Assessment Schedule – 2019

Scholarship Economics (93402)

Evidence

Q1	Score	
Outstanding Scholarship See Appendix for Marking Schedule's key points.	8	• The candidate produces and effectively communicates an outstanding and sophisticated economic analysis of changes in the New Zealand market for petrol, price elasticity of demand in the petrol market and the impact of persistently high petrol prices on the market for petrol and electric vehicles in the long run. • This is complete and demonstrates *perception and insight* AND • demonstrates *sophisticated abstraction and integration* of the resource material AND • demonstrates *independent reflection and extrapolation* relevant to the evaluation of the impact of persistently high petrol prices on allocative efficiency in the market for petrol and electric vehicles in the long run AND • is *convincing* and economically literate.
	7	• The essay fulfils most of the requirements above, but contains minor factual inaccuracies (when this affects a statement or opinion) OR • deals inadequately with an essential point OR • lacks sufficient abstraction or integration of the resource material OR • has some minor failure in the evaluation OR • may lack some fluency and / or coherence.

Q1	Score	
Scholarship See Appendix for Marking Schedule's key points.	6	• The candidate produces and effectively communicates a sophisticated economic analysis of changes in the New Zealand market for petrol, price elasticity of demand in the petrol market, and the impact of persistently high petrol prices on allocative efficiency in the market for petrol and electric vehicles in the long run. • This demonstrates a high level of *analysis and critical thinking* AND • incorporates a *competent level of integration and synthesis* of the resource material AND • the discussion and evaluation are *clear, logically developed and precise*.
	5	• The essay fulfils most of the requirements above, but has some unsupported generalisations OR • some major point in the discussion is neglected or incomplete OR • has some inadequacy in the evaluation OR • ideas may not be communicated effectively.
	4	• The candidate produces a comprehensive analysis of the changes in the New Zealand market for petrol, price elasticity of demand in the petrol market and the impact of persistently high petrol prices on the market for petrol, and electric vehicles in the long run AND • produces a *clear but undeveloped* discussion and evaluation AND • demonstrates *some level of integration and synthesis* of the resource material AND • demonstrates *some application* of economic theory relevant to the discussion.
	3	• The answer fulfils most of the requirements above, but is incomplete OR • fails to present a cogent argument or make critical analysis OR • does not communicate ideas adequately.
	2	• The answer shows limited understanding relevant to the question or limited coverage of the question.
	1	• The answer contains a minimal amount of relevant evidence.
	0	• No response; no relevant evidence.

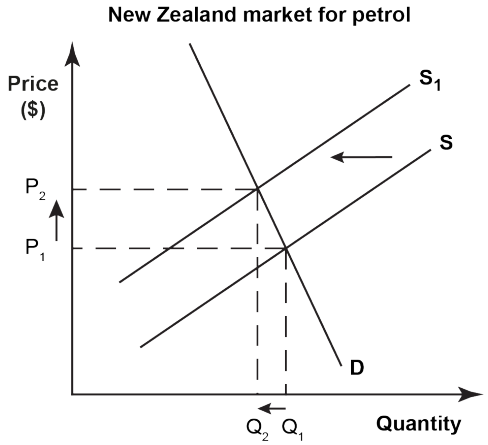
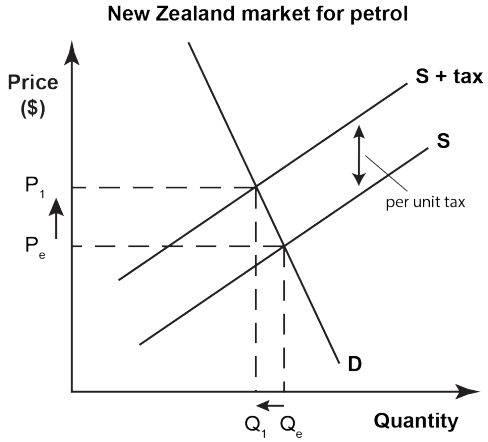
Q2	Score	
Outstanding Scholarship See Appendix for Exemplar Answer's key points.	8	• The candidate produces and effectively communicates an outstanding and sophisticated economic analysis of the impact of increasing visitor numbers on national parks as a public good, and government interventions to address capacity issues. • This is complete and demonstrates perception and insight AND • demonstrates sophisticated abstraction and integration of the resource material AND • demonstrates independent reflection and extrapolation relevant to the evaluation of the impact of possible government interventions on efficiency and equity AND • is convincing and economically literate.
	7	• The essay fulfils most of the requirements above but contains minor factual inaccuracies (when this affects a statement or opinion) OR • deals inadequately with an essential point OR • lacks sufficient abstraction or integration of the resource material OR • has some minor failure in the evaluation OR • may lack some fluency and / or coherence.

Q2	Score	
Scholarship See Appendix for Exemplar Answer's key points.	6	• The candidate produces and effectively communicates a sophisticated economic analysis of the impact of increasing visitor numbers on national parks as a public good and government interventions to address capacity issues. • This demonstrates a high level of *analysis and critical thinking* AND • incorporates a *competent level of integration and synthesis* of the resource material AND • the discussion and evaluation are *clear, logically developed and precise*.
	5	• The essay fulfils most of the requirements above, but has some unsupported generalisations OR • some major point in the discussion is neglected or incomplete OR • has some inadequacy in the evaluation OR • ideas may not be communicated effectively.
	4	• The candidate produces a comprehensive analysis of the impact of increasing visitor numbers on national parks as a public good and government interventions to address capacity issues AND • produces a *clear but undeveloped* discussion and evaluation AND • demonstrates *some level of integration and synthesis* of the resource material AND • demonstrates *some application* of economic theory relevant to the discussion.
	3	• The answer fulfils most of the requirements above, but is incomplete OR • fails to present a cogent argument or make critical analysis OR • does not communicate ideas adequately.
	2	• The answer shows limited understanding relevant to the question or limited coverage of the question.
	1	• The answer contains a minimal amount of relevant evidence.
	0	• No response; no relevant evidence.

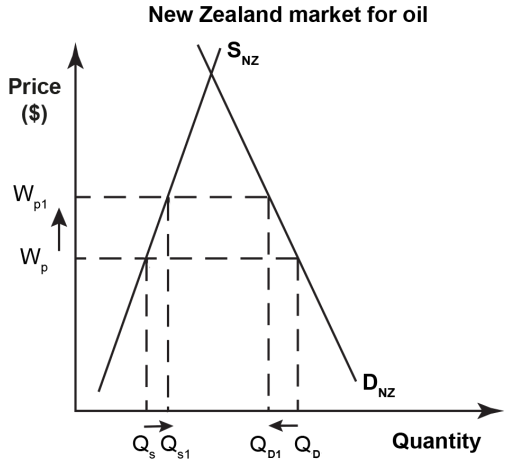
Q3	Score	
Outstanding Scholarship See Appendix.	8	• The candidate produces and effectively communicates an outstanding and sophisticated economic analysis of fiscal stimulus and the New Zealand economy. • This is complete and demonstrates *perception and insight* AND • demonstrates *sophisticated abstraction and integration* of the resource material AND • demonstrates *independent reflection and extrapolation* relevant to the evaluation of the impact of fiscal stimulus in relation to the position of the New Zealand economy AND • is *convincing* and economically literate.
	7	• The essay fulfils most of the requirements above, but contains minor factual inaccuracies (when this affects a statement or opinion) OR • deals inadequately with an essential point OR • lacks sufficient abstraction or integration of the resource material OR • has some minor failure in the evaluation OR • may lack some fluency and / or coherence.

Q3	Score	
Scholarship See Appendix for Exemplar Answer's key points.	6	• The candidate produces and effectively communicates a sophisticated economic analysis of fiscal stimulus and the New Zealand economy. • This demonstrates a high level of analysis and critical thinking AND • incorporates a competent level of integration and synthesis of the resource material AND • the discussion and evaluation are clear, logically developed, and precise.
	5	• The essay fulfils most of the requirements above, but has some unsupported generalisations OR • some major point in the discussion is neglected or incomplete OR • has some inadequacy in the evaluation OR • ideas may not be communicated effectively.
	4	• The candidate produces a comprehensive analysis of the fiscal stimulus and the New Zealand economy AND • produces a clear but undeveloped discussion and evaluation AND • demonstrates some level of integration and synthesis of the resource material AND • demonstrates some application of economic theory relevant to the discussion.
	3	• The answer fulfils most of the requirements above, but is incomplete OR • fails to present a cogent argument or make critical analysis OR • does not communicate ideas adequately.
	2	• The answer shows limited understanding relevant to the question or limited coverage of the question.
	1	• The answer contains a minimal amount of relevant evidence.
	0	• No response; no relevant evidence.

Appendix

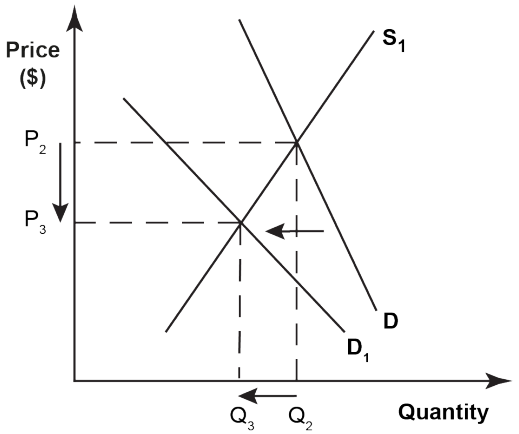
Q1	Marking schedule
	• In 2018, the price of petrol increased due to several factors affecting the costs of production. This caused supply to shift to the left from S to S1 and price to increase from P to P1.  • One factor is the depreciation of the New Zealand dollar, which results in the cost of imported oil for refining increasing in New Zealand dollar terms. • At the same time, nationally there has been an increase in the fuel excise levy, which is a tax, so the supply curve shifts vertically up by the amount of the levy at each quantity. 

- Finally, international oil prices increased substantially. As New Zealand is a price taker in terms of the market for oil, the price of oil in the New Zealand market would rise from Wp to Wp1. This means that the costs of production for New Zealand petrol companies have again increased.



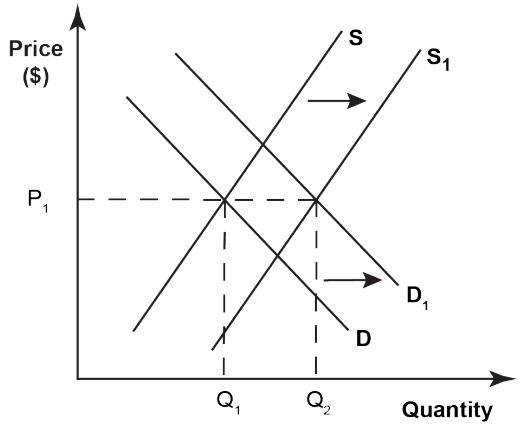
- Petrol has inelastic demand as petrol is seen as a necessity (given that transport is seen as a necessity), there are no substitutes to petrol if you own a petrol vehicle, and it takes time to switch away from petrol consumption (e.g. switch to public transport or electric vehicles). As a result, any increase in price leads to a less than proportional decrease in quantity demanded.
- Price elasticity of demand becomes less inelastic in the long run. This is because it takes time for petrol consumers to change their buying behaviour in terms of switching from driving to public transport or buying an electric car so in the short run the quantity demanded is relatively unresponsive to a change in price. However, over a longer period of time consumers are able to be more responsive.
- In the long run, in the market for petrol, there will be two main factors impacting demand. First, as discussed, the price elasticity of demand will become less inelastic, causing a change in the slope of the demand curve. In addition, there will be a decrease in the demand for petrol at each and every price as consumer demand moves permanently away from petrol vehicles and towards use of public transport and electric vehicles. Consequently, **referring to the New Zealand market for petrol graph on page 9**, the demand for petrol will shift from D to D1. This would result in a fall in price from P2 to P3 and a fall in market quantity from Q2 to Q3. The fall in price and quantity will result in a decrease in producer surplus while consumer surplus will also fall as the decrease in demand and therefore quantity purchased will more than offset the benefits of the fall in price for consumers. As the market continues to operate at market equilibrium and consumer and producer surplus are maximised, allocative efficiency is retained. (Candidates might also argue that the existence of various fuel taxes may create a degree of deadweight loss).

New Zealand market for petrol



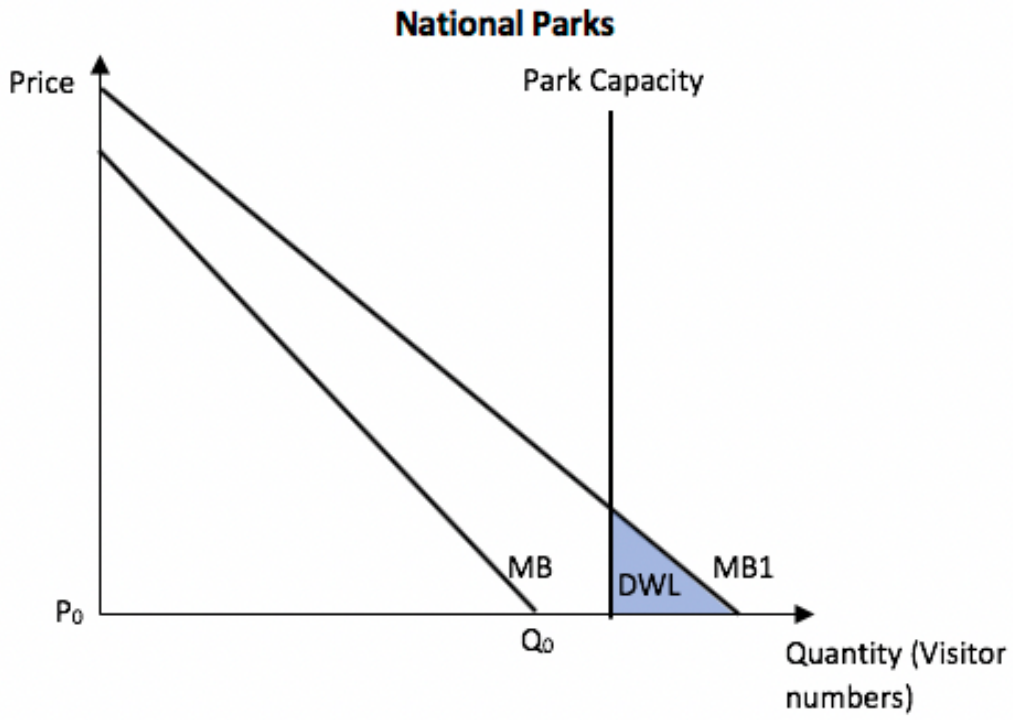
- In the long run, in the market for electric cars, there will be an increase in demand and supply. Electric vehicles are substitute goods for petrol-fueled cars so in the long-term consumers will switch from petrol-fueled cars to electric vehicles since the cost of running petrol-fueled vehicles increases with increased petrol prices. At the same time, as noted in Resource B, there is an increasing supply of electric vehicles so supply will shift from S1 to S2. In addition, falling demand and profitability for petrol-fueled cars will encourage manufacturers to further switch to electric vehicle production. This will cause an increase in equilibrium quantity from Q1 to Q2, while the impact on price will depend on the relative size of the shifts in demand and supply. As a result of the increase in equilibrium quantity, it is likely that both consumer and producer surplus will increase as more units are being consumed and produced from which to gain surplus, increasing net welfare. Allocative efficiency will be maintained as the market is at equilibrium.

Market for electric vehicles

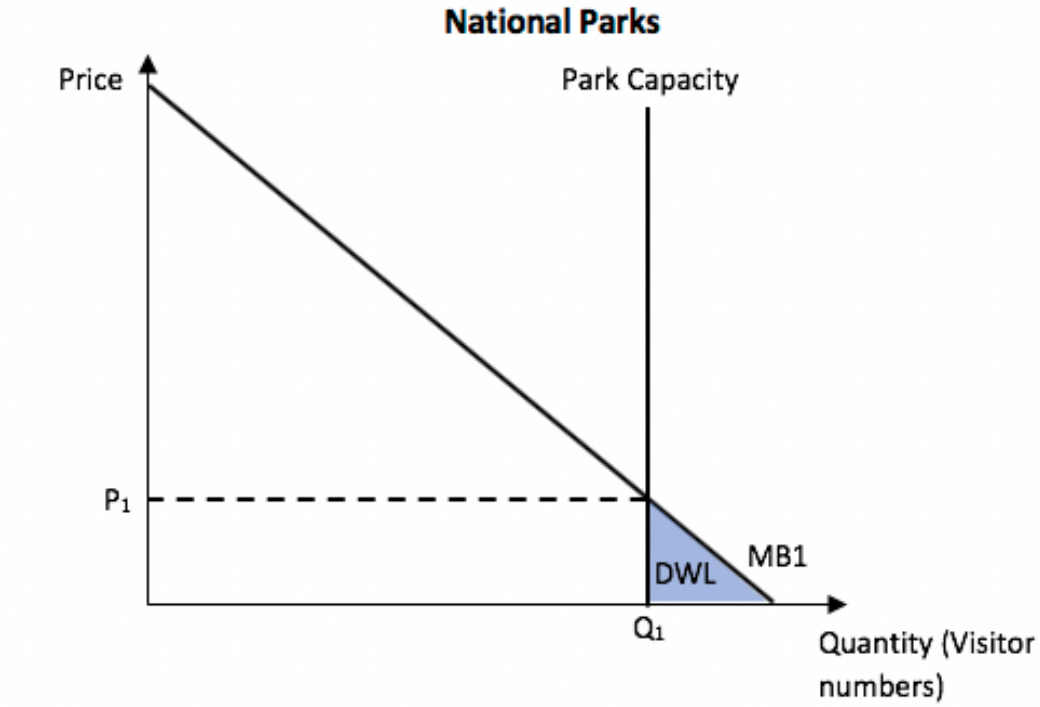


Q2	Exemplar answer:

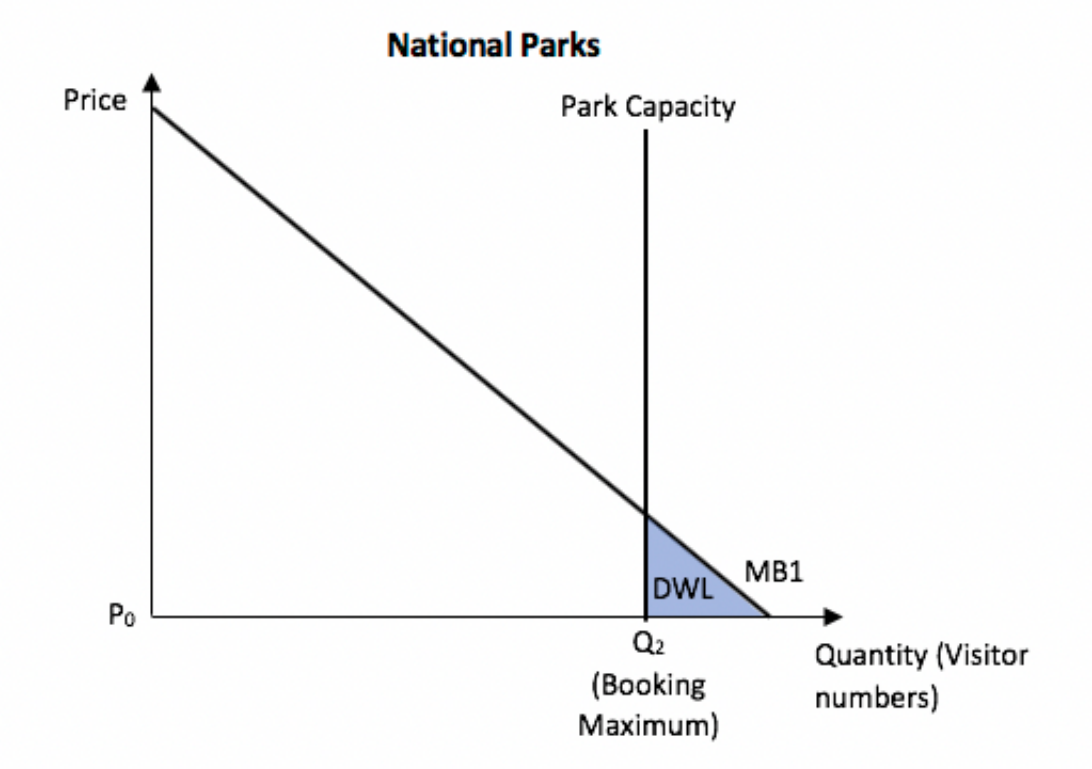
- Pure public goods are non-rival and non-excludable. National parks have been pure public goods because their use by one person has not led to another person having less access to the same park (non-rival) and the use of the park has been open to all people irrespective of any contribution to their cost (non-excludable). Maximising allocative efficiency has been achieved through government provision, free of direct charge. This is shown on the model below as an equilibrium of P_0Q_0. The market is operating at a level below the capacity of the national park(s).
- If the growth in visitors causes a rise in demand for use of the national park(s) (from MB to MB_1), then full capacity will be reached and there will be a loss of allocative efficiency created. The parks have become 'rival' as the use by large numbers of visitors is impacting on the access to the park and marginal benefit gained by other visitors. The loss of allocative efficiency is shown as the shaded area of deadweight loss (DWL) and would be identifiable as people avoiding the park(s) or not gaining enjoyment from visiting the park(s) due to overcrowding.



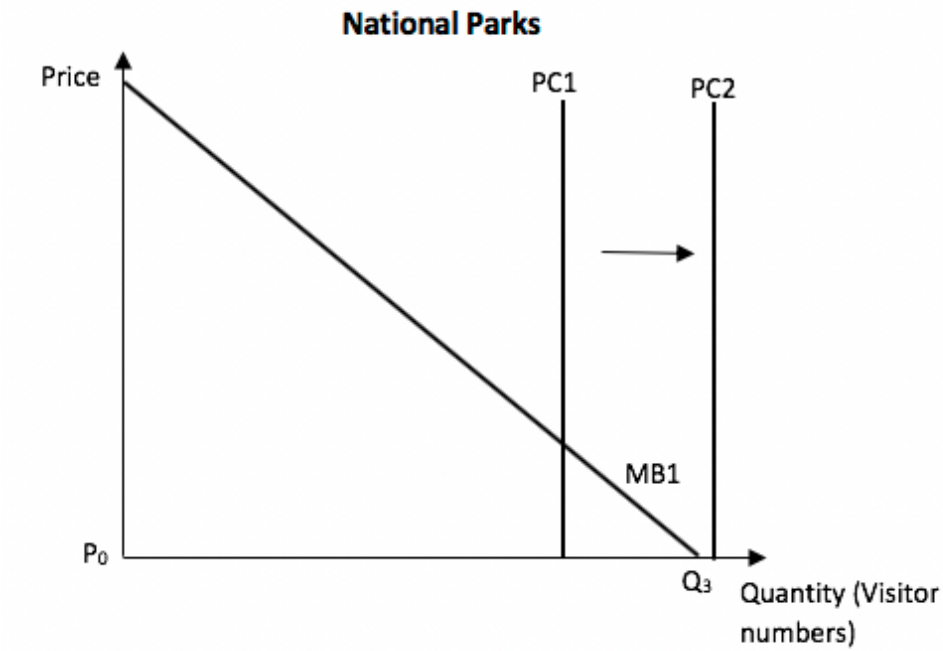
- There are three potential options listed in the resource material. Option 1 is a pricing strategy. By setting a charge per visitor where P=MB at capacity, the market will achieve equilibrium at P_1Q_1. This option assumes that it is possible to meaningfully prevent visitors from entering a national park if they have not paid. This will maximise net welfare and improve allocative efficiency by eliminating deadweight loss, so long as it is possible to eliminate free riders.



- The second option is to restrict visitors through a booking system. By issuing permits for visitors on specific dates, it is possible to regulate visitor flow, keeping numbers at capacity (Q_2) on any given day. This would enhance the experience for those that have bookings, which will raise their marginal benefit. There will however be potential visitors that will be unable to get bookings and therefore they will gain no benefit. This will have a similar effect on the market as the charge in Option 1, eliminating the deadweight loss created by congestion and maximising net welfare, assuming that free riders can be minimised.



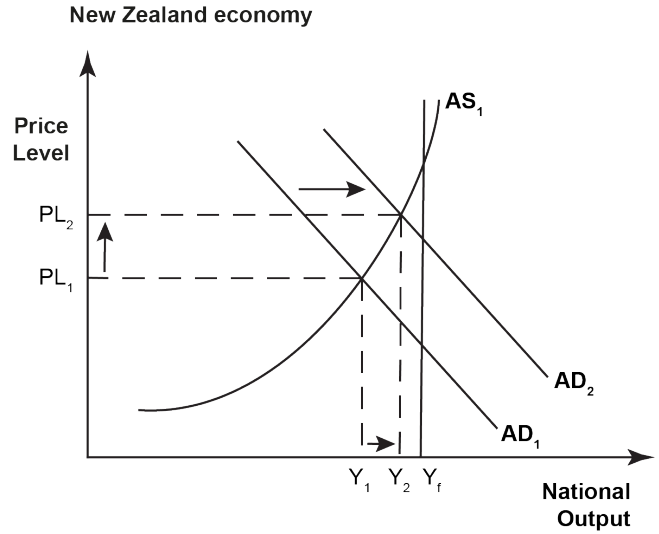
- A third option is to expand the national park network of tracks. By adding new parks, new tracks or enhancing other existing tracks it is possible to increase the capacity of the national park network. An increase in capacity will result in a shift to the right of the park capacity constraint (to PC2). Increasing capacity would need to be undertaken in conjunction with promotion of alternatives. This will help spread visitor demand across a larger number of tracks and a longer timeframe. The outcome would be a higher number of visitors at below capacity and a new allocatively efficient outcome at P_0Q_3.



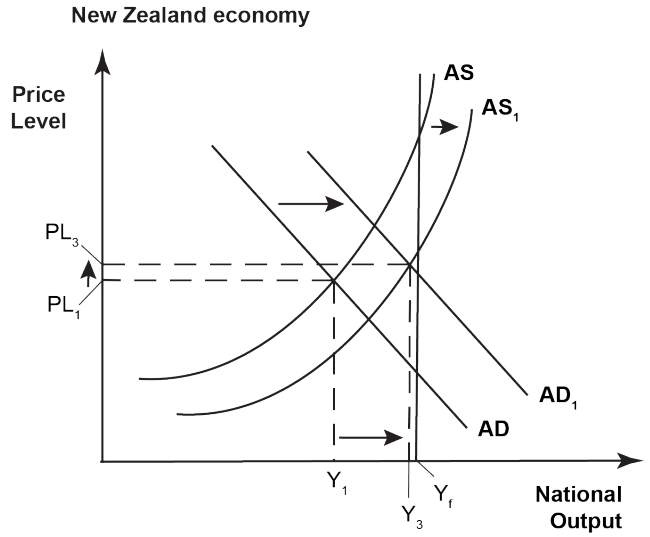
- Candidates may also analyse appropriate alternative options.
- Candidates should provide a justified evaluation as to which option would be most efficient and / or equitable. For example, the pricing strategy, based on user pays, would appear to be an efficient means of achieving the desired control over visitor numbers and will ration access to national parks to those who place value on it. However, it may lack equity by excluding people unable to afford the fee, many of whom will be New Zealand citizens, rather than overseas visitors. Alternatively, the booking system will provide greater access to lower income groups, improving equity, but may add significant administration and enforcement costs, which would create inefficiencies. The expansion of the network may be more allocatively efficient for this market by maximising consumer surplus, but could draw resources away from other government funded activities and investments, creating opportunity costs. This could also create negative externalities of consumption and production as more tracks impact the environment, which would detract from efficiency. However, this option would improve equity as all those wishing to experience national parks would have unhindered access.

Q3	Exemplar answer:
Outstanding Scholarship	• The Families Package will increase the disposable income of many low-income families. Since the marginal propensity to spend is high for low income families, most of the extra income will be spent and have a multiplied effect on the economy. This will cause consumer spending to increase aggregate demand. As a result, Real GDP will increase from Y1 to Y2, increasing economic growth and employment. The increase in demand will cause demand-pull inflation and the price level will increase from PL1 to PL2. **(See Graph 4 on page 15)** Note: this is not an increase in government spending (G) as it is an increase in transfer payments. • The infrastructure spending including the Provincial Growth Fund would have two effects. First, the spending of the fund will increase government spending, causing aggregate demand to increase. Since the government will be paying producers to build the various projects, investment in capital goods may also increase in order to complete the projects, further adding the increase in aggregate demand. The impact on the economy will take longer than the Families Package as the projects take time to develop and to complete. In the long run, aggregate supply will increase as the various projects boost productivity and reduce firms' costs of production due to improved efficiency. Overall, the impact will be to increase Real GDP from Y1 to Y3, while the effect of the price level will depend on the relative size of the shifts. **(See Graph 5 on page 15)** • The Research and Development (R&D) tax credits will encourage businesses to increase investment in research facilities and equipment so aggregate demand will increase. Successful R&D should increase productivity, so in the long run aggregate supply will increase. The overall impact will be increase Real GDP from Y1 to Y3, while the effect of the price level will depend on the relative size of the shifts. • Overall, the combined impact of these policies would be to boost Real GDP, but will also be inflationary as the multiple increases in AD will outweigh the disinflationary effect of the increase in AS. • At present the New Zealand economy is in a slowdown period of the business cycle, though near the peak of the most recent cycle. This can be seen from the falling economic growth rate, though still above 2% a year and low unemployment. The peak of the cycle occurred in 2017. • The impact of these policies will depend on the position in the business cycle. If the economy is near the peak of the business cycle and operating close to full employment, as is the case based on current data, it will be facing capacity constraints with limited resources available for expansion. This means that as firms try to expand production in response to rising aggregate demand, they will face increasing costs of production due to competition for resources, production bottlenecks and diminishing returns. As a result, firms will need to raise prices and the increase in Real GDP and employment is likely to be limited so the impact will be greater for inflation. Candidates should include an AD / AS graph of an economy operating close to YF and increasing AD with increasing PL. **(See Graph 6 on page 16)** • If an economy were instead operating during a downturn or slump, then the impact of the policies would be more likely to result in rising Real GDP and employment with little impact on price levels. This would occur as the economy is likely to have spare capacity with higher unemployment so that producers can increase production with readily available resources and so relatively little impact of costs. **(See Graph 7 on page 16)** • At present the New Zealand economy is operating close to the peak on the business cycle, though slowing, so the economy is likely to see limited economic growth and greater inflationary pressures. However, with inflation running at about 2% it could be argued that there is scope to accept these inflationary pressures and that the inflationary impact will be constrained.

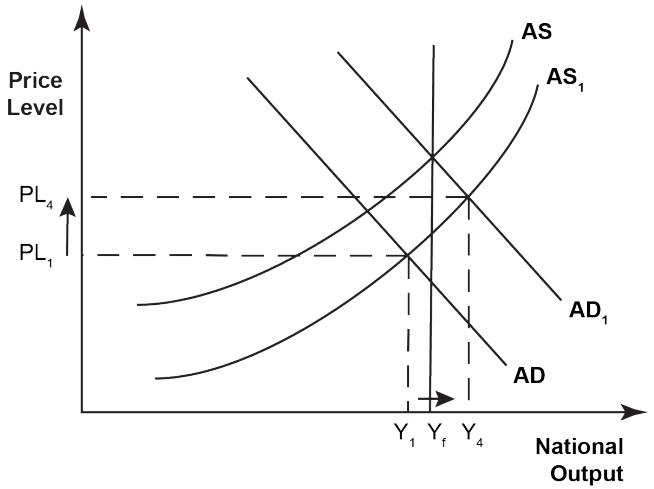
Graph 4:



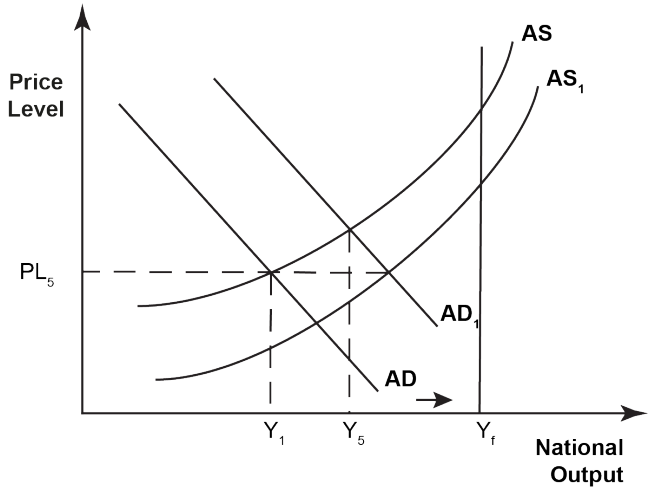
Graph 5:



Graph 6:



Graph 7:



Cut Scores

Scholarship	Outstanding Scholarship
13 - 18	19 - 24