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NZQA
NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

Scholarship 2019
Economics

2.00 p.m. Tuesday 12 November 2019

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Scholarship Economics 93402.

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

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.

PETROL, ELASTICITIES AND ALLOCATIVE EFFICIENCY

Use **Resources A** to **D**, and your knowledge of micro-economic theory, to answer Question One.

RESOURCE A

Petrol price rises

Petrol prices surged to fresh highs in May 2018, hitting $2.40 per litre and, in some instances, more for 91 octane fuel. The previous high was $2.27 per litre in mid 2013. Petrol retailers insisted little more could be done to make prices at the pump cheaper. A spokeswoman for Z Energy said the price rise was justified and was largely a result of:

- a rise in oil prices on the international market
- a nationwide increase in the fuel-tax levy, and
- the depreciation of the New Zealand dollar.

Z Energy's profit margin was about 5 cents per litre, after it paid expenses such as wages and electricity. Given this context, *New Zealand Herald* business editor Liam Dann suggested paying $3 per litre for petrol in the near future was no longer a far-fetched prospect.

(From an article on the *New Zealand Herald* website)

RESOURCE B

Oil's price rise toward US$100 is exactly what electric cars need

Oil's price rise towards US$100 a barrel in 2018 came at just the right time for automakers, who are investing billions in the switch to electric cars.

Fuel prices reached a four-year high in October 2018, with consumers focusing on the relative costs of petrol versus electric motors. For companies preparing to bring a record number of electric and hybrid models to market in 2019, oil's price surge could turbo-charge demand.

"The higher the price of oil, the more push we're going to have behind electric cars," said Carlos Ghosn, chairman Renault SA and Nissan Motor Co.

While production of the Tesla Inc.'s Model 3 electric car grabs all the attention, carmakers in Asia, Europe and the United States plan new models across all market segments in 2019, from cheap city runabouts to high-performance roadsters.

In total, the number of different types of plug-in hybrid and battery vehicles for sale worldwide will rise 20 per cent to 216 next year. Crude-oil prices jumped 27 per cent in 2018 to more than US$85 a barrel, and major traders predict prices could reach US$100.

As well as new models, progress on the infrastructure needed to keep plug-in vehicles on the road will speed up in 2019. A better network of charging stations will help lessen the main consumer concern about buying an electric car: that a lack of range will leave drivers stranded due to empty batteries that they cannot charge up.

(From an article on the *New Zealand Herald* website)

RESOURCE C

Estimated price elasticity of demand for petrol

Short Run	Long Run (longer than one year)
0.2	0.6

(From the *ThoughtCo* information website)

RESOURCE D

Electric vehicles the clear preference for Kiwis

The overwhelming majority of New Zealanders see electric vehicles (EVs) as the way of the future, and almost half are considering getting one soon, new research by electricity company Mercury shows.

In its most recent survey of EV uptake in New Zealand, Mercury found 84 per cent of respondents agreed that EVs are the "way of the future". There was a higher proportion of respondents than expected who are considering getting an EV in the next two years.

However, it takes time for people to make the switch to EVs, due to the cost of the vehicles, although consumers may also be responsive to changes in the price of petrol.

Kathryn Trounson, who chairs the Better New Zealand Trust, which promotes electric cars and zero-carbon renewable energy technologies, says the biggest limitation to a year-on-year doubling of EVs is importing enough second-hand vehicles from Japan and the UK.

Another impediment, says Ministry of Transport, is that New Zealand has one of the oldest vehicle fleets among developed nations. Cars are 14 years old on average, and many New Zealanders may be slow, or financially unable, to replace their cars with modern EVs.

In addition, consumers needed to consider that most EVs have a range of only 100–200 km before they need to be recharged.

(From articles on the *Scoop* and *New Zealand Herald* websites, and image from University of Canterbury website)

NATIONAL PARKS

Use **Resources E** to **I**, and your knowledge of micro-economic theory, to answer Question Two.

RESOURCE E

New Zealand's national parks

New Zealand has 13 recognised national parks covering almost 30 000 square kilometres, plus regional parks, all of which can be accessed for recreational purposes.

The national parks protect areas of the nation's natural heritage, forest, wildlife and landscapes. Much of the land included in these vast parks is largely untouched by man.

Seeing parts of these parks gives visitors an opportunity to see what New Zealand looked like thousands of years ago, both natural and unspoiled.

(From the *Department of Conservation* website and *New Zealand Tourism Guide* industry website)

RESOURCE F

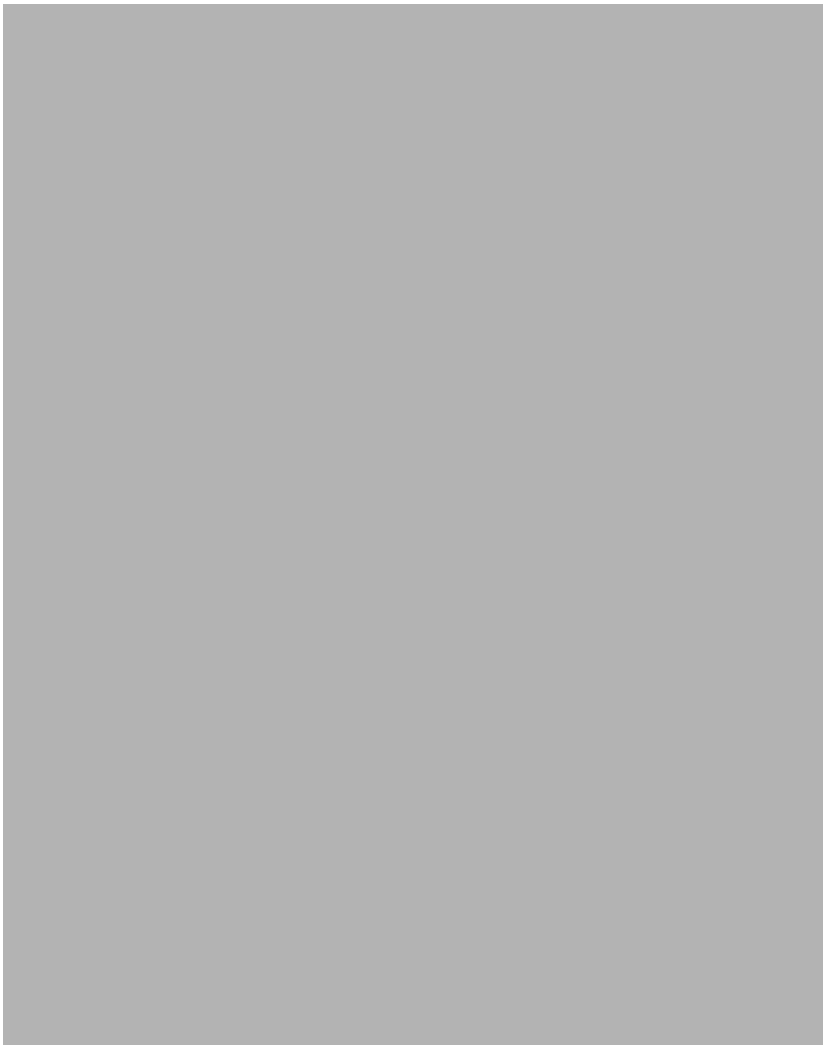
Tongariro Alpine Crossing in Tongariro National Park

The world-renowned Tongariro Alpine Crossing in New Zealand is becoming overcrowded due to the country experiencing an unprecedented tourism boom.

Visitor numbers to the Crossing, which is in Tongariro National Park, have increased more than tenfold since 1990. They reached 125 000 in 2015.

The Crossing is heralded as one of the best one-day walks in New Zealand. It is also a World Heritage Site.

However, the wilderness experience that many visitors to the Crossing seek is no longer possible. This is because walkers must share the path with thousands of others. Overcrowding on the track has become a major complaint among tourists, and is referenced in many online reviews.



(From an article on the *New Zealand Herald* website, and information on the *Tongariro River Motel* business website)

RESOURCE G

Pure and impure public goods

Pure public goods: Goods that are non-rival in consumption and are non-excludable by price.

Impure public goods: Goods that satisfy the two public good conditions (non-rival in consumption and non-excludable) to some extent, but not fully.

		Is the good rival in consumption?	
		Yes	No
Is the good excludable by pricing?	Yes	Private Good (e.g. icecream).	Impure Public Good (e.g. Netflix, Spotify).
	No	Impure Public Good (e.g. crowded footpath).	Pure Public Good (e.g. national defence).

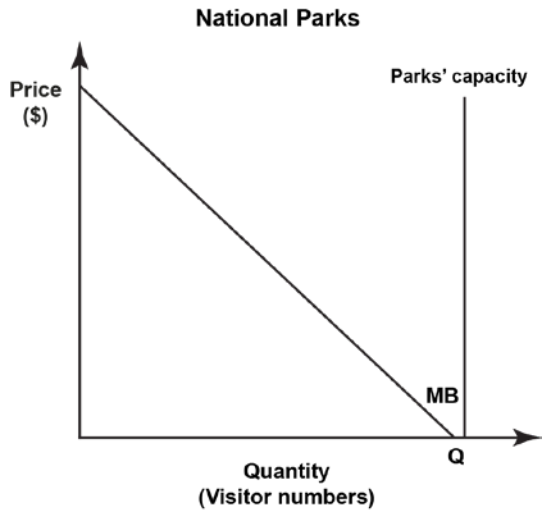
(From an article on the *Harvard University* website)

RESOURCE H

Three possible intervention options to maintain visitor enjoyment in national parks:

- charge visitors a fee to use the most popular walkways
- create a booking system to limit the number of walkers
- extend and improve the national parks' walkways network.

RESOURCE I



Public goods are typically illustrated as in the graph on the left. Once a public good is provided, it costs no more for another person to use it, so marginal cost is zero (i.e. no MC curve is shown).

(From an article in the book *Senior Economics*)

FISCAL STIMULUS AND THE NEW ZEALAND ECONOMY

Use **Resources J** and **K**, and your knowledge of macro-economic theory, to answer Question Three.

RESOURCE J

The Families Package

This policy includes a number of measures. These include the winter-energy payment, the Best Start payment and increasing paid parental leave, to name a few. It was designed to provide more income to families across New Zealand. The government says that, thanks to the policy, a family with a household income of $55 000 a year or less would be $129 a week better off. Most of the money will be going to low-income households that have a high marginal propensity to spend rather than save.

Infrastructure spending

The government has announced a record ten-year nationwide transport infrastructure investment, with a $4 billion spend this year, from $3.6 billion last year and rising to $4.7 billion in 10 years' time.

In addition, for each of the next three years, the government will allocate $1 billion to the regions (i.e. areas outside New Zealand's major cities) to help regional economic development – this is the Provincial Growth Fund. Projects already given the go-ahead include a wharf development in Gisborne, a mussel farm in Marlborough, and rail and port developments. These projects are expected to raise productivity and investment in the regions, and generate new jobs and skills as well.

Looking at the government's overall spending plans, Treasury has assessed the impact of the Budget as stimulatory for 2018 / 19. The question of how much it is stimulatory is open for debate.

"The supply constraints in the economy, such as limited availability of skilled workers and necessary equipment, mean that more spending might not necessarily translate easily into more economic growth and activity," says Infometrics' chief forecaster, Gareth Kiernan.

Some of the effects of the spending may be delayed, due to approval processes taking time, or construction-sector capacity (i.e. the maximum amount the industry is able to build) being stretched.

Research and development tax credits

The government has set aside about $1 billion over the next four years for tax rebates from the research and development (R&D) tax credit. Innovation Minister Megan Woods hopes this will encourage private-sector R&D investment.

"This is a huge opportunity for businesses to invest in research and development, which will help us increase our productivity and boost wages," says Woods.

The tax credit lets businesses claim 12.5 cents in the dollar back for every dollar they spend on R&D, provided that bill is more than $100 000 a year.

(From articles on the *New Zealand Herald* and *TVNZ* websites, and information on the *Interest* industry website)

RESOURCE K

Current and forecast economic data for New Zealand

		Annual average % change			
	2017	**2018**	**2019**	**2020**	**2021**
GDP (production)	3.4%	2.8%	2.3%	3.1%	2.4%
Inflation	1.6%	1.9%	1.7%	1.9%	2.1%
Employment change	+3.5%	+2.3%	+1.3%	+2.0%	+1.8%
Unemployment rate	4.5%	4.3%	4.2%	3.9%	3.7%

(From an article on the *Westpac* business website)

Acknowledgements

Material from the following sources has been adapted for use in this examination:

Resource A

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12056038.

Resource B

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12137292.

Resource C

https://www.thoughtco.com/price-elasticity-of-demand-for-gasoline-1147841.

Resource D

http://www.scoop.co.nz/stories/BU1808/S00226/new-research-shows-evs-the-clear-choice-for-most-kiwis.htm.

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11954346.

https://www.canterbury.ac.nz/life/parking/evc/.

Resource E

https://www.doc.govt.nz/parks-and-recreation/places-to-go/national-parks/.

https://www.tourism.net.nz/visitor-information/national-parks.

Resource F

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11828781.

http://www.tongarirorivermotel.co.nz/wp-content/uploads/2017/10/DSC_0352-Too-Many-Trampers-1.jpg.

Resource G

https://scholar.harvard.edu/files/stantcheva/files/lecture8.pdf.

Resource I

Geoff Evans, *Senior Economics - NCEA Level 3, 2nd Edition*, (North Shore: Pearson New Zealand, 2008) p 236.

Resource J

https://www.interest.co.nz/news/95198/economy-shifts-down-gear-finance-minister-has-been-talking-%E2%80%98fiscal-stimulus%E2%80%99-government.

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12053398.

https://www.tvnz.co.nz/one-news/new-zealand/government-announces-1-billion-tax-incentive-research-and-development?variant=tb_v_2.

Resource K

https://www.westpac.co.nz/assets/Business/Economic-Updates/2019/Bulletins-2019/Westpac-QEO-February-2019-WEB.pdf.

https://www.westpac.co.nz/assets/Business/Economic-Updates/2019/Bulletins-2019/Westpac-QEO-May-2019-EMAIL.pdf.