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2

91224



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## Level 2 Economics, 2015

### 91224 Analyse economic growth using economic concepts and models

2.00 p.m. Thursday 12 November 2015  
Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Analyse economic growth using economic concepts and models.	Analyse economic growth in depth using economic concepts and models.	Analyse economic growth comprehensively using economic concepts and models.

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 the 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 2–11 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.**

Merit

TOTAL

14

ASSESSOR'S USE ONLY

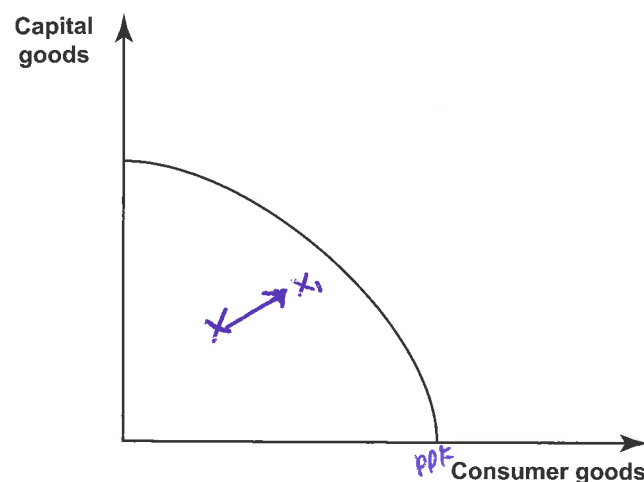
# QUESTION ONE: PRODUCTION POSSIBILITY FRONTIER

The unemployment rate, as measured by the Household Labour Force Survey (HLFS), has been trending downwards from 7.3% to 5.4% over the period September 2012 to September 2014.

Sources (adapted): <http://www.parliament.nz/en-nz/parl-support/research-papers/00PLEcoRP2014011/unemployment-and-employment-statistics-the-household-labour>  
[http://www.stats.govt.nz/browse\\_for\\_stats/income-and-work/employment\\_and\\_unemployment/HouseholdLabourForceSurvey\\_HOTPSep14qtr.aspx](http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/HouseholdLabourForceSurvey_HOTPSep14qtr.aspx)

- (a) (i) Identify ONE point on Graph One below that represents unemployment. Label the point with an X.

Graph One: Production Possibility Frontier



- (ii) Explain in detail the impact of an increase in Real Gross Domestic Product (Real GDP). In your answer:

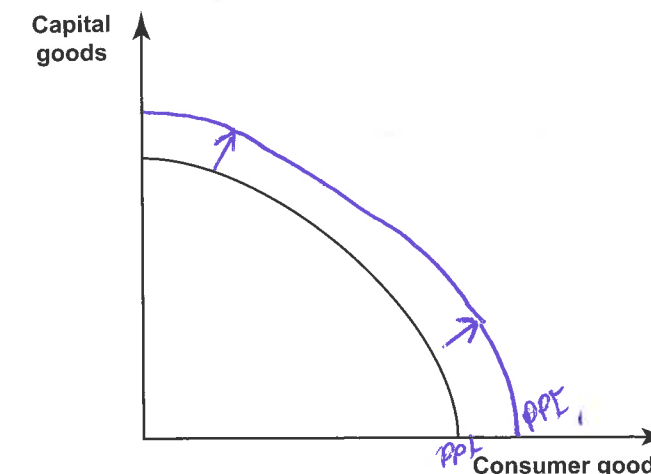
- on Graph One show the impact of an increase in Real GDP
- explain in detail how the increase in Real GDP will affect economic growth
- refer to Graph One.

An increase in real gross domestic product (GDP) will mean that the economy is producing at greater levels than it originally was, so as a result unemployment will decrease as firms attempt to ~~maintain~~ maintain increased productivity, which will mean that the economy is producing closer or at its economic potential. This is shown on graph 1, as there is a shift outwards from  $x$  to  $x_1$ , which represents the increased production and increase in economic growth.

- (b) Compare and contrast the impact on economic growth of an increase in Real Gross Domestic Product (Real GDP) with an increase in Productive Capacity. In your answer:

- on Graph Two show the impact of an increase in Productive Capacity
- explain in detail how the increase in Productive Capacity will affect economic growth
- explain in detail the different impact on economic growth that an increase in Real GDP has when compared with an increase in Productive Capacity
- refer to Graph One and Graph Two.

Graph Two: Production Possibility Frontier



lets to  
 An increase in productive capacity ~~means that~~ increases to either natural capital or human resources in the NZ economy. An increase in productive capacity means that there is an increase in the amount of what can potentially be produced with given resources available, allowing the NZ economy to produce more consumer and capital goods at any point along the PPF line. The increase in economic potential output at any point resulting from increased productive capacity is shown on graph two as an increase of the entire PPF curve from PPF to PPF<sub>1</sub>. This is good for economic growth as it ~~now~~ means that the economy is capable of producing

There is more space for your answer to Question One on the following page.

higher values of real GDP than ~~the~~ <sup>these</sup> ~~allowing~~ is.

However, an increase in real GDP will have a different effect on economic growth compared to an increase in productive capacity. This is because an increase in Real GDP is ~~that~~ the actual increase in productivity of goods produced at current levels: ~~indicated at~~ <sup>meaning</sup> on increase in real GDP will refer to an increase in production of goods and services, ~~at~~ <sup>as</sup> indicated on graph 1 as a shift outwards from point X to  $X_1$ . However, an increase in productive capacity does not generally mean that the ~~productive~~ production levels have increased like an increase in real GDP. Productive capacity impacts economic growth as it means that production levels could increase with the resources that are available for production, which is indicated on graph 2 as a shift to the right of the entire PPF curve from PPF to  $PPF_1$ . Therefore, increases in real GDP will impact ~~to~~ economic growth in ~~the economy~~ as it refers to an increase in production, while productive capacity will affect economic growth in a different way, as it refers to the increases in ~~potential~~ <sup>potential</sup> output.

ASSESSOR'S USE ONLY

M5

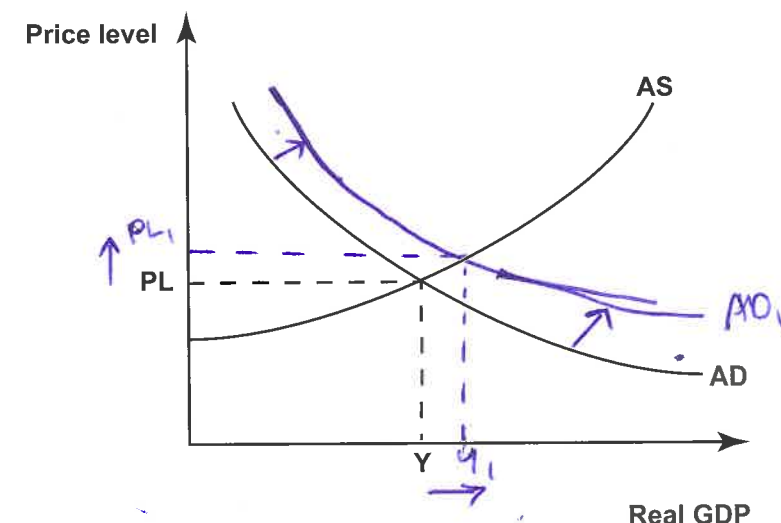
## QUESTION TWO: THE IMPACT OF CLIMATE CHANGE ON ECONOMIC GROWTH

ASSESSOR'S USE ONLY

One view of the impact of climate change on the economy is that it will provide business opportunities as households, business, and the Government increase spending on protection from its worst influences.

- (a) Explain in detail the impact of climate change on economic growth in New Zealand. In your answer:
- fully label on Graph Three the impact of the increase in spending on economic growth
  - explain in detail the impact that you have shown on Graph Three.

Graph Three: AD/AS model of the New Zealand economy



The impact of climate change will mean that all of consumption spending ( $C$ ), investment spending ( $I$ ), and Government spending ( $G$ ) has ~~all~~ <sup>increase</sup> risen as consumers, businesses and the government ~~for~~ <sup>increase</sup> levels of spending on protection from climate changes worse influence. As  $C$ ,  $I$  ~~GDP~~ and  $G$  are all ~~the~~ components that make up the equation for  $AD$ , ( $AD = C + I + G + (X - M)$ ), an increase in all three of these will result in  $AD$  increasing, shown on the graph as a shift outwards of the entire  $AD$  curve from  $AD$  to  $AD_1$ . (~~Reliant~~ <sup>held</sup> all other factors of  $AD$  are ~~held~~ constant). At new levels of  $AD$ , there will be a shortage ~~at~~ in the NZ market.

Continue on extra paper



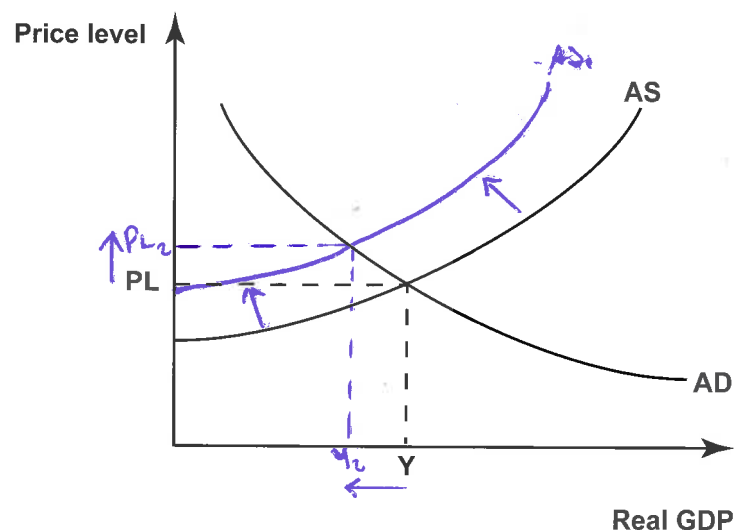
An alternative view of the impact of climate change on the economy is that it will increase costs of production because of higher costs of obtaining resources or changing production methods.

(b) Discuss the effect of climate change on economic growth in New Zealand as the impacts of climate change intensify over the next 50 years.

In your answer:

- fully label Graph Four to show the impact of increasing costs of production
- explain in detail the impact that you have shown on Graph Four
- explain in detail whether increasing spending or increasing costs of production would have a greater impact on economic growth in New Zealand over the next 50 years.

Graph Four: AD/AS model of the New Zealand economy



Increased costs of production will mean that producing goods and services to market will become relatively less profitable if producer <sup>revenue</sup> remains the same (is held constant), as the same amount of revenue is being used to cover increased costs of production. As a result, NZ producers will reduce their supply of goods and services to the NZ market as producing goods is now relatively less profitable, therefore decreasing levels of AS from AS to AS<sub>1</sub> on ~~graph~~ graph four. As a result of producers producing less due to increased costs of production, the levels

of real GDP will fall from  $Y_1$  to  $Y_2$ , therefore having <sup>negative</sup> impacts on the levels of economic growth.

It is likely that increased costs of production will have ~~or~~ a greater impact on economic growth in the next 50 years, compared to increased spending. Even though increased spending has increased the value of three of the components of AD (consumption, investment and government spending), which has caused ~~AD~~ AD to significantly increase from AD to AD<sub>1</sub> on graph 3, it is unlikely that spending will remain at high levels for the next 50 years as climate change will ~~lead~~ lead to the depletion of some natural resources that could influence spending levels. However in contrast, cost of production are likely to remain high for the next 50 years due to climate change. This is because resources will become more scarce due to climate change, so the cost of obtaining resources are likely to increase, which will further push up the costs of production for producers. Therefore, due to short lived spending by households, investments and the government ~~with~~, and ever increasing prices of costs of production due to the scarcity of resources as a result from climate change, economic growth will most likely be negatively affected due to increased costs of ~~production~~ production in the next 50 years.

### QUESTION THREE: THE UNEVEN IMPACT OF ECONOMIC GROWTH

The proposed Ruataniwha Water Storage Scheme will create an 83-metre-high dam located on the upper Makaroro River in Central Hawke's Bay, where it will create a storage reservoir. The reservoir will supply water to irrigate approximately 25 000 hectares of land, primarily in the Ruataniwha Plains area of Central Hawke's Bay district. The scheme also includes a plan for a small (6.5 MW) renewable energy hydroelectric power station to be constructed adjacent to the dam (capable of supplying electricity equivalent to 2 200 average households).

Source (adapted): [http://www.epa.govt.nz/Resource-management/Tukituki/lodgement-notification/about\\_tukituki\\_proposal/Pages/default.aspx](http://www.epa.govt.nz/Resource-management/Tukituki/lodgement-notification/about_tukituki_proposal/Pages/default.aspx)

Objections to the scheme ranged from the earthquake risk, inadequate protection of ecosystems, and existing high levels of pollution, to reduced access to water.

Source (adapted): <http://www.epa.govt.nz/Resource-management/Tukituki/Submissions/Pages/Summary%20and%20Submissions.aspx>

Compare and contrast the impacts that the Ruataniwha Water Storage Scheme could have on the economic well-being of businesses and households.

In your answer, explain in detail:

- one example of a business that may be better off
- one example of a business that may be worse off
- one example of how households may be better off
- one example of how households may be worse off.

One business that may be better off as a result of the proposed Ruataniwha Water Storage Scheme is energy companies. Such as Mercury energy. Businesses such as Mercury energy will be better off as a result of the Ruataniwha Water Scheme as the scheme adds our capital expenditure to these firms, which will increase the level of capital expenditure. This means that these firms have available, which will as a result improve their means to supply energy to NZ consumers and households. As these ~~energy~~ energy companies now have greater means of generating revenue, they will experience an increase in profits as a result, provided that

the costs of production remain the same. Therefore they will be further able to invest to increase their available capital, therefore leaving them better off.

An example of a business that will be worse off as a result of the ~~proposed~~ Ruataniwha Water Storage Scheme are bottled water companies and water treatment plants. These businesses will be worse off because the scheme will reduce access to water, which will as a result decrease their means to natural resources, which will mean that these firms have limited means to ~~generate~~ generate income, so will most likely experience a fall in revenue. Provided that costs of production stay the same, these firms will experience a fall in profits as a result, which may mean that these firms will struggle to stay in business. Therefore, firms such as bottled water companies and water treatment ~~plants~~ stations will be left worse off as they struggle to stay in business.

Households may benefit from the Ruataniwha Water Storage Scheme, as the hydroelectric dam will be able to generate electricity to rural homes. The hydroelectric dam that was planned to be installed as part of the Water Storage Scheme is capable of ~~generating~~

There is more space for your answer to Question Three on the following page.



generating power to the equivalent of 2,200 homes, so therefore rural households that struggle to get power and electricity will now be able to have cheaper, more affordable electricity, therefore leaving households better off.

~~However~~, However, the ~~the~~ sustainable water storage scheme will also have negative impacts to the households. The scheme will result in ~~the~~ reduced access to water, so some households may struggle to find basic sanitation to water, which will decrease the health and well-being of some households. The scheme will also result in higher ~~sanitation to water pollution~~ pollution levels than those already are existing, which will again lead to decreased health and well being, so therefore impacting households ~~are~~ negatively, as they may not necessarily be in good health. As a result, households will be negatively affected, as while the scheme gives people affordable access to energy, at the same time households health will suffer due to ~~increased~~ increased pollution and restricted access to sanitation and ~~clean water~~.  
Clean water.

Extra space if required.

Write the question number(s) if applicable.

QUESTION  
NUMBER

2A. meaning goods are more scarce, which will increase the prices from  $P_L$  to  $P_L'$ . At the new price level, producers will produce more, which will increase Real GDP to increase from  $Y$  to  $Y_1$ , therefore positively impacting on economic growth.

N2

## EXEMPLAR Score 14

### Question 1 – M5

Q 1(a)(i) – X placed inside of frontier – correct

Q 1(a)(ii) – arrow towards frontier – correct

Explanation – no mention of increase in output or reasons for increase in economic growth.

Q1(b) – graph shift correctly

Explanation – candidate mentions “increases to either natural, capital or human resources”, specifically links to model (PFF to  $PFF_1$ ). (M5)

### Question 2 – E7

Q 2(a) – curve shifted correctly and labelled correctly

Explanation – candidate mentions increase in C, I and G will lead to increase in economic growth – AND link to model ( $Y-Y_1$ ). (M6 evidence – 3 components)

Q 2(b) – curve shifted correctly

Explanation – candidate mentions less profitable,  $Y-Y_1$  and negative impacts on economic growth (M5 evidence)

As candidate focused on increased costs of production having a greater impact, rather than increased spending as the impact over the next 50 years of increasing cost of production due to resource scarcity will continue to remain high. Also discussed how increased spending will only be short-lived. E7 (misses E8 as insufficient links to model in this part of the question).

### Question 3 – N2

Business positive – not accepting energy companies

Business negative – bottle water companies not accepted as no “less access to water”.

Household positive – cheaper power not accepted BUT able to access power (supply focus) is accepted for A

Household negative – decreases health and well-being due to pollution accepted for A

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## Level 2 Economics, 2015

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Merit

TOTAL

17

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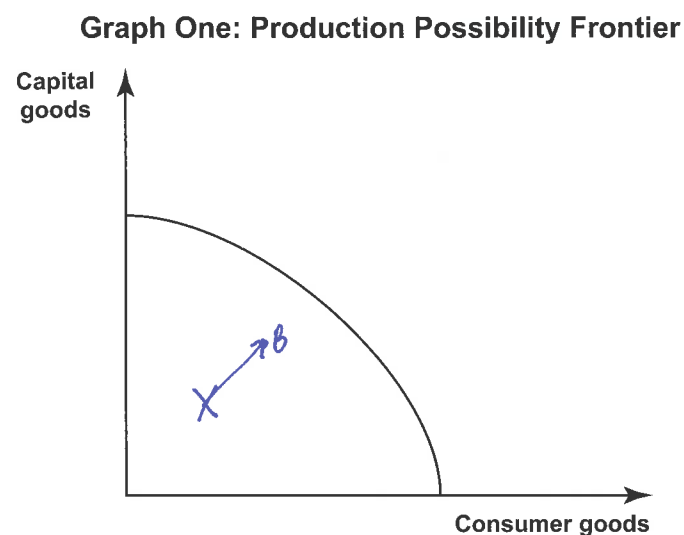
# QUESTION ONE: PRODUCTION POSSIBILITY FRONTIER

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[http://www.stats.govt.nz/browse\\_for\\_stats/income-and-work/employment\\_and\\_unemployment/HouseholdLabourForceSurvey\\_HOTPSep14qtr.aspx](http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/HouseholdLabourForceSurvey_HOTPSep14qtr.aspx)

- (a) (i) Identify ONE point on Graph One below that represents unemployment. Label the point with an X.



- (ii) Explain in detail the impact of an increase in Real Gross Domestic Product (Real GDP). In your answer:

- on Graph One show the impact of an increase in Real GDP
- explain in detail how the increase in Real GDP will affect economic growth
- refer to Graph One.

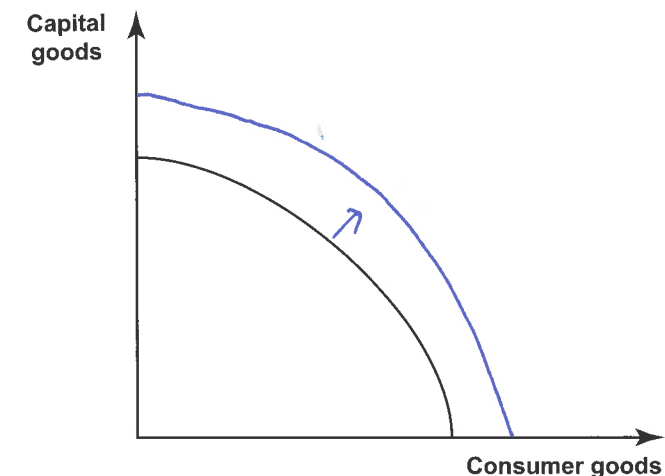
An increase in Real GDP ~~is~~ is a measure for economic growth, so if it increases it will cause economic growth. An increase in Real GDP ~~is~~ means that there is increased production, this means that there is higher employment and higher incomes which means that quality of life may also improve, which is another measurement for economic growth. Therefore an increase in Real GDP will cause economic growth, shown as a shift in production from point X to point B.

- (b) Compare and contrast the impact on economic growth of an increase in Real Gross Domestic Product (Real GDP) with an increase in Productive Capacity.

In your answer:

- on Graph Two show the impact of an increase in Productive Capacity
- explain in detail how the increase in Productive Capacity will affect economic growth
- explain in detail the different impact on economic growth that an increase in Real GDP has when compared with an increase in Productive Capacity
- refer to Graph One and Graph Two.

**Graph Two: Production Possibility Frontier**



An increase in productive capacity may cause economic growth. However an increase in productive capacity doesn't mean production has ~~increased~~ increased, so Real GDP ~~and~~ could still be the same one way to measure economic growth is by an increase in productive capacity. An increase in productive capacity ~~means~~ ~~you~~ allows for greater production, so an ~~increase~~ increase in productive capacity ~~could~~ <sup>could</sup> cause economic growth. An increase in Real GDP means that production has increased, which means that growth has occurred. An increase in productive capacity doesn't necessarily mean that production has increased so it doesn't mean that growth has occurred. However an increase in productive capacity allows

There is more space for your answer to Question One on the following page.

For greater growth in the future. One way to measure economic growth is also by measuring an increase in the production capacity, so if growth was measured that way ~~and~~ an increase in productive capacity causes economic growth. However if growth was measured by an increase in real GDP then an ~~increase~~ increase in productive capacity doesn't necessarily mean that there was economic growth, ~~but~~ however an ~~increase~~ increase in ~~production~~ Real GDP means that there was economic growth.

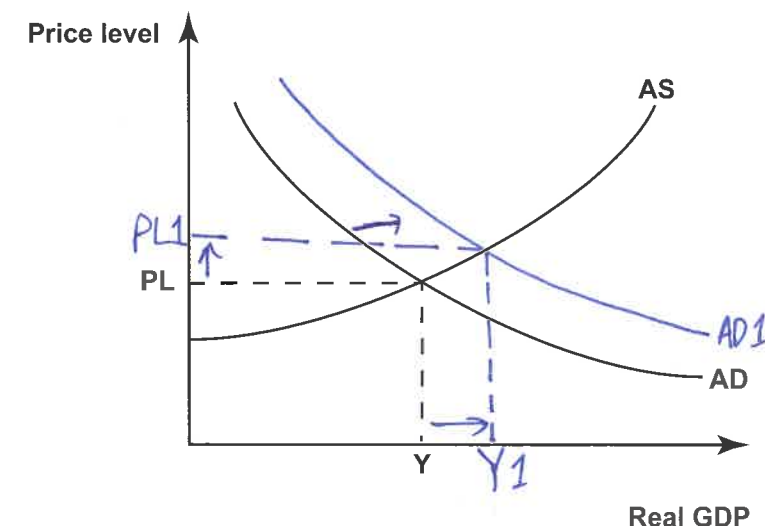
A4

## QUESTION TWO: THE IMPACT OF CLIMATE CHANGE ON ECONOMIC GROWTH

One view of the impact of climate change on the economy is that it will provide business opportunities as households, business, and the Government increase spending on protection from its worst influences.

- (a) Explain in detail the impact of climate change on economic growth in New Zealand.
- In your answer:
- fully label on Graph Three the impact of the increase in spending on economic growth
  - explain in detail the impact that you have shown on Graph Three.

Graph Three: AD/AS model of the New Zealand economy



Household spending or Consumption ( $C$ ), business spending or investments ( $I$ ), and Government spending ( $G$ ) will cause an increase in Aggregate demand from  $AD$  to  $AD1$ . This is because these factors are part of the aggregate demand equation:  $C + I + G + (X - M)$ . The increase in Aggregate demand will cause an increase in Real GDP from  $Y$  to  $Y1$ , causing economic growth.

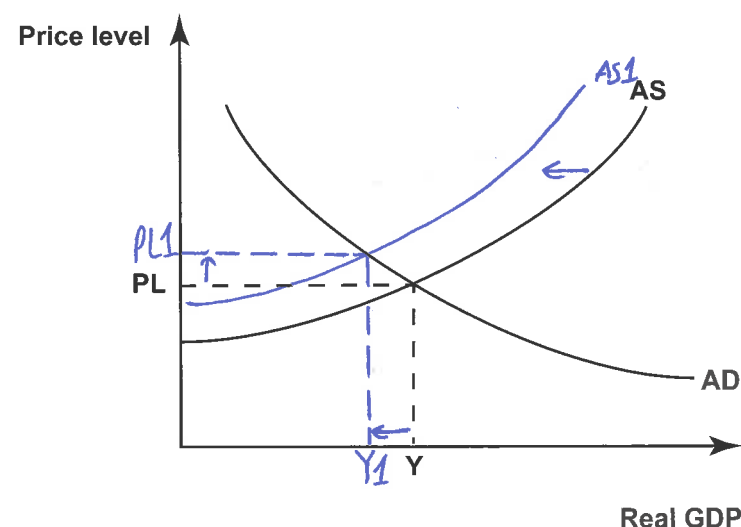
An alternative view of the impact of climate change on the economy is that it will increase costs of production because of higher costs of obtaining resources or changing production methods.

- (b) Discuss the effect of climate change on economic growth in New Zealand as the impacts of climate change intensify over the next 50 years.

In your answer:

- fully label Graph Four to show the impact of increasing costs of production
- explain in detail the impact that you have shown on Graph Four
- explain in detail whether increasing spending or increasing costs of production would have a greater impact on economic growth in New Zealand over the next 50 years.

Graph Four: AD/AS model of the New Zealand economy



Increased costs of production will cause Aggregate supply to drop, as <sup>producers</sup> ~~businesses~~ are making less profit. ~~This will cause prices to rise~~ as businesses want to keep their profit margins, and supply will decrease as businesses lay off workers to ~~reduce~~ costs of production. The result will be a decrease in aggregate supply from AS to AS1. This will cause Real GDP to decrease from  $Y^*$  to  $Y_1$  and prices to increase from PL to PL1.

Increased spending <sup>will</sup> ~~may~~ have a greater impact on economic growth as over the long

term (50 years) it will ~~cause create new~~ ~~but~~ cause new businesses to form and new jobs will be created from the increased ~~investe~~ spending. An increase in costs of production will have a lesser impact in the long term as the price of changing production methods is a one off cost to business. Therefore in the short term it may cause economic slow down. However increased investment ~~may~~ may lead to new & more efficient technology or production methods that will offset the increased costs of production due to the higher costs of obtaining resources in the long term. Therefore ~~decreased~~ the negative impacts of ~~the~~ Climate change will only affect the economy in the short term. In the long term increased spending will have a greater impact on economic growth.



### QUESTION THREE: THE UNEVEN IMPACT OF ECONOMIC GROWTH

The proposed Ruataniwha Water Storage Scheme will create an 83-metre-high dam located on the upper Makaroro River in Central Hawke's Bay, where it will create a storage reservoir. The reservoir will supply water to irrigate approximately 25 000 hectares of land, primarily in the Ruataniwha Plains area of Central Hawke's Bay district. The scheme also includes a plan for a small (6.5 MW) renewable energy hydroelectric power station to be constructed adjacent to the dam (capable of supplying electricity equivalent to 2 200 average households).

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Objections to the scheme ranged from the earthquake risk, inadequate protection of ecosystems, and existing high levels of pollution, to reduced access to water.

Source (adapted): <http://www.epa.govt.nz/Resource-management/Tukituki/Submissions/Pages/Summary%20and%20Submissions.aspx>

Compare and contrast the impacts that the Ruataniwha Water Storage Scheme could have on the economic well-being of businesses and households.

In your answer, explain in detail:

- one example of a business that may be better off
- one example of a business that may be worse off
- one example of how households may be better off
- one example of how households may be worse off.

A Farming business may be better off, ~~from~~ due to the improved irrigation which means that they could take advantage of land that was previously too dry to plant in. This means that they could increase production and increase revenue making them better off. A business that may be worse off may be an ~~power plant~~ oil power plant. This is because they will lose business to the hydroelectric power station, which would cause them to make less profit and possibly have to lay off workers due to less production being needed.

A Household that may be better off may be ~~a household~~ ~~is employed by a New Farming business~~ A Household that own a Farm that has improved irrigation. This is because they will be able to farm more crops and gain more income. This means that they will be able to afford more goods and services and therefore have a better quality of life. ~~A business~~ A Household that ~~has~~ benefits from being employed ~~for~~ for the construction of the dam or by a Farming business expanding, because they will receive higher ~~incomes~~ incomes and be able to afford more ~~the~~ Goods and services. ~~The~~ Households may be worse off because of reduced access to water, which may mean they have to <sup>start</sup> paying for the water they use. This would cause these Households to have less ~~discretionary~~ <sup>discretionary</sup> income and be able to afford less goods and services. Households may also be worse off due to the ~~reduction of~~ increased pollution in the water, which may cause them to ~~become~~ have worse health and have to go to the hospital ~~more~~ more often causing them to have less ~~the~~ discretionary income to spend and it would also cause them to have ~~a~~ worse quality of life.

There is more space for your answer to Question Three on the following page.

## **EXEMPLAR Score 17**

### Question 1 – A4

Q 1(a)(i) – X placed inside of frontier – correct

Q 1(a)(ii) – arrow towards frontier – correct

Explanation – mentions increase of economic growth and increase in production but no reasons for this increase in economic growth. (A evidence)

Q1(b) – graph shift correctly

Explanation – mentions economic growth but no reasons why, no link to the model or specific impact on the future

### Question 2 – M6

Q 2(a) – curve shifted correctly and labelled correctly

Explanation – candidate mentions increase in C, I and G will lead to increase in economic growth – AND link to model ( $Y-Y_1$ ). (M6 evidence – 3 components)

Q 2(b) – curve shifted correctly

Explanation – candidate mentions increased cost of production will lead to lower profit margins,  $Y-Y_1$  BUT no impact on economic growth.

As candidate focused on increased spending having a greater impact, rather than increased costs of production due to increased scarcity of resources. This is acceptable only if the increased spending early on provided technology or production methods that are reducing need for scarce resources.

### Question 3 – E7

Business positive – Farmers can take advantage due to improved irrigation of land previously too dry ... increase production (who and why) ... increase revenue (implication) – M evidence

Business negative – power companies not accepted.

Household positive – employment in construction businesses. Higher incomes (who and why) ... able to afford more goods and services (implication) – M evidence

Household negative – increased pollution may lead to worse health (who and why) ... have to go to the hospital more often causing them to have less discretionary income (implication) – M evidence

As candidate has households positive AND negative = E7