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Level 1 Economics, 2017

90986 Demonstrate understanding of how consumer, producer and/or government choices affect society, using market equilibrium

9.30 a.m. Friday 10 November 2017
Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how consumer, producer and/or government choices affect society, using market equilibrium.	Demonstrate in-depth understanding of how consumer, producer and/or government choices affect society, using market equilibrium.	Demonstrate comprehensive understanding of how consumer, producer and/or government choices affect society, using market equilibrium.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

Achievement

TOTAL 09

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QUESTION ONE: MARKET EQUILIBRIUM

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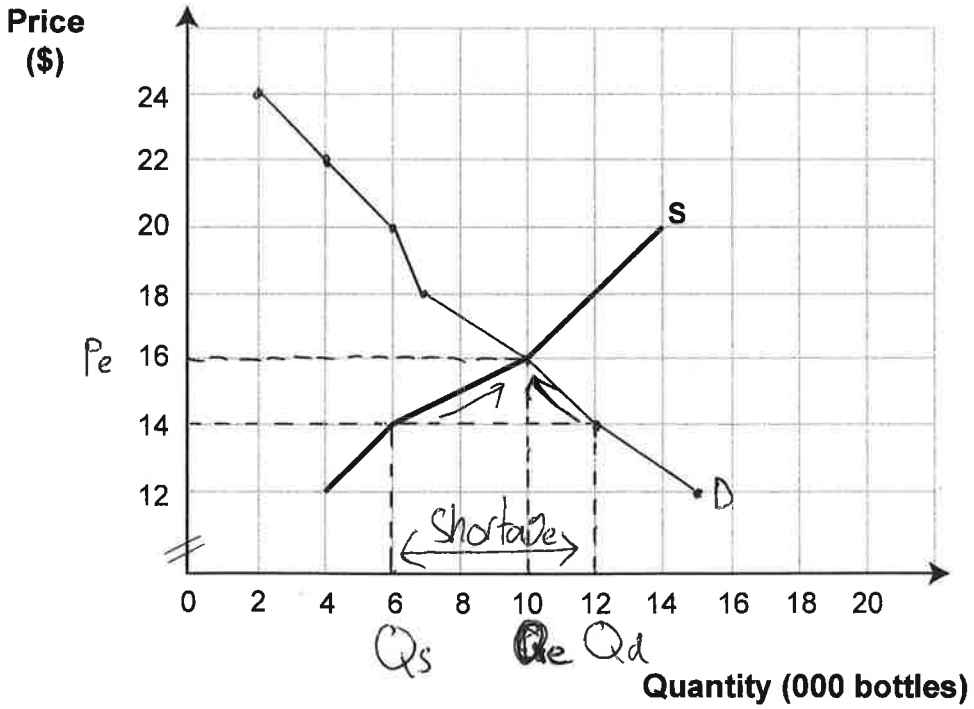
The table and graph below indicate the market for Vitamin C tablets (large bottle) in New Zealand per month.

Market demand for Vitamin C tablets (large bottle) in New Zealand (monthly)

Price ($)	South Island (000s)	North Island (000s)	Market demand (000s)
24.00	0.5	1.5	2
22.00	1	3	4
20.00	2	4	6
18.00	3	4	7
16.00	4.5	5.5	10
14.00	5.3	6.7	12
12.00	7	8	15

Market for Vitamin C tablets (large bottle) in New Zealand (monthly)



(a) Use the information above to:

- complete the market demand schedule
- draw the market demand curve
- use dotted lines to indicate the market equilibrium price (P_e) and market equilibrium quantity (Q_e).

(b) On the graph above, show the market situation if the price of a large bottle of Vitamin C tablets was $14.00.

In your answer:

- use dotted lines to show the quantity demanded (label as Q_d)
- use dotted lines to show the quantity supplied (label as Q_s)
- fully label the resulting surplus or shortage.

(c) Using the graph on page 2, fully explain how the market would respond to the situation at $14.00 in order to restore equilibrium.

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In your answer, explain:

- the resulting surplus or shortage
- the change required in market price
- the change in quantity demanded and quantity supplied.

At $14.00 for Vitamin C tablets (large bottle) the quantity supplied is 6,000 Vitamin C tablets (large bottles) per month and the quantity demanded is 12,000 Vitamin C tablets (bottles large). Which results in a shortage of 6000 Vitamin C tables (large bottles) per month, as the quantity demanded is greater than the quantity supplied. In order to stop this shortage the price will have to be moved up to price Pe at $16 per Vitamin C tablets (large bottle) as this is where the quantity demanded and quantity supplied are equal. At $16 (↑) per large bottle the quantity supplied will increase as more now relatively more profitable for the producers to supply. At $16 (price Pe) the quantity demanded will decrease as Vitamin C tablets (large bottles) are now relatively less affordable in comparison to the consumers limited descretionary income. This in turn pressure on price will continue until price Pe ($16) is met and the equilibrium is restored (where the quantity demanded and quantity supplied are equal at 10,000 Vitamin C tablets large bottles per month)

Price Pe

Vitamin C tablets (large bottles)

for consumers

A3

QUESTION TWO: MAXIMUM PRICE

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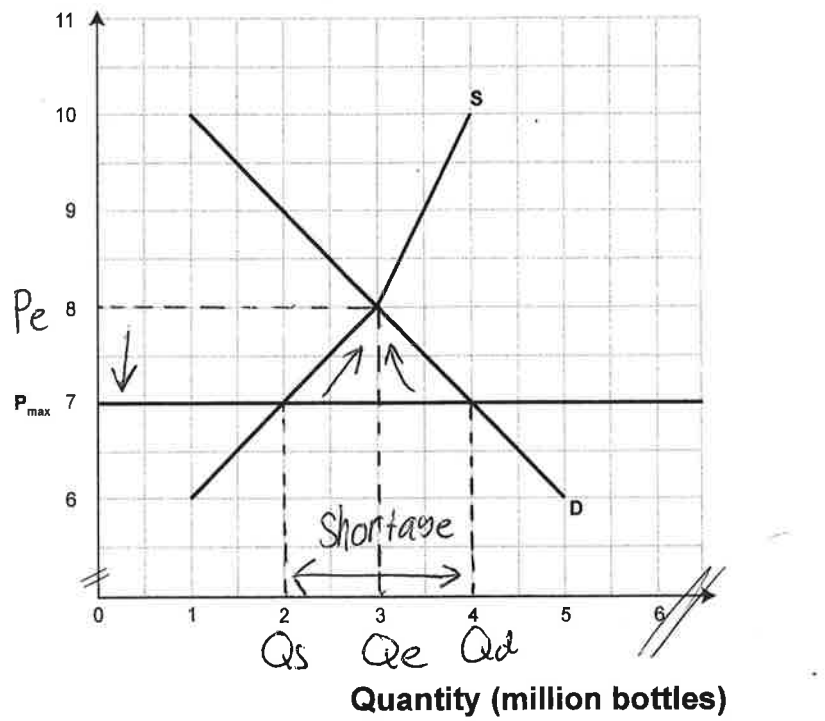
Taking Vitamin C supplements has been linked to preventing the common cold. Evidence suggests that if people take Vitamin C, a cold does not last as long and it is not so bad.

Source (adapted): http://sciencelearn.org.nz/Contexts/Food-Function-and-Structure/Looking-Closer/Vitamin-C

The graph below shows the effect of a maximum price of $7 per small bottle on the market for Vitamin C.

New Zealand market for Vitamin C (small bottle) annually



(a) On the graph above, show the changes to quantity demanded and quantity supplied of Vitamin C (small bottles), as a result of a maximum price.

In your answer:

- use dotted lines to show the equilibrium price and equilibrium quantity before the maximum price (label as P_e and Q_e)
- use dotted lines to show the new quantity demanded by consumers after the maximum price (label as Q_d)
- use dotted lines to show the new quantity supplied by Vitamin C suppliers after the maximum price (label as Q_s)
- fully label the resulting surplus or shortage.

(b) Use the graph above to complete the table below.

1. 3,000,000
2. 4,000,000
3. 3,000,000
4. 2,000,000

	Before maximum price	After maximum price
Quantity demanded by consumers	1. [illegible] bottles	2. [illegible] bottles
Quantity supplied by producers	3. [illegible] bottles	4. [illegible] bottles
Price received by producers	$8	$7
Revenue received by producers	$ 24,000,000	$ 14,000,000

(c) Use the graph on page 4 and your calculations to fully explain the effect on consumers of introducing a maximum price.

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In your answer, fully explain the change in:

- price paid by the consumer
- quantity demanded
- consumer spending.

When the price for Vitamin C (small bottles) is brought from Price Pe at $8.00 per bottle to a Maximum Price of $7.00 there is a Shortage of 2,000,000 bottles annually, as the quantity demanded is greate than the quantity Supplied. This means that quantity now the demanded by consumers is greater than it was at $8.00 as the bottles are now relatively more affordable in comparison to the consumers limited descressionary income. Although, there are now also less bottles being supplied as the bottles are relatively less profitable for Producers to supply. This subsequently means that some consumers will miss out on their Vitamin C as there is a shortage.

(d) Fully explain TWO flow-on effects for society of introducing a maximum price.

Introducing a maximum Price would mean that there are less sick People around as the Vitamin C helps People with colds, which would mean less People having to take sick days off work which would increase the productivity rate at the work place. This would also mean that less People are visiting doctors when they are sick which would make doctors struggle financialy as they are not receiving as many Patients of which they can gain income from.

A3

QUESTION THREE: SUBSIDY

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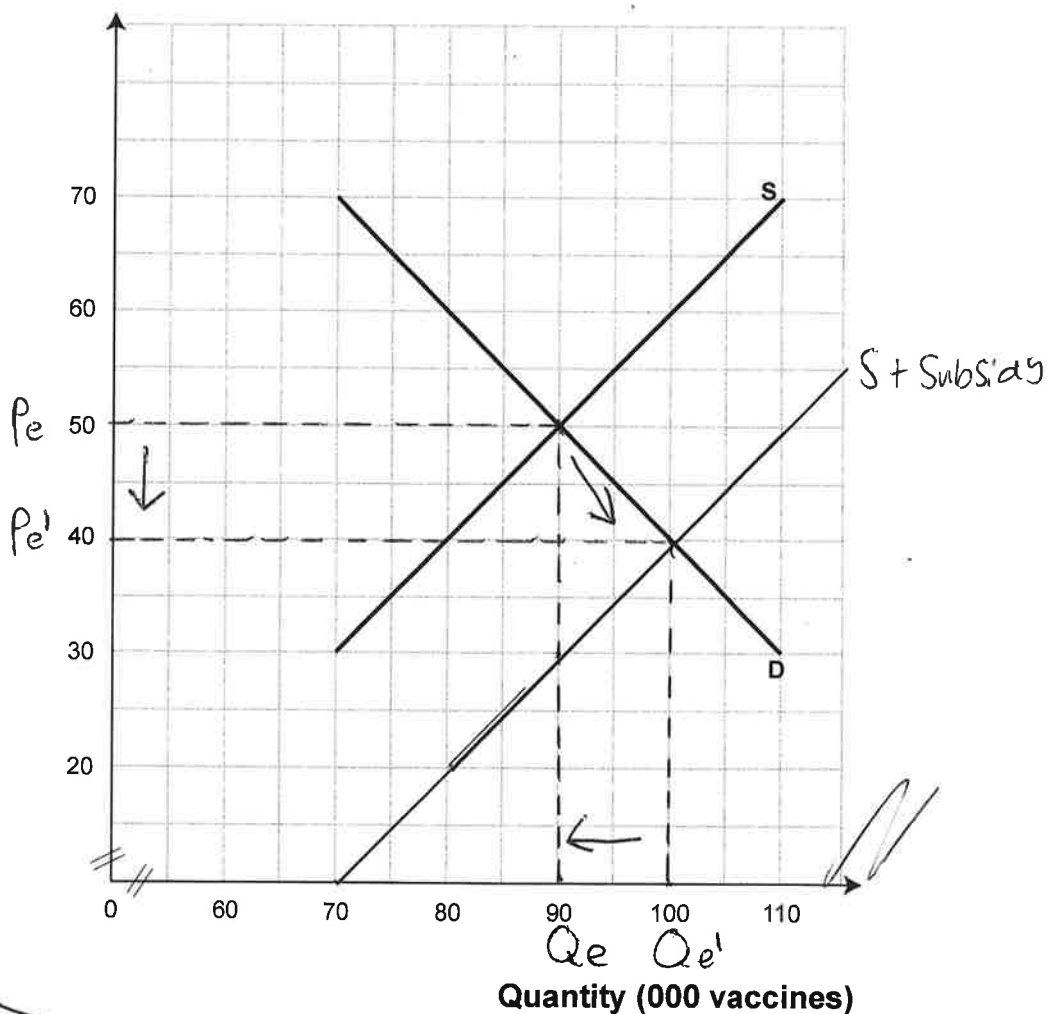
One way that the government may prevent people from getting the flu is to subsidise the flu vaccine.

(a) On the graph below, show the impact of a $20 subsidy per vaccine on the market for flu vaccines.

In your answer:

- use dotted lines and label the original equilibrium price (P_e) and equilibrium quantity (Q_e)
- shift and relabel the appropriate curve
- use dotted lines to show the new equilibrium price (P_{e1}) and new equilibrium quantity (Q_{e1}).

New Zealand market for flu vaccines (annually)



a payment

(b) Explain the immediate financial effect on the government from the subsidy on flu vaccines.

~~This means that at each and every price, more~~ A subsidy is put in place by the government to help producers lower their production cost. This means that the goverment loses money.

(c) Fully explain ONE possible long-term benefit to society from the subsidy on flu vaccines.

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This would make people more inclined to get vaccinations as they are now relatively more affordable for the consumer (in comparison to the consumers limited discretionary income. This would benefit society as it would decrease the amount of people getting the flu which would improve the well being of the society.

(d) Using the graph on page 6, and any additional calculations, discuss the impact of a subsidy on producers. In your answer, fully explain:

- the effect on equilibrium quantity
- the change in price received by producers
- the change in producer revenue.

A subsidy has been given by the government to help lower the production cost for producers. This has meant that at each and every price more vaccinations are supplied which has shifted the equilibrium. The producers revenue has also now changed from $4,500,000 annually to 4,000,000.

A3

Achievement exemplar 2017

Subject:	Economics	Standard:	90986	Total score:	09

Q	Grade score	Annotation
1	A3	This candidate has correctly completed the table. The graph is plotted correctly, with Pe, Qe, Qd, Qs and shortage correctly labelled. The definition of a shortage is correct on line 8, where the candidate states that QD is greater than QS. This candidate has not identified that the CONSUMER will bid the price up, merely stating that the price needs to be moved up. Nor do they explain WHY the price should increase (ie: in order for the consumer to avoid missing out on vitamin C). This candidate correctly identifies that the QS would increase due to increased profitability and that QD would decrease due to reduced affordability. It is also explained that equilibrium would be restored at $16 and 10 000 bottles. These things are M and E level answers, but this candidate is prevented from achieving a higher grade due to not being able to explain who or why the price increases.
2	A3	This candidate earns credit in this question by correctly completing the graphs and figures. This candidate does correctly explain that the price decreases due to a maximum price, but this is not enough evidence to earn a higher grade. No other content in this question contributes towards the grade as it is not explained in enough detail. The flow on effects are incorrect as they do not relate to a decrease in consumer spending.
3	A3	This graph is correct, showing correct labels and the supply curve shifting to the right. The immediate financial effect on the government is they would have “less money” which is correct, although only stated as opposed to explaining that $2 million would be used to pay for the subsidy. The long-term benefit of improved well-being of society is correct. This candidate does not specifically state or explain an increase in quantity or prices received by producers. It is stated that revenue has “changed” (not increased) and the figures are incorrect.