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93402

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OUTSTANDING SCHOLARSHIP EXEMPLAR

NZQA

NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

**QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!**

Tick this box if you
have NOT written
in this booklet

Scholarship 2021
Economics

Time allowed: Three hours
Total score: 24

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 answer ALL the questions in this booklet.

Pull out Resource Booklet 93402R from the centre of 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 2–28 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.

INSTRUCTIONS: Write an essay in response to EACH of the THREE questions in this paper. Question Two is on page 10, and Question Three is on page 18.

QUESTION ONE: The New Zealand honey market

Use information from **Resources A** to **C**, and your knowledge of micro-economic theory, to answer this question.

The beekeeping industry has seen significant growth over the past decade in response to strong demand and high prices for honey. However, over the past year honey prices dropped by as much as 25–50% on the previous season.

Analyse and evaluate the recent changes in the market for raw honey and the impact of these on individual beekeepers in the short run and long run.

In your answer:
- use appropriate economic models throughout
- explain why the raw honey production industry could be considered to be an example of perfect competition
- analyse and illustrate the impact of the recent changes in the market for raw honey on individual beekeepers and why some beekeepers may shut down in the short run
- evaluate the differing impacts of increased supply and low interest rates on the market for honey and on individual beekeepers in the short run and long run.

Use this space for planning your essay. This plan will NOT be marked.
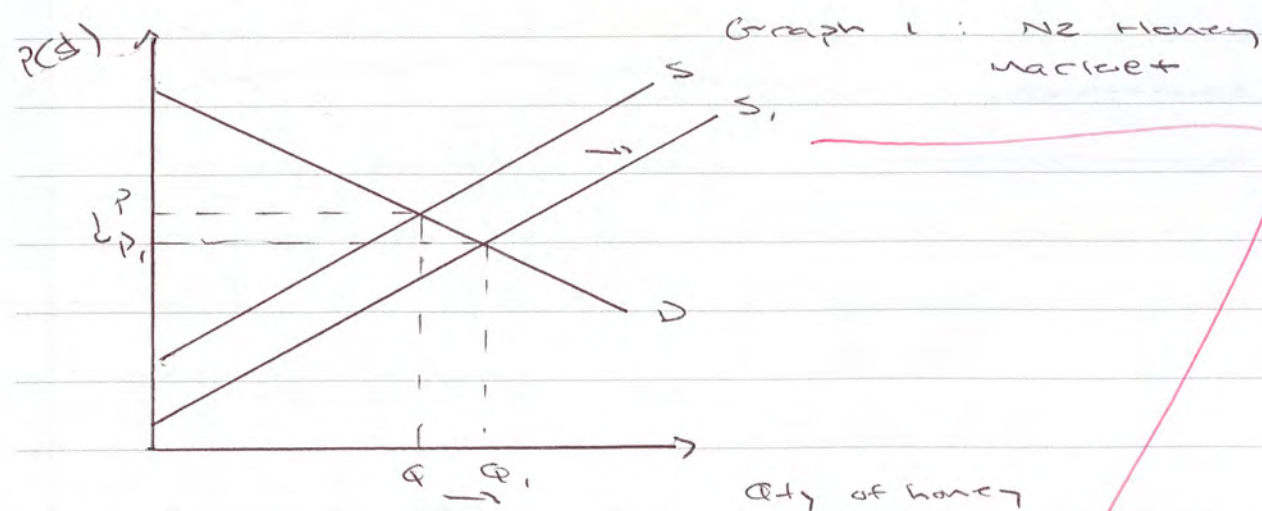
PLANNING

Features of perfect competition
- large number
- price taker
- homogenous product
-

In the New Zealand honey market significant growth and increased supply has caused revenues to fall for many producers posing dangers to beekeepers across the country who may be forced to shut down or take on large levels of debt.

A perfectively competitive market consists of a large number of small firms. Beekeepers that produce honey can be considered to be an example of this for many reasons. First of all raw honey is a homogenous product which comes "straight from the honeycomb" (Res A) meaning beekeepers have no way to differentiate themselves from other sellers. They do not "process the honey" (Res A) so they will be all selling the same raw honey. Additionally as there are such a large number of sellers. There are also a large number of sellers, in NZ there are now "up to 9000 beekeepers" (Res B), another feature of perfect competition. Combined this means that beekeepers are price takers, each individual firm is too small to influence market price and cannot produce at a higher price then it's competitors as consumers would just switch consumption to alternative beekeepers who are selling the same product. Finally beekeeping has no barriers to entry. All it takes to produce

honey is honeycomb and labour meaning anyone can set up their own business and firms can easily exit and enter the market. However the honey market will never be ~~currently the New Zealand honey market~~ considered truly perfectly competitive as honey sellers will never have perfect information or mobility of resources. Overall however the honey market can be approximated to be perfectly competitive.
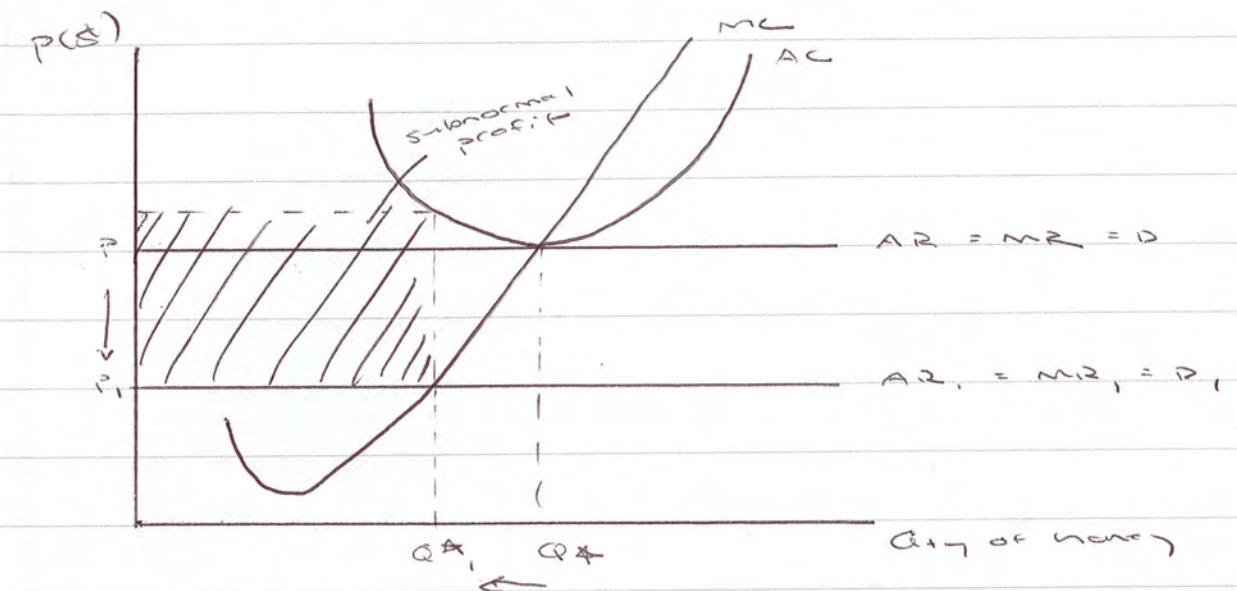
Currently in the New Zealand honey market ~~the~~ beekeepers are facing rising supply. Hive numbers have increased from 343 000 to 925 000 hives (Res B) and there are more ~~to~~ sellers producing honey.

Graph 1 : NZ Honey Market

As shown in graph 1 supply of honey has increasing shifting the supply curve to the right from S to S₁ and causing a fall in the price

of honey from P to P_1, as producers lower price to remove excess stock, and a rise in the ~~type~~ quantity of honey produced from Q to Q_1.

Graph 2 : Individual Beekeeping firm
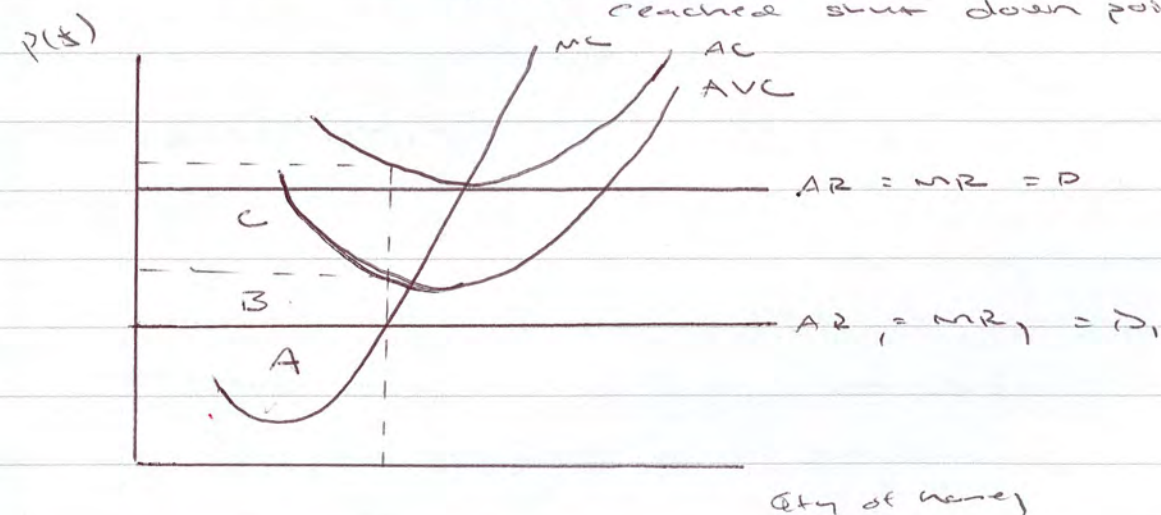
For individ

As individual beekeepers are price takers they have to recieve this new lower price ~~from P~~ for honey and the price they recieve falls from P to P_1. As they are price takers the demand curve is horizontal and equal to price so the AR, MR and demand curves shift downward as well from AR = MR = D to $AR_1 = MR_1 = D_1$. At the original profit maximising equilibrium output $Q*$ where MC = MR, MC is now greater than MR and the firm is making marginal losses on each additional unit. This causes the beekeeper to reduce output to $Q*_1$

as this is true of all units up until Q
between q^* and q^*_1. This is the new ~~pro~~
loss minimising output equilibrium where MC
$= MR_1$. The beekeeper is now making a
subnormal profit (▨) as AR < AC and
total revenue cannot cover total costs.)

In the short run earning this subnormal would
mean some beekeepers are forced to shut
down in the short run as they reach their
shut down point.

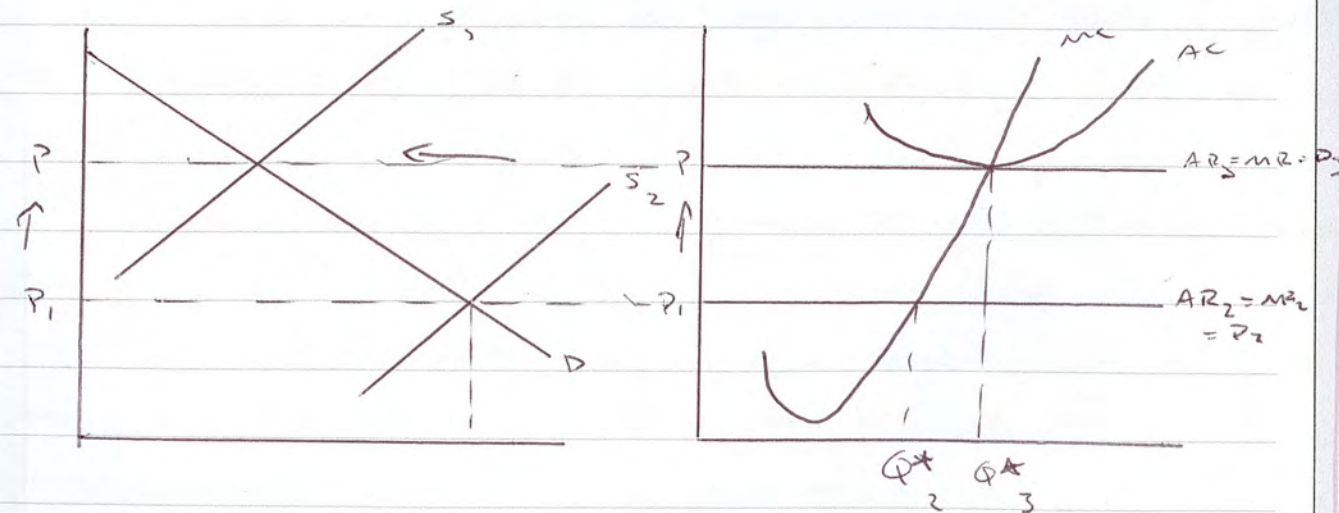Graph 3: Beekeeper who has
reached shut down point

The shut down point is where a firm is no
longer able to cover their variable costs. As
shown in graph the ~~beee~~ AR ~~is less~~ (A) is
less than AVC (B + A). This means that if
the firm remained open they would have to
~~pay~~ take out debt to pay for all of their
fixed costs (C) and a portion of the variable
costs (B). It would be better for them to shut

down in the short run as then they would
have no variable costs and would only
have to borrow enough funds to cover their
fixed costs (C). They no longer have to pay
the portion of variable costs (B). This is
supported by resource A. Honey takes
about "$8 to $10 ... that's how much it
costs to produce it" but honey producers
are selling it for far less at "$3.00 to $4
a kilogram". Their AR of $4 is much less
than the variable cost to make of $8. ~~and~~
Some beekeepers will have differing levels of
costs so may remain in business but as
resource A indicates "A number of beekeepers
have gone out of business" and many firms have
shut down.)

In contrast lower interest rates in the short run
may mean that some beekeepers decide to
stay in the market in hope of price rises in
the future as the cost of borrowing extra
funds to cover both fixed and variable costs
is currently low. As Res C indicates there
has been "significantly reduced debt servicing
costs for businesses and households." This
may mean ~~from~~ beekeepers decide not to
leave. However in the long run this means
beekeepers will be taking on significant level)

debt as they borrow more and more funds to stay in business. This will raise their fixed costs, and eventually they may shut down in the long run as well. This will reduce profitability for beekeepers in the long run, ~~and~~ and while low interest rates mean profits may be made in the short run for individual beekeepers in the ~~in~~ long run this will cause larger problems of rising debt and costs.

In contrast increasing supply causing the price of honey to fall in the long run will mean that the beekeepers who remain the market earn normal profits. As the firms who reach their shutdown point exit the market, and those who do not want to earn subnormal profits leave supply will begin to fall, raising the price of honey. Firms will continue to leave the market until no more subnormal profits are made, and the incentive to leave is removed.

A fall in supply from S_2 to S_3 causes a rise in price (from P_1 to P) in honey and as beekeepers are price takers this translates into the honey market increasing $AR_2 = MR_2 = D_2$ to $AR_3 = MR_3 = D_3$. At the original profit maximising equilibrium where $MC = MR_2$ marginal gains are now being made as $MR_3 > MC$. So beekeepers increase production $T^{his\ is\ true\ of\ all\ units\ between\ Q^*_2\ and\ Q^*_3}$ to Q^* where $MC = MR_3$ and profit is maximised again. Normal profits are now being made as $AR = AC$ and total revenue = total cost.

Overall for the firms that remain in the honey market in the long run those that do not have to take out significant levels of debt will be far better off than those who take advantage of th beekeepers borrowing large sums of money to stay above their shut down points. In the short run all beekeepers will be worse due to falling prices and increasing supply.

QUESTION TWO: New Zealand waterways

Use information from **Resources D** to **H**, and your knowledge of micro-economic theory, to answer this question.

> Recent research has highlighted issues with the water quality in New Zealand lakes and waterways, particularly as a result of urban development, farming, and forestry.

Analyse the externalities created from these industries for New Zealand waterways, and evaluate economic policy options that could be used to improve the quality of New Zealand waterways over time.

In your answer:

- use appropriate economic models throughout
- explain why waterways in New Zealand could be considered to be an example of public goods, and how free-rider behaviour impacts the ability to control waterway quality in New Zealand
- analyse the externalities associated with waterways as a result of waterway-polluting industries and the impact on the allocative efficiency of these markets as a result
- evaluate THREE options from **Resource E** for addressing these externalities and improving the quality of New Zealand waterways in terms of equity, efficiency, and likely effectiveness.

Use this space for planning your essay. This plan will NOT be marked.
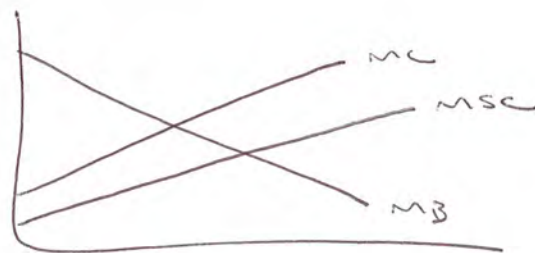

PLANNING

Non excludable

non-rival

non-depletable

People use it without paying for consumption

Tragedy of the commons non-depletable so individual

behaviour is perceived to not matter

Thus case to intervene

N ext of production

Increasing pollution from ~~industries~~ industries and urban development poses very real dangers to our waterways, ~~that~~ ~~requires~~ ecological systems and requires the government to intervene to correct this market failure.

Public goods are "non-excludable by price" "non-rival" and "non-depletable". (Res D) in consumption

Waterways are a definite example of a public good. Firstly waterways are non-excludable by price as you cannot charge for individual consumption. Waterways do not have property rights and it is difficult to stop individuals from using waterways through the use of prices. Secondly they are non-rival in consumption as the waterways are so large that one person using them does not restrict another individual from also using them at the same time. As Res F states there are "70 major river systems ... more than 50000 lakes ~~and~~ ... 440 billion cubic metres of water flow in our rivers and streams" Many can use the waterways at one time so there is no scarcity of use. Finally waterways are perceived to be non-depletable. The ~~water~~ large amounts of water flowing in streams and stored underground mean it is unlikely ~~that the~~ that waterways will ever dry up or stop flowing unless they become polluted

to beyond the point of reasonable use.
~~However this means that is difficult to~~

However waterways being public goods mean it
is difficult to conserve and protect our waterways.
~~The free rider principle on states that people~~
~~If regulators~~ As you cannot restrict
consumption of waterways free rider behaviour
leads to people using waterways irresponsibly
and without respect for other users, such as
industries increasing pollution into the waterways
damaging water quality as there is no way to
stop these free riders from using the waterways.
Free rider behaviour:
~~This~~ also leads to the tragedy of the commons
principle. As waterways are perceived to
                    and so large
be non-depletable ~~individuals~~ people believe
their individual actions ~~will not~~, such as
individual pollution from single firms or
individuals, ~~will~~ does not impact water
                         believe
quality significantly so their actions do not
matter and continue to pollute. However over
time waterways have become over-polluted
due to all polluters believing their actions do
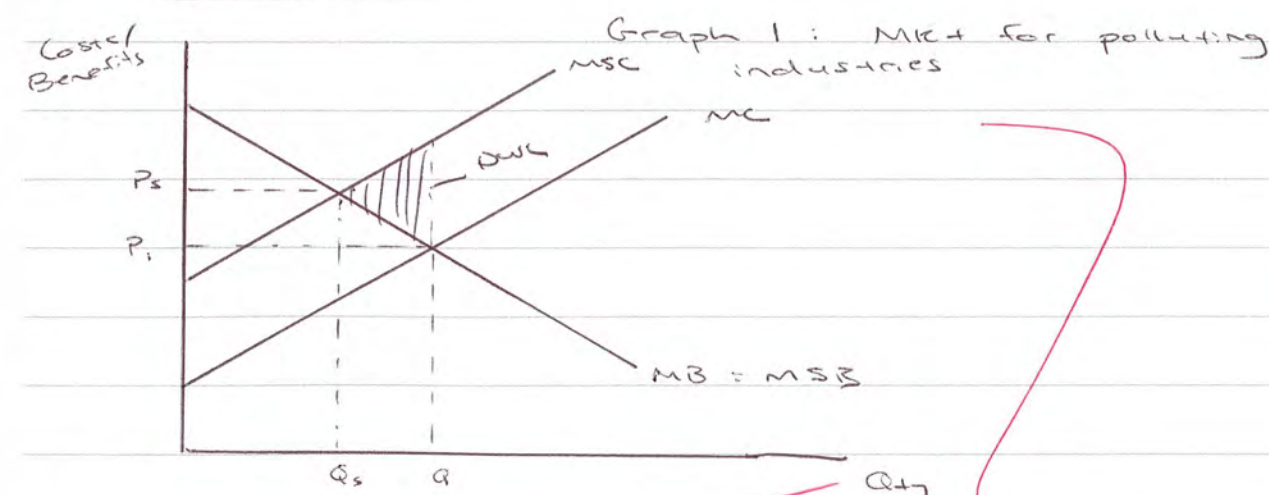not matter and all individual actions
combining to create a large detrimental impact.
or water quality

Market failure occurs when the free market
fails to allocate resources with efficient or

equitable outcomes. In this case water
polluting industries will be creating negative
externalities of production. Industries involved
in urban development, farming or forestry
produce a negative external cost on the
environment and pollution. For example these
industries have caused "76% of our native
freshwater fish ... [to be] either threatened with
or at risk of extinction" and caused "excess
chemicals pathogens and sediments to enter the
water reducing the benefits society recieves
from nature. This means that MSC is
greater than MC and ~~polluting industries~~
~~goods are being overconsumed~~ and the
production of ~~pollutant~~ things such as farming
with run off pollutants are being over produced
and underpriced.

Graph 1: Mkt for polluting industries

The private market fails to account for externalities
and will produce where MC = MB. However
from societies point the optimal output level

is where MSC ≥ MSB at a higher price other (P₁ to P₅) and lower quantity (Q₁ to Q₅) This means that overall social allocative efficiency is lost creating a deadweight loss in social welfare (DWL). This creates a case for government intervention into these industries to reduce this deadweight loss and the scale of these externalities
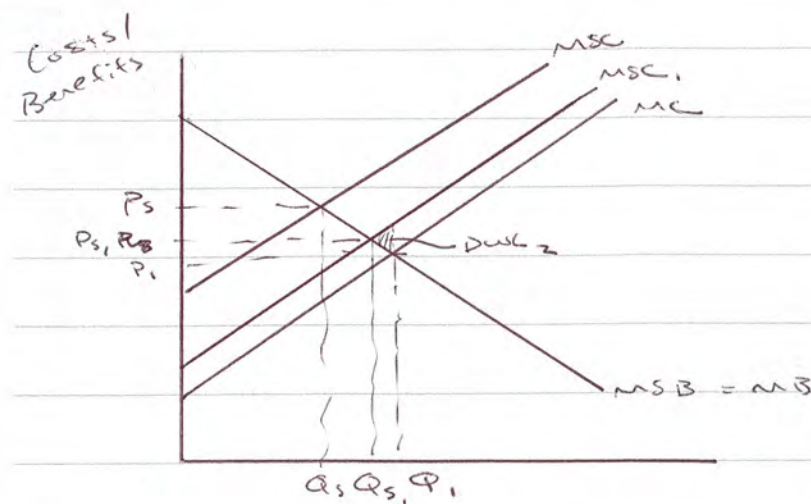
As according to resource E only policy the government could implement is the "increased regulations.

Graph 2: Polluting industries after regulations

Increased regulations will increase MC for producers in these industries as ^are they now responsible for "minimising nitrogen and effluent runoff into waterways" and ~~requiring~~ requires councils to plan developments to better protect waterway quality". (Res E) This shifts the MC curve to the left from MC to MC₁. This helps reduce the

negative externalities as producers increase the price (P₁ to P₂) for their goods moving it closer to the socially desirable price (P₅) and decrease output from P₁ to Q₂, closer to the socially desirable output (Q₅) as profitability falls. This improves efficiency as the deadweight loss decreases from DWL to DWL₁. The effectiveness of this policy depends on the actions that farmers and other industries take in response to the regulations. There may be a significant time lag as farmers ~~start when taking action~~ have to plan and introduce the new regulations to minimise runoff. This means it is likely to be ineffective in the short run. However the policy is equitable as the farmers and other industries are now paying the full cost of their actions and MC is more reflective of the true social cost caused by their pollution. These firms are the cause of the externality so should be directly responsible for.

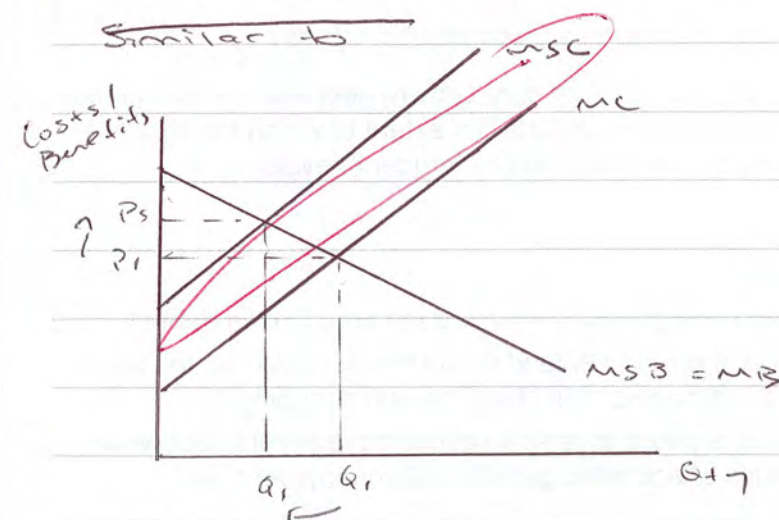A second policy is the "increased government spending" ^on protecting and restoring waterways (Res E).

Graph 3: Industries waterways after spending

Graph 3: Fining industries

Increased work on protecting and restoring waterways means that the scale of the negative external cost is reduced. The effect of the pollution being produced is minimised. This decreases MSC shifting it to the right from MSC to MSC₁. While this does not effect the private market equilibrium efficiency is still improved as the private price (P₁) and quantity (Q₁) is now closer to the socially desirable price (Ps₁) and quantity (Qs₁). This improves allocative efficiency as the deadweight loss is reduced from DWL to DWL₂. The effectiveness of this depends on government and council actions and again there may be a time lag as it will take time to implement initiatives restoring waterways. However this policy is not equitable. It is not fair that taxpayer money is used to fund those policies as the burden of the externality does not lie on the average taxpayer. They should not be expected to cover the external cost and

there may be more equitable uses for the government revenue.

A third policy the government could use is "fining businesses that allow pollutants to enter waterways above limits set."

Similar to

As the government is able to set the limit on pollutants this restricts output to the socially optimal level as firms will not produce above that output to escape the fine. This means allocative efficiency is reached and the deadweight loss is eliminated. The effectiveness however depends on the government correctly setting limits equal to the socially desirable output and requires perfect information about the size of the external cost, so may not be as effective as displayed. However this policy is effective in the short term as fines can be immediately implemented. Additionally the policy is

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Costs/Benefits

MSC
MSC₁
MC

Graph 3: ~~Industries~~ ~~waterways~~ Industries after spending

Ps
Ps, Ps₁
P₁

DWL₂

MSB = MB

Qs, Qs₁, Q₁

Increased work on protecting and restoring waterways means that the scale of the negative external cost is reduced. The effect of the pollution being produced is minimised. This decreases MSC shifting it to the right from MSC to MSC₁. While this does not effect the private market equilibrium efficiency is still improved as the private price (P₁) and new quantity (Q₁) is now closer to the socially desirable price (Ps₁) and quantity (Qs₁). This improves allocative efficiency as the deadweight loss is reduced from DWL to DWL₂. The effectiveness of this depends on government and council actions and again there may be a time lag as it will take time to implement initiatives restoring waterways. However this policy is not equitable. It is not fair that taxpayer money is used to fund those policies as the burden of the externality does not lie on the average taxpayer. They should not be expected to cover the external cost and

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there may be more equitable uses for the government revenue.

A third policy the government could use is "fining businesses that allow pollutants to enter waterways above limits set."

Similar to

Costs/Benefits

MSC
MC

Ps
P₁

MSB = MB

Q₁ Q₁ G+7

Graph 3: Fining industries

As the government is able to set the limit on pollutants this restricts output to the socially optimal level as firms will not produce above that output to escape the fine. This means allocative efficiency is reached and the deadweight loss is eliminated. The effectiveness however depends on the government correctly setting limits equal to the socially desirable output and requires perfect information about the size of the external cost, so may not be as effective as displayed. However this policy is effective in the short term as fines can be immediately implemented. Additionally the policy is

Economics 93402, 2021

QUESTION THREE: Repayment of government debt

Use information from **Resources I** to **O**, and your knowledge of the New Zealand economy and macro-economic theory, to answer this question.

> Net core Crown debt is forecast to hit more than 50% of gross domestic product over the next five years as the Government expects to pump more than $60 billion into the economy to offset the impact of COVID-19. By way of comparison, net core Crown debt was 19% of GDP in the year to June 2019.
>
> Source: https://www.nzherald.co.nz/business/budget-2020-debt-set-to-soar-as-govt-looks-to-recover-and-rebuild/ XW7VASZN23IGTOWTGRSBRQMS74/ (14 May 2020)

Analyse the reasons for the significant increase in government (net core Crown) debt and the economic impact of potential government policies to reduce debt levels. Evaluate the extent to which the New Zealand Government should be focused on reducing government debt to "prudent" levels.

In your answer:

- use appropriate economic models throughout
- explain reasons for the 2020 budget deficit and how this has impacted net core Crown debt
- analyse THREE policies from **Resource L** that the New Zealand Government could use to reduce government debt and the impact that each would have on the New Zealand economy
- evaluate the case for the Government pursuing a policy to rapidly reduce government debt while also focusing on the key macro-economic goals of economic growth, full employment, and price stability.

Use this space for planning your essay. This plan will NOT be marked.
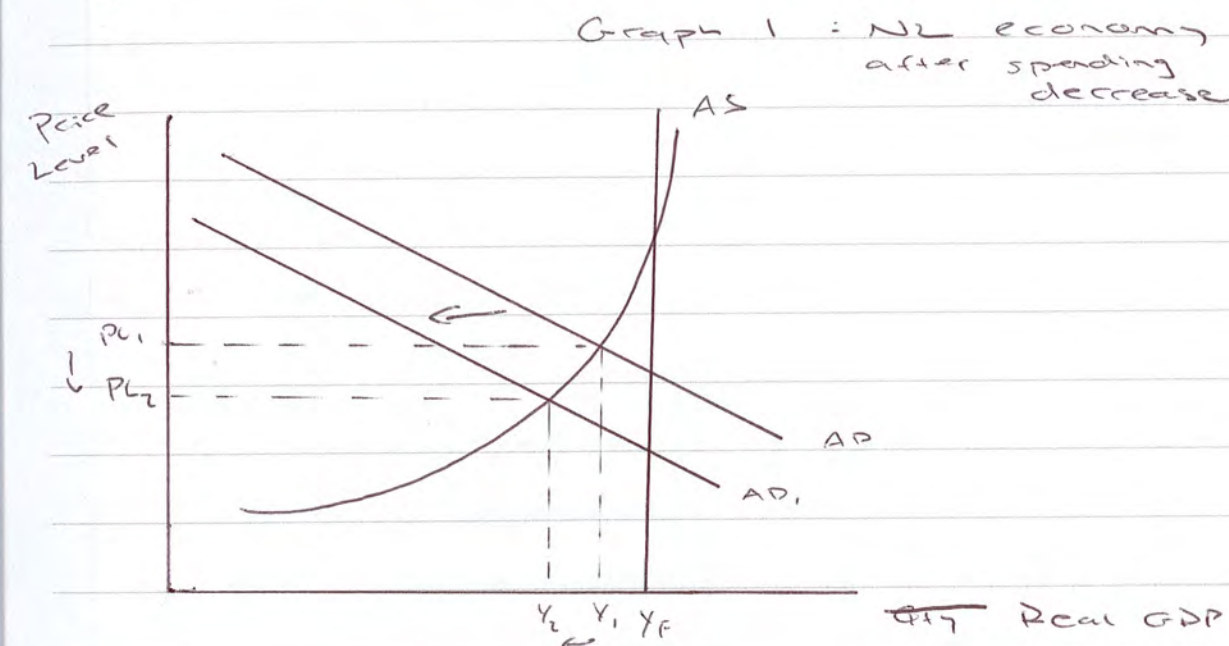
PLANNING

As a result of the Covid-19 crisis and government attempts to stimulate the economy the government is currently facing a significant budget deficit and high levels of debt.

This is for several reasons. Firstly government spending has increased drastically. In 2020 the government passed a "$50 billion Covid Response and Recovery" (Res I) to increase economic growth after lockdowns caused an economic shutdown. In combination with this the closing of borders meant tax revenue fell as there were "lower service exports, fewer international visitors and lower incomes" (Res J) The government was receiving less indirect tax revenue from consumption and import spending and less direct tax revenue from falling household incomes and business profits. This meant govt spending was far greater than govt revenue and the govt had to take on more debt to cover the increased spending. As Resource J indicates the forecast for 2020 debt is expected to reach "$190 billion in 2024/25 ... driven by the need to fund the net cash deficits" and in 2020 core crown expenses outweighed tax revenue by more than 10%. In the

this is dangerous for the NZ government ~~and as~~ as a ~~deficit~~ persistent budget deficit and high levels of debt are not sustainable. ~~As such the government must intervene.~~ As Resource R indicates the Public Finance Act states the government should ensure " on average... total operating expenses do not exceed total operating revenues." and should " reduce total debt to prudent levels". If ~~the~~ the budget deficit continues these goals will not be met and thus the government has an obligation to implement policy to reduce total debt. However included in the evaluation of these policies the government must also attempt to continue to support the wider NZ economy and their wider ~~goals~~ ~~macroeco~~ macro-economic goals of economic growth, full employment and price stability. Debt is not the only concern for the government.

~~As~~ One policy the government could implement is to " reduce government spending". This would mean government spending falls ~~its rate for sectors~~ in areas such as "healthcare and education" (Res R) meaning that total government expenses are lower and the government has to borrow less money and take on less debt in the future.

Additionally the money saved from the cut spending and government projects could be used to pay off existing debt. However by cutting government spending this will decrease aggregate demand as shown in graph 1.

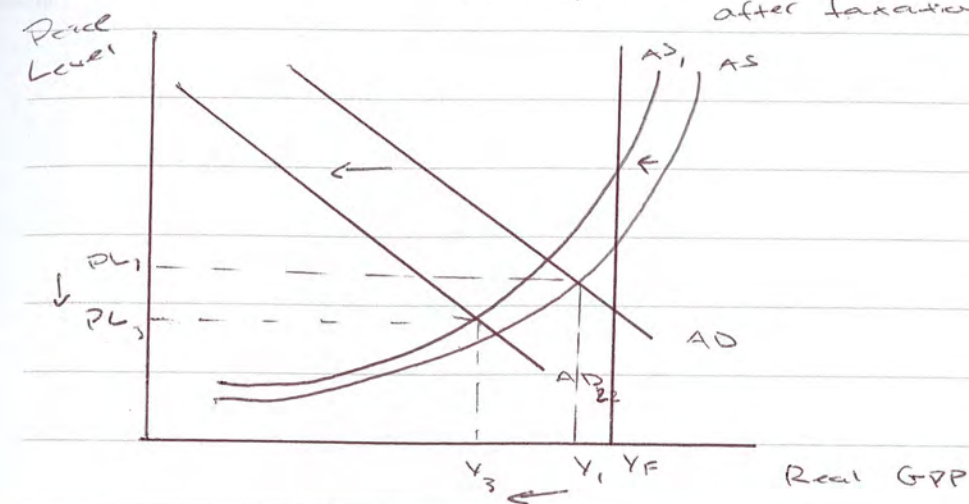Graph 1 : NZ economy after spending decrease

As less projects are commissioned in sectors such as infrastructure, healthcare or education the government will hire less workers, decreasing incomes and consumption spending in the economy and having a multiplier effect. $AD = C + I + G + (X-M)$ Therefore as G and C have fallen AD decreases, shifting to the left from AD to AD₁. Thus while the level of debt has fallen this has worse outcomes on the wider economy. Falling demand decreases ~~output from~~ real GDP from Y₁ to Y₂, decreasing economic growth and moving

further away from the full employment output level (X_F). Out Unemployment increases and this creates a larger recessionary gap. Additionally inflation is currently low so falling price levels from PL_1 to PL_2 may cause deflationary pressure which impacts adversely on price stability. Overall it is likely that this policy, while achieving lower debt, negatively impacts the economy too significantly to provide a valid case for intervention.

A second policy the government could implement is to increase taxation. Increasing both a GST tax and direct taxes on income and company profits will increase government revenue, allowing them to cover more of their expenses and potentially pay off some of their debt. The government would eventually be able to reduce their budget deficit and stop taking on more debt, achieving their goal. This will insure total operating expenses do not exceed total operating revenues. (Ref 1c) However similarly to cutting government spending increasing taxation will harm the government's other macro-economic goals.

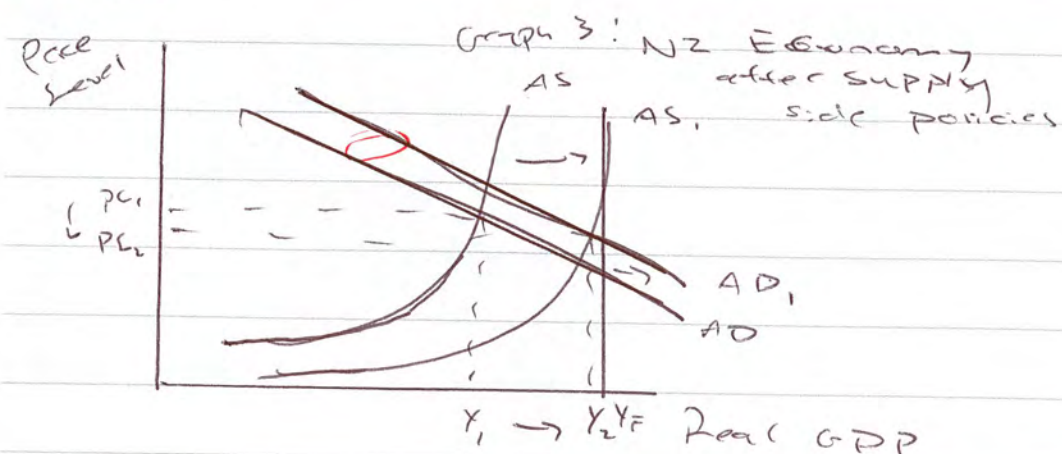Graph 2: NZ economy after taxation increase

Increasing taxation through income tax will mean households have less disposable income and will decrease their consumption spending, as they have to pay more in tax. Additionally a tax on goods and services as suggested in resource O would make commodities more expensive also contributing to a fall in consumer spending. ~~This causes a fall in AD~~ Additionally a tax on company incomes will increase cost of production for producers causing them to reduce output and investment as ~~these~~ profitability falls. This means that AD falls as a result of lower spending and investment, shifting to the left ~~decreasing~~ from AD to AD_2, and AS also decreases from rising costs, ~~from AD, AD₂~~ ~~AS~~ shifting to the left from AS to AS. ~~In~~ Both of these shifts decrease economic growth and real GDP from X_1 to X_3 moving further away from full employment (Y_F) and causing a rise in unemployment. The

and price stability

on the price level is uncertain and depends on the relative size of the shifts, but again it is clear that this policy is not justified to lag and reduce government debt while sacrificing all other goals.

A third policy is to "stimulate economic growth through supply side policies" (Res L). This will increase government revenue as economic growth will increase tax revenue from the increased spending and economic activity. The government can "pay down debt over time" as they slowly earn more tax revenue.

In contrast to the other two policies this supply side policy will benefit the economy in the long run.

Graph 3: NZ Economy after supply side policies

Stimulating supply will increase AS, shifting it to the left right from AS to AS₁, and will also increase AD, shifting it to the right from AD to AD, due to the multiplier effect. This means that real GDP, economic growth and employment increases from Y₁ to Y₂, moving closer to full employment (Yₑ) and achieving the government's goal.

~~Thus although~~ There will be a time lag in implementing these supply side policies so this means that debt will only fall in the long run once the (supply) has increased over time. However this is acceptable as currently "the cost servicing debt is also low" (Res M) and the government can afford a budget deficit for a while longer until these policies are complete and the govt can begin paying off their debt. As Res M states they aim to "grow the economy to pay down debt over time". This means the case for government intervention is justified as the government can pay off debt in the long run and stimulate economic growth, by increasing AD and AS, at the same time. Thus this is the policy the govt should implement. //

Extra space if required.
Write the question number(s) if applicable.

ASSESSOR'S
USE ONLY

QUESTION
NUMBER

(2) equitable as it ensures that businesses and farmers producing pollutants pay the full cost of their actions. ~~Additionally the policy crea~~

In conclusion the best policy to implement ~~ofe~~ is fining businesses and farmers as it the most effective, can be implemented immediately unlike regulation and spending, ~~dire~~ eliminates the externality completely and is the only policy to achieve social allocative efficiency and is the most equitable of the three. ~~Additionally~~ Alternatively the govt revenue collected from the fine could be used to fund the other two policies in the long term.

Extra space if required.
Write the question number(s) if applicable.

ASSESSOR'S
USE ONLY

QUESTION
NUMBER

Outstanding Scholarship Exemplar 2021

Subject	Economics			Standard	93402	Total score	19

Q	Grade score	Annotation
1	6	The candidate has produced and effectively communicated a sophisticated economic analysis of the impact of changes in the market for raw honey on individual beekeepers in the short run and long run. On Pages 3 and 4 the candidate has integrated resource material into their explanation of why the raw honey production industry could be considered to be an example of perfect competition. This has provided industry specific evidence that supports the explanation of the features of perfect competition. On Pages 4 to 7 the candidate has analysed, in detail, the impact of recent changes in the market for raw honey on individual beekeepers and why some beekeepers may shut down in the short run. They have competently integrated resource material and appropriate economic models into their explanation. The explanation of changes shown on the models is clear and logical. Key concepts of Market Forces and Marginal Analysis have been appropriately included to provide the necessary detail to their explanation. On Pages 6 and 7, using a model, the candidate has provided a detailed explanation of the significance of (Average) Variable Cost to the individual beekeeper's desire to shut down or continue to operate in the short run. On Pages 7, 8, and 9 the candidate has evaluated the differing impacts of increased supply and low interest rates on the market for honey and on individual beekeepers in the short run and long run. The evaluation is clear and logical but lacks the precision necessary in an outstanding economic analysis.
2	7	Overall this candidate produces and effectively communicates a relatively sophisticated economic analysis of the impact of waterway polluting industries on New Zealand waterways and policies to address these, which is largely complete and demonstrates perception and insight. On Page 11 the candidate provides a sound explanation of the ways in which waterways meet the criteria of a public good, using specific examples from the resource material to support their argument. They also noted that the classification of waterways as non-depletable could be in doubt due to pollution, showing independent thought and perception. This point could have been expanded further. Similarly, on Page 12 the candidate provides a reasonable explanation of the idea of free-rider behaviour though this could have made more specific reference to the connection to non-excludability by price as a key factor. Inclusion of the concept of Tragedy of the Commons supported this explanation and reflected broader economic literacy. On Pages 13 and 14 the candidate explains the negative externalities of production related to waterway polluting industries by integrating relevant reference to the resource material and supporting this with detailed, accurate reference, and explanation of the MSB / MSC model. On Pages 14 and 15 the candidate provides an accurate and detailed explanation of the impact of regulations in terms of allocative efficiency, equity, and effectiveness, including the appropriate model and specific reference to this. The candidate shows some independent reflection in considering possible time lags in action being taken to conform to the regulations. A more sophisticated answer could have identified a long-term reduction in social costs due to these actions which would have shifted MSC to the right. Similarly on Page 16 the candidate provides an accurate and detailed explanation of the impact of government spending to mitigate waterway pollution in terms of allocative efficiency, equity, and effectiveness, including the

		appropriate model and specific reference to this. This answer could have shown greater sophistication and independent thought by expanding on the idea of equity for this policy and the failure of this policy to address polluters to internalise the externalities.
		On Pages 17 and 26 the candidate provides an explanation of the impact of fines as a policy in terms of allocative efficiency, equity, and effectiveness, including the appropriate model though lacking in detailed reference to this. The candidate shows independent reflection and economic literacy in discussing the difficulties of setting fines and pollution limits at an appropriate level to internalise the externalities.
3	6	The candidate effectively conveyed a sophisticated economic analysis of the reasons for Government debt levels as well as three potential Government Policies to reduce debt, evaluating each policy in relation to the Government's goals.

On Pages 19 and 20, both increases in expenses (i.e. COVID Response Fund) and decreases in revenue (i.e. Indirect Tax and Direct Tax for the Government), have been explained and linked to the deficit that led to increased debt being taken-on by the Government. Comparisons of debt levels and implications of this are related thoroughly to the resource material.

On Pages 20–22 the policy to reduce Government Spending has been correctly linked to Aggregate Demand, illustrated, and analysed logically. The policy's impact on all three goals (Economic Growth, Price Stability and Full Employment) has been analysed as has the impact of this policy on the operating balance. The multiplied effect of this withdrawal has also been considered.

On Pages 22–24 possible taxation policies have been correctly linked to AD and AS respectively. Direct taxes are analysed in relation to disposable income, consumption and hence Aggregate Demand, meanwhile Indirect Tax is linked to costs of production and Aggregate Supply. Both changes are linked to all required Government goals and model integrated fluently into analysis.

On Pages 24 and 25 the supply-side policy analysis is short and not as detailed as other policies, however both impacts on AD in short-term and AS in long-term are identified, and evaluation of the 'time-lags' that can accompany supply side policies are evaluated.

To gain a higher mark, more specific context to the current economic climate could be incorporated into analysis i.e. present high inflation and capacity constraints, hence downwards pressure on inflation would aid goal of price stability.

Overall, the candidate communicated a sophisticated economic analysis with resources integrated correctly throughout with a logical evaluation to conclude. |