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# EXTENDED INVESTIGATION CRITICAL THINKING TEST

Wednesday 30 July 2025

Reading time is **15 minutes**: 10.00 am to 10.15 am

Writing time is **1 hour 15 minutes**: 10.15 am to 11.30 am

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## Approved materials

- Pens and pencils

## Materials supplied

- Critical Thinking Test
- Student Instruction Booklet

## Instructions

- All responses must be in English.

Students are **not** permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

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## Contents

- 10 questions, 50 marks

## Table of contents

	Page number
Test cover	1
Table of contents	2
Question 1 (3 marks)	3
Question 2 (4 marks)	4
Question 3 (6 marks)	5
Question 4 (6 marks)	6
Question 5 (6 marks)	7
Question 6 (6 marks)	8
Question 7 (6 marks)	9
Question 8 (6 marks)	10
Question 9 (3 marks)	11
Question 10 (4 marks)	12

**Question 1** (3 marks)

The passage below presents an argument.

The task of hosting the Summer Olympic Games has become unrealistic, typically requiring years of preparation and huge financial expense. Some nations have spent a great deal of money on hosting: Canada took 30 years to pay off the debt from hosting the 1976 Summer Olympic Games in Montreal. Rather than moving this costly event to different countries, we should identify a long-term home for the summer games. Settling the games in Athens would emphasise the historical and cultural value of sport, as the Ancient Olympic Games originated in Greece. There would be an international effort to build permanent world-class facilities to be maintained and re-used over many years, saving everyone a great deal in the long run. After all, international sporting events should not be the world's highest priority.

Select three statements from the passage that best match the functions described below, using the drop down menu.

**Claim**

The main idea the argument is proposing

**Reason**

The main supporting reason for the claim

**Evidence**

Information that supports the claim and the reason

**Question 2** (4 marks)

There is evidence to suggest that light pollution from excessive lighting in streets and carparks in coastal areas is environmentally damaging.

Consider the following proposition:

**Councils should reduce the use of lighting in streets and carparks along Australia's coastline.**

Below is a table containing some arguments for and against the proposition.

Select the most appropriate of the following four statements for four of the empty cells in the table (in the correct column **and** in opposition to a relevant argument).

STATEMENT 1	STATEMENT 2	STATEMENT 3	STATEMENT 4
Many species can adapt successfully to environments modified by human beings.	Even a small amount of light pollution can affect animal breeding cycles.	Protecting marine wildlife, a source of tourism income, should be a high priority.	The lights in streets and carparks are powered by renewable energy sources.
<b>For</b>		<b>Against</b>	
Light pollution can affect iconic and important animals, such as penguins.			
		Most of Australia's vast coastline does not have any nearby roads or carparks.	
		Councils have usually funded research into any coastline in their areas.	
It is time for councils to be stronger leaders in environmental responsibility.			
Continuing disruption may eventually lead to the extinction of some animals along our coast.			
		Well-lit streets and carparks are essential to people's safety when accessing coastal areas.	

**Question 3** (6 marks)

The following table lists some key findings about car ownership, based on a range of studies.

Based on these findings, evaluate the positive aspects of car ownership against the negative aspects. In your response, identify the most relevant findings, positive and negative, to support your view.

Positive aspects of car ownership	Negative aspects of car ownership
<b>A.</b> In a recent automotive industry study, car owners identified the flexibility and convenience of private car travel as their number one reason for buying a car.	<b>F.</b> Comparative transport studies have shown that cars, including electric cars, decline in value by 10–15 per cent annually, making them a poor investment.
<b>B.</b> Asked to identify the key advantages of owning a car, 40 per cent of owners selected ‘quick access to medical help in an emergency’ in their top five responses.	<b>G.</b> Buying and maintaining a car is expensive, on average requiring people to take out loans in excess of \$42 000, which they frequently cannot afford.
<b>C.</b> Annual surveys of owners show that the proportion of motorists using their cars to earn income is steadily increasing.	<b>H.</b> Analyses of global air pollution show that the manufacture and use of cars, including electric cars, is responsible for at least 10 per cent of greenhouse gas emissions.
<b>D.</b> Getting around rural and regional areas is almost impossible without access to one’s own car, according to residents in a sample of locations outside the major cities.	<b>I.</b> Most drivers surveyed agreed that owning a car is a disincentive to walking, cycling or taking public transport, even when these alternatives are readily available.
<b>E.</b> Fully electric and hybrid cars now account for around 12 per cent of new car sales in Australia, and the percentage is growing rapidly.	<b>J.</b> According to government predictions, Australia will need to spend around \$36 billion annually on roads and road-related infrastructure.

**Question 4** (6 marks)

Guaranteed minimum income (GMI) is the principle that all citizens of a country have a right to enough income to meet their basic needs. In most GMI schemes, the government makes a regular payment to all citizens, except those who already have enough income.

Read the following extract from a newspaper report.

**A guaranteed minimum income for Australia?**

*Changes affecting employment are hard to predict, and some economists think a guaranteed minimum income (GMI) scheme may be a good idea. We asked two experts for their thoughts.*

‘Many countries already have some version of this,’ said Associate Professor Dr Bella Wenn, a researcher on international GMI schemes. ‘The idea is good in theory, but in practice the results can be quite mixed and it’s hard to find examples of full implementation.’

She mentioned countries where issues have arisen: ‘In Saudi Arabia more than half the population signed up for the GMI scheme. And some schemes come with extra conditions; for example, in Brazil people don’t receive the income unless they send their children to school, and in Mexico people must access health services.’ She pointed out that some businesses worry that if a GMI is available, workers would leave their jobs, but so far there’s limited evidence of that. ‘But nor do these schemes seem to result in getting people back to work,’ she said.

And isn’t the long-term cost a major problem? ‘Yes, finding a way to pay for it is what most governments worry about,’ Dr Wenn concluded.

Dr Mischa Prochazka, a lecturer on social support systems, thinks Australia can afford it if we streamline our current social welfare practices. ‘We already provide income support to about a quarter of the population,’ he said, ‘but our welfare system is complex, hard to access and expensive to run.’ He sees the advantage of a single program replacing dozens of different payments, and also highlights the dignity and security that come with guaranteed income.

‘In most overseas schemes we have seen improved mental health, less homelessness and addiction, and a drop in hospital visits,’ he said. ‘In Spain, trials found that guaranteed income does not discourage people from looking for employment. In Alaska, a single guaranteed payment scheme, funded from oil profits, has wiped out extreme poverty.’

The benefit in the long term, he added, is that people can then learn new skills and develop their creativity. ‘In an uncertain future, that may be very important,’ he said.

Referring to the views and evidence reported, present an argument **either** for **or** against introducing a GMI scheme in Australia.

In your argument, explain why you reject the alternative view.

**Question 5** (6 marks)

The data below indicates how the consumption of some major food groups has changed between 2018 and 2023 in Australia, based on purchases made from supermarkets and other food stores. Two people have commented on this information.

Discuss the extent to which their comments are based on the data provided.



Data: Australian Bureau of Statistics, <www.abs.gov.au>  
Image: Adapted from <Vectuz/Shutterstock.com>

**Person A**

Despite millions of dollars spent by the food industry to maintain or increase their market share and discourage people from changing their dietary habits, Australians are choosing healthier options in increasing numbers. They are eating less processed food and not eating at restaurants as much. There are more vegetarians and vegans than ever before, and this will probably lead to less diet-related illness in later life.

**Person B**

Other than the introduction of fake meats, I don't see much change in Australian diets at all. There are two reasons that best explain the so-called 'changes' to Australia's major food-purchasing choices. The first is immigration. Newly arrived migrants bring their dietary preferences with them. Secondly, there has been a surge in people growing their own food in their backyards. Otherwise, we seem to be pretty fixed in our food preferences.

**Question 6** (6 marks)

Research is needed to inform debate about

- A. evaluating the benefits of large-scale international events, such as the Olympic Games.
- B. limiting or eliminating the effects of light pollution on vulnerable animal populations.
- C. reducing the rate of private car ownership in Australia.
- D. making a guaranteed minimum income available to all Australian citizens.

Select **one** of these issues (**A–D**) to research.

What would be a good research question to explore the issue you have selected?

How might good evidence be collected to address this research question?

**Question 7** (6 marks)

Below are five possible research questions (A–E).

- A. What is the correlation between democratic values and life satisfaction?
- B. To what extent are left-handed people disadvantaged in everyday tasks?
- C. Would generating electricity from nuclear energy reduce electricity prices for Australian households in the long term?
- D. Do creative people perform better in job interviews?
- E. Does eating spicy food affect the enjoyment of music?

Select **one** research question.

Evaluate all of the following four aspects of the question you have selected:

1. its scope and significance
2. its likely suitability for a research investigation
3. whether investigating it may raise ethical issues
4. its likelihood of yielding a useful answer

**Question 8** (6 marks)

It is recommended that Australians have an annual influenza (flu) vaccination at any time from April onwards to be protected for the peak flu season. A state health agency wishes to establish how to increase the uptake of yearly flu vaccinations. Two research designs have been proposed.

**Design A**

Free flu vaccines will be offered to all adult members of a local community group. The researcher will conduct one-hour-long semi-structured interviews in a focus group setting, with each group consisting of six participants who consent to the vaccine and six participants who decline the vaccine. To track any changes in attitudes towards vaccination and willingness to be vaccinated over time, the same participants will be brought back together annually for four additional years. By analysing the transcripts of the discussions each year, the researcher expects to identify common factors that influence the decision to accept or decline a flu vaccination.

**Design B**

Ten participants who have not had a flu vaccination in the past two years will be recruited and randomly allocated into two groups. In April, five of the participants will be told that they will be rewarded with a \$50 supermarket gift card if they have a flu vaccination at their local chemist. The other five participants will be given information about the benefits of herd immunity (that is, indirect protection when a large proportion of the population is immune) and encouraged to be vaccinated. The researcher will track the number of participants from both groups who have the flu vaccination by June of that year.

Evaluate the two research designs to determine which would provide the best data on how to increase the uptake of yearly flu vaccinations.

**Question 9** (3 marks)

Below are five possible research questions (A–E).

- A. How effective are warning labels on alcoholic drinks in discouraging people from consuming alcohol?
- B. Do people who participate in weekend sporting teams tend to be highly competitive in other situations?
- C. What is the most effective strategy for reducing the use of offensive language at Dubon Secondary College?
- D. How do changes to the cost of living affect the spending habits of age pensioners in rural Victoria?
- E. Does an appreciation of nature affect recycling behaviour?

Select **one** research question.

What method or methods would be best suited to an investigation designed to answer the question you have selected?

Explain why the identified method(s) would be the most suitable.

**Question 10** (4 marks)

Consider the following research question and proposed design.

**Research question**

How does the use of social media affect perceptions of connectedness to peers?

**Proposed research design**

All 300 Year 12 students in a large regional high school will be invited to participate in the research. Participants will first complete a survey consisting of the following three Likert-scale items (with a scale of 1–5, where 1 = strongly disagree, and 5 = strongly agree):

- I feel a strong sense of belonging.
- I am liked and respected by people around me.
- I can rely on my friends and family.

Each participant will then be invited to opt in to one of two groups: either the ‘zero-use’ group or the ‘high-use’ group. The zero-use group will be instructed to delete all social media apps from their devices and not access any social media on any device for two weeks. The high-use group will be instructed to use social media apps for at least three hours per day for two weeks. At the end of the two-week period, all participants will complete the same survey consisting of the same three Likert-scale items. This will allow comparison of the results before and after participation, as well as comparison between the groups.

How well does the proposed research design address the research question? In your response, comment on how the design might be improved to address the research question.