the gain in CS due to lower price (and reasons fully explained to include CS definition) • CS increases more on elastic item (or CS increases less on inelastic item) • PS decreases due to lower price and lower quantity • decrease in PS is the same for both elastic and inelastic items. AND • refers to data.
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The loss in PS is greater than the gain in CS, which leads to a decrease in allocative efficiency, indicated by the DWL area of 2 + 4 when the item is inelastic or 7 + 9 if elastic. This means that the sum of CS and PS is not maximised. The loss of efficiency is greater for the inelastic item rather than elastic as the DWL is larger, i.e. 2 + 4 is larger than 7 + 9. While the decrease in quantity consumed is the same for both the inelastic and elastic items, i.e. $Q_s Q_e = Q_{s1} Q_e$, the price consumers are willing to pay for Q_s units of the inelastic item is higher than the price consumers are willing to pay for Q_{s1} units of the elastic item, meaning the loss of CS, i.e. the difference between the price consumers are willing to pay and what they actually pay is larger for the inelastic item (area 2 > area 7), contributing to a larger DWL.	Explains: • AE decreases as the sum of CS and PS is not maximised or there is a DWL OR • loss in PS is greater than gain in CS OR loss of AE is greater if item is inelastic.	Explains in detail: • AE decreases as the sum of CS and PS is not maximised and there is a DWL AND • gain in CS not enough to offset loss in PS AND • loss of AE is greater if item is inelastic. AND • refers to data.	Explains in detail: • AE decreases as the sum of CS and PS is not maximised and there is a DWL AND • gain in CS not enough to offset loss in PS AND • loss of AE is greater if item is inelastic (higher price consumers willing to pay for inelastic). AND • refers to data.
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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, Graph Four, or Table Three.	Most Merit evidence.	Excellence evidence. One part may be weaker. Integrates relevant information from Graph Three, Graph Four, and Table Three.	All points covered.

N0 = No response; no relevant evidence.

Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
00–06	07–13	14–19	20–24

Appendix

Question Two (a)(i)

**Graph Two: The market for alcoholic drinks
– impact of an indirect tax**

