Assessment Schedule – 2015

Economics: Demonstrate understanding of the efficiency of market equilibrium (91399)

Assessment criteria

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding involves: • providing an explanation of: – market equilibrium and / or changes in market equilibrium – efficiency in the market • using an economic model(s) to illustrate concepts relating to the efficiency of market equilibrium.	*Demonstrate in-depth understanding* involves: • providing a detailed explanation of: – market equilibrium and / or changes in market equilibrium – 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.	*Demonstrate comprehensive understanding* involves: • 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.

Each question should be read as a whole before awarding a grade.

Note: *Explanation* involves giving a reason for the answer.

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).

Evidence

Question One	Sample answers / Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	(i) See **Appendix One**.	(i) Change in **CS** and **PS** correctly shaded and labelled on Graph One.		
	(ii) The consumer surplus increases as consumers are paying a lower price ($\mathbf{P_2}$) and are purchasing more with the subsidy ($\mathbf{Q_2}$). There are more units from which they can gain a surplus. The producer surplus increases, as producers are receiving a higher price for each unit sold ($\mathbf{P_2}$ + subsidy) and are selling more ($\mathbf{Q_2}$). So there are more units from which they can gain a surplus.	(ii) Explains: • Consumer surplus will increase, as consumers are paying less OR consuming more OR the difference between what consumers are willing to pay and what they actually pay increases. • Producer surplus will increase, as producers are receiving a higher price OR selling more OR the difference between what producers actually receive and what they are willing to receive increases.	(ii) Explains in detail: • Consumer surplus will increase, as consumers are paying less AND are consuming more. • Producer surplus will increase, as producers are receiving a higher price AND are selling more. Refers to Graph One to support answers.	(ii) Explains in detail • Consumer surplus will increase. • Producer surplus will increase. Integrates Graph One to support answers.
(b)	See **Appendix One**. There is a loss of allocative efficiency, as the cost of the subsidy is not fully offset by the gain in consumer surplus plus the gain in producer surplus. So a deadweight loss is created, as shown by the labelled shaded area on Graph One. Subsidies will be more effective in reducing transport congestion if demand is elastic. This is because the drop in price due to the subsidy will result in a greater increase in **Qd** compared to inelastic demand ($\mathbf{Q_2}$ on	The loss of allocative efficiency is correctly shaded and labelled on both graphs. Explains: • There is a loss of allocative efficiency because the cost of the subsidy is not fully offset by the gain in producer surplus AND	Explains in detail: • There is a loss of allocative efficiency because [the cost of the subsidy is not fully offset by the gain in producer surplus AND	Explains in detail: • There is a loss of allocative efficiency because the cost of the subsidy is not fully offset by the gain in producer surplus AND

	Graph One is greater than $\mathbf{Q_3}$ on Graph Two). Hence there will be a greater increase in the number of people using public transport rather than using cars.	consumer surplus, OR because a deadweight loss is created OR the sum of consumer surplus and producer surplus is not maximised OR net welfare loss idea. • The subsidy will be more effective with elastic demand as there will be a greater increase in **Qd**	consumer surplus PLUS a deadweight loss is created] OR [the sum of consumer surplus and producer surplus is not maximised PLUS a deadweight loss is created (must refer to DWL areas)]. Refers to Graph One to support answers.	consumer surplus PLUS a deadweight loss is created. • The subsidy will be more effective with elastic demand, as there will be a greater increase in **Qd** so a greater decrease in the number of people using cars. Must link increase in use of public transport with fewer cars on the road. Integrates Graph One and Graph Two to support answers.

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence, partial explanations.	Some Achievement evidence.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence *AND* Refers to Graph One.	Most Merit evidence *AND* Refers to Graph One.	Excellence evidence. Must have comparison. One part may be weaker. *AND* Integrates relevant information from both graphs into the explanation.	All points covered. *AND* Integrates relevant information from both graphs into the explanation.

N0 = No response; no relevant evidence.

Question Two	Sample answers / Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	(i) See **Appendix Two**. (ii) **CS** $150 million (decrease) **PS** $150 million (decrease) Tax revenue $240 million Evidence to support explanations in (c) only, but may be used for N1 or N2.	Supply curve correctly shifted and labelled.		
(b)	CS $150 million (decrease) PS $90 million (increase) Consumer Spending $180 million (decrease) Evidence to support explanations in (c) only, but may be used for N1 or N2.			
(c)	Consumers: **CS** declines by $150 million for the indirect tax and also by $150 million for the minimum price. This is because in both cases, consumers are paying a higher price ($18) and are consuming less (40 million packets). Producers: **PS** declines by $150 million for the indirect tax, as producers are receiving a lower price ($12) and selling less (40 million). However, **PS** increases by $90 million for the minimum price because the increase in the price received ($15 to $18) offsets the loss in quantity sold (60 million to 40 million). Government: The Government receives $240 million tax revenue from the indirect tax, which can be spent on health issues related to cigarettes or other areas of the economy. There is no revenue received directly from the minimum price, but they will receive less GST from	Explains: Indirect Tax: • Consumer surplus declines because consumers are paying a higher price OR consuming less. • Producer surplus will decrease as producers are receiving a lower price OR selling less. • The Government will receive increased tax revenue.	Explains in detail: Indirect Tax: • Consumer surplus declines because consumers are paying a higher price AND consuming less. • Producer surplus will decrease, as producers are receiving a lower price AND selling less. • The Government will receive increased tax revenue so will have more to spend elsewhere.	Explains in detail: Indirect Tax: • Consumer surplus declines. • Producer surplus will decrease. • The Government will receive increased tax revenue so will have more to spend elsewhere. *AND*

	cigarettes because of less consumer spending on cigarettes ($180 million decrease) and they may receive less company tax from cigarette producers, as their revenue has decreased ($900 million to $720 million), which may lower their profits.	Minimum Price: • Consumer surplus declines because consumers are paying a higher price OR consuming less. • Producer surplus will increase, as producers are receiving a higher price. • There will be no direct impact on the Government OR that the Government may receive less GST or company tax.	Minimum Price: • Consumer surplus declines because consumers are paying a higher price AND consuming less • Producer surplus will increase, as producers are receiving a higher price, which offsets the decrease in quantity sold. • The Government may receive less GST or company tax or instead, it will cost the government to police or implement the minimum price. Uses some correct relevant calculations from EITHER graph to support the explanation.	Minimum Price: • Consumer surplus declines. • Producer surplus will increase. • The Government may receive less GST or company tax or it will instead, cost the govt to police the minimum price. Integrates all correct relevant calculations from BOTH graphs to support the explanation.

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence, partial explanations.	Some Achievement evidence.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence. Some detailed explanations for the indirect tax. *OR* Some detailed explanations for the minimum price. *AND* Refers to relevant calculations from EITHER graph.	Most Merit evidence. Most detailed explanations for the indirect tax. *OR* Most detailed explanations for the minimum price. *AND* Refers to calculations from EITHER graph.	Excellence evidence. One part may be weaker. *AND* Integrates relevant calculations from BOTH graphs into the explanation.	All points covered. *AND* Integrates relevant calculations from BOTH graphs into the explanation.

N0 = No response; no relevant evidence.

Question Three	Sample answers / Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	(i) See **Appendix Three**.	(i) Supply curve correctly shifted and labelled. New equilibrium price and quantity labelled.		
	(ii) The reduction in the cost of building a house will increase the supply of houses to $\mathbf{S_1}$, which creates a surplus of houses at $\mathbf{P_1}$. Producers will need to reduce the price to remove the surplus, reducing the quantity supplied and increasing the quantity demanded until the equilibrium is restored at $\mathbf{P_2}$ and $\mathbf{Q_2}$.	(ii) Explains that the increase in supply will create a surplus, which results in a lower price and TWO of: – increase in quantity demanded – reduction in quantity supplied – equilibrium restored (at $\mathbf{P_2}$, $\mathbf{Q_2}$).	(ii) Explains in detail that the increase in supply will create a surplus, which results in a lower price and ALL of: – increase in quantity demanded – reduction in quantity supplied – equilibrium restored (at $\mathbf{P_2}$, $\mathbf{Q_2}$). Refers to Graph Five in the explanation.	
(b)	Change in **CS** = area $\mathbf{P_w}$ **+ Tariff, f, g,** $\mathbf{P_w}$ Change in **PS** = area $\mathbf{P_w}$ **+Tariff, e, d,** $\mathbf{P_w}$ Tariff revenue = area **e, f, i, h** **DWL** = area **e, h, d** + area **f, g, i** Evidence to support explanations in (c) only, but may be used for N1 or N2.			

(c)	The consumer surplus declines by the area **P_w + Tariff, f, g, P_w**. This is because consumers now have to pay a higher price, **P_w + Tariff**, and are consuming less units from which to gain a surplus, **Q_3**. The producer surplus increases by the area **P_w + Tariff, e, d, P_w**. This is because producers are receiving a higher price, **P_w + Tariff**, and are selling more units from which to gain a surplus, **Q_2**. The Government will receive tariff revenue of area **e, f, i, h**, which means they have more to spend elsewhere in the economy. The tariff creates a loss of allocative efficiency that equals the combined areas: **d, e, h + f, g, i**. This occurs because the loss of consumer surplus is not fully offset by the gain in producer surplus plus the gain in tariff revenue for the Government; the difference creating the deadweight loss.	Explains: • Consumer surplus declines because consumers are paying a higher price OR consuming less. • Producer surplus will increase as producers are receiving a higher price OR selling more. • The Government will receive tariff revenue. • The tariff reduces allocative efficiency because the loss of consumer surplus is not fully offset by the gain in producer surplus OR tariff revenue OR because a deadweight loss is created OR the sum of consumer surplus and producer surplus is not maximised OR net welfare loss idea.	Explains in detail: • Consumer surplus declines because consumers are paying a higher price AND consuming less. • Producer surplus will increase as producers are receiving a higher price AND selling more. • The Government will receive tariff revenue that can be spent elsewhere in the economy. • The tariff reduces allocative efficiency with reference to TWO of: – the loss of consumer surplus – the gain in producer surplus – tariff revenue gained by the Government. OR [the sum of consumer surplus and producer surplus is not maximised PLUS a deadweight loss is created (must refer to DWL areas/labels)]. Refers to relevant information from Graph Six and Table Three in the explanation.	Explains in detail: • Consumer surplus declines. • Producer surplus will increase. • The Government will receive tariff revenue that can be spent elsewhere in the economy. • The tariff reduces allocative efficiency because the loss of consumer surplus is not fully offset by the gain in producer surplus AND tariff revenue. Integrates relevant information from Graph Six and Table Three in the explanation.

N1	N2	A3	A4	M5	M6	E7	E8
Very little Achievement evidence, partial explanations.	Some Achievement evidence.	Most Achievement evidence.	Nearly all Achievement evidence.	Some Merit evidence *AND* Refers to Graph Six and Table Three.	Most Merit evidence *AND* Refers to Graph Six and Table Three.	Excellence evidence. One part may be weaker. *AND* Integrates relevant information from Graph Six and Table Three into the explanation.	All points covered. *AND* Integrates relevant information from Graph Six and Table Three into the explanation.

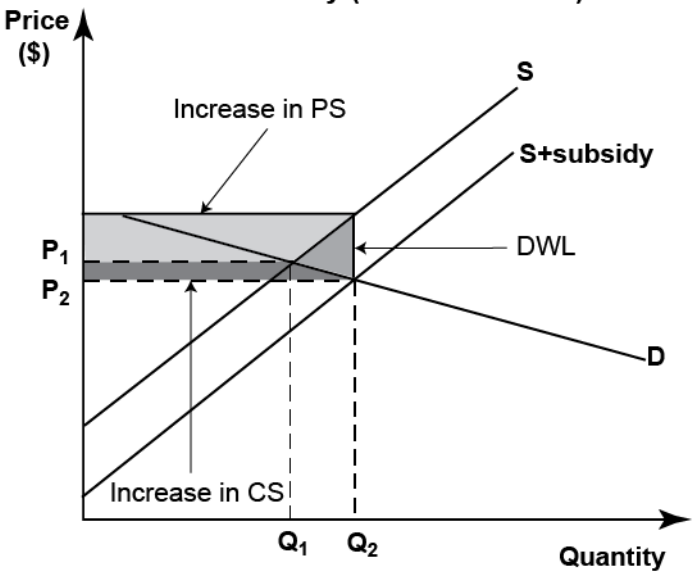
N**0** = No response; no relevant evidence

Cut Scores

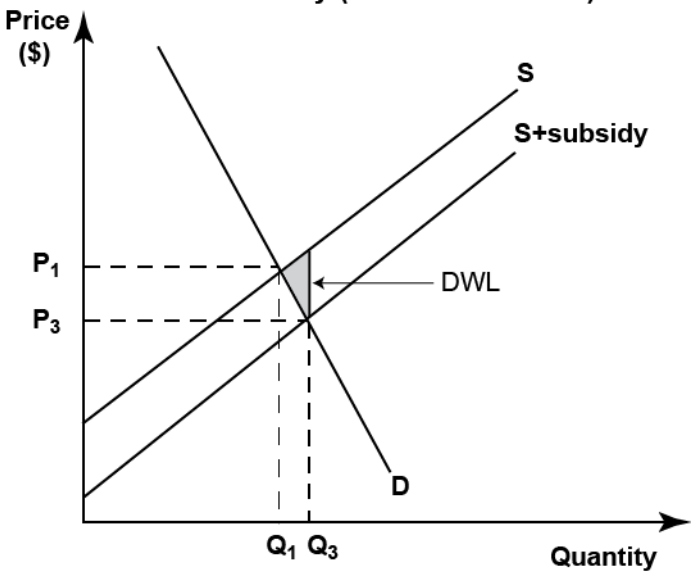
	Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
Score range	0 – 6	7 – 12	13 – 18	19 – 24

Appendix One – Question One (a) and (b)

Graph One: Market for public transport with a subsidy (Elastic demand)

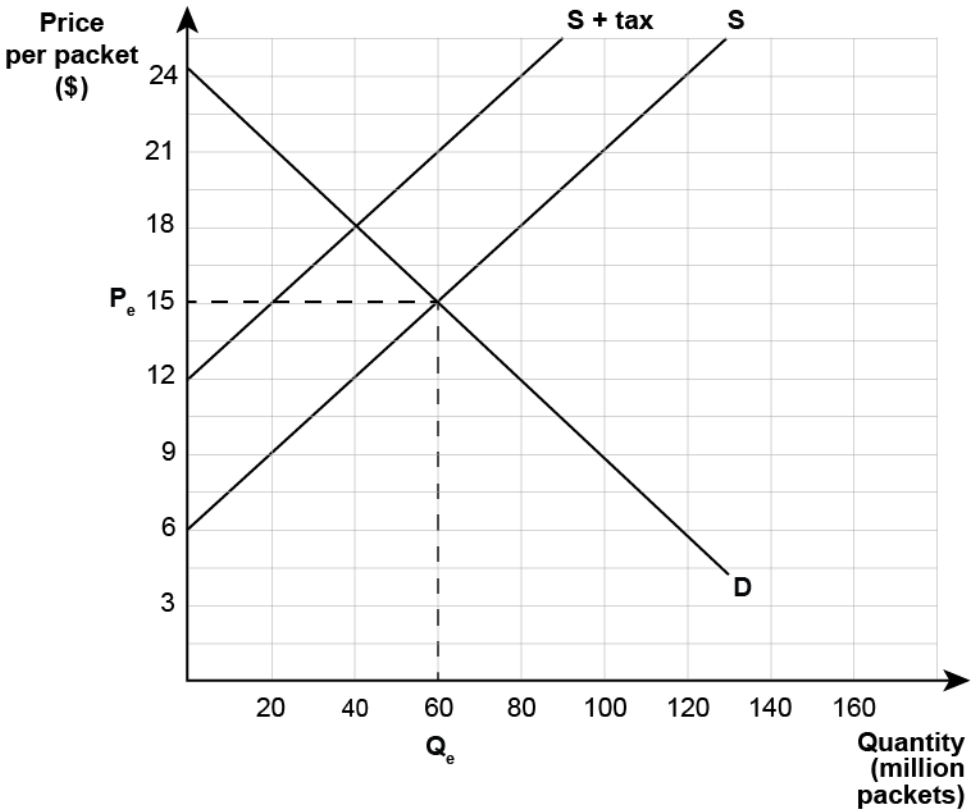


Graph Two: Market for public transport with a subsidy (Inelastic demand)



Appendix Two – Question Two (a)

Graph Three: New Zealand market for a packet of cigarettes



Appendix Three – Question Three (a)

Graph Five: The New Zealand housing market