# Cambridge International AS & A Level

**THINKING SKILLS** **9694/23**

Paper 2 Critical Thinking **May/June 2023**

**1 hour 45 minutes**

You must answer on the enclosed answer booklet.

You will need:  Answer booklet (enclosed)

## INSTRUCTIONS
- Answer **all** questions.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.

## INFORMATION
- The total mark for this paper is 50.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **8** pages. Any blank pages are indicated.

**[Turn over**

**Section A**

*Study the evidence and then answer Questions 1 and 2.*

**Source A**

> **Extract from popular ecology magazine**
>
> Self-driving cars could save fuel. Research over the last few years has shown that, for safety reasons, people often buy heavier cars than they actually need or want. First of all, if self-driving cars can be shown to operate more safely than human-driven ones, people may be more willing to downsize to lighter cars. Lighter cars generally use less fuel than heavier ones, and hence are better for the environment.
>
> Secondly, as the acceleration of a self-driving car will be controlled by the car's onboard computers, and not by a human driver, there will be no reason for self-driving cars to have engines that are more powerful than necessary for ordinary use. It's true that the adrenaline rush experienced by some motorists when they choose to accelerate at full power would vanish, but the feel-good factor experienced by reducing our personal carbon footprint will more than compensate. Lower-powered engines are usually lighter in weight and consume less fuel than high-powered ones.

**Source B**

> **Newspaper report of disadvantages of self-driving cars**
>
> Self-driving vehicles, whether powered by fossil fuels or by electricity, could actually use more fuel than conventional ones of the same weight and power. Firstly, such vehicles have to be fitted with many cameras, sensors and lasers to provide information about the vehicle's movement and what is in its surroundings. These devices often have to be fitted outside the car (rather than being integrated into its bodywork), and hence make the vehicle less aerodynamic than it would otherwise be. They also add weight. Both these factors increase fuel consumption.
>
> Secondly, compared to current cars, self-driving cars require much larger amounts of computing activity to process the data from the additional monitors. This activity is essential if the car is to navigate busy roads safely and efficiently, but it uses a lot of energy, which in turn affects fuel consumption.

**Source C**

> **Extract from popular car magazine**
>
> Forecasts of the effects of self-driving vehicles gradually replacing human-driven ones often optimistically predict large reductions in the number of cars on the road. These predictions depend on people not owning individual cars, at least in cities, but instead using car-pooling or taxi schemes to get around, especially when travelling to and from work. However, the introduction of self-driving cars could actually cause an increase in the number of privately-owned vehicles.
>
> It is easy to think of many reasons why this might be so. Sharing a car with strangers is unpopular on privacy grounds. Sharing cars can also lead to longer journeys, unless the passengers are heading for the same destination. Both these problems can be resolved by people buying their own cars. Also, people who are unable to drive, or whose dislike of driving keeps them off the roads, may be tempted to buy a self-driving car. One estimate suggests that if it delivers on its promised benefits, the adoption of self-driving technology could cause an increase of up to 40% in car travel in the US.

**Source D**

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**Extract from magazine for members of national motorists' association**

Our recent survey shows that people in this country are very reluctant to accept the use of self-driving cars, except for low-speed and local journeys.

We invited our members to complete a questionnaire about self-driving cars. These are some of the results:

- 25% of our members who responded to the survey said that they would willingly be a passenger in a self-driving car on a main highway.
- 18% were at ease with the idea of their loved ones being transported in such a vehicle.
- 55% would happily travel in such a vehicle for short distances and at low speeds, for example, around large shopping complexes or theme parks.
- 42% were comfortable with local food-delivery vehicles being autonomous.

Higher approval ratings were found among drivers whose current vehicles contain very advanced safety technology, such as adaptive cruise control and automated emergency braking. These drivers would be 70% more likely to trust self-driving cars than would those unfamiliar with such high-tech safety features.

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**1 (a)** Is Source B an argument? Explain your answer. [2]

**(b)** Assess the representativeness of the evidence in Source D. [2]

**(c)** Identify and explain **two** weaknesses in the support given in Source C for its claim that 'the introduction of self-driving cars could actually cause an increase in the number of privately-owned vehicles.' [4]

**(d)** Explain why Sources A and B are **not** inconsistent. [4]

**(e)** Suggest **two** reasons why the support given by Source A to its claim that 'there will be no reason for self-driving cars to have engines that are more powerful than necessary for ordinary use' is weak. [2]

**2** *You are advised to spend some time planning your answer before you begin to write it.*

'The environment is likely to benefit from the availability of self-driving cars.'

To what extent do you agree with this claim? Write a short, reasoned argument to support your conclusion, using and evaluating the evidence provided. [8]

**Section B**

*Read the following passage and then answer Questions 3, 4 and 5.*

1   It is a widely held belief that the most important goal of our lives is that we should be happy. It is certainly very hard to imagine someone *not* wanting to be happy. However, searching for happiness will inevitably result in failure. It is difficult to look for something unless we are clear what it is that is being sought. But even professional psychologists fail to agree on exactly what happiness is. Since they cannot reach agreement on this crucial point, clearly the concept of happiness is vague and not easy to define.

2   By focusing on our own happiness, we may set standards for ourselves that are unrealistically high, expecting to be happy for all or most of the time. Apart from a few lucky individuals, this is impossible. The circumstances in which most people live rule this out. Life constantly confronts us with problems to be solved and difficulties to be overcome.

3   Thinking about our own happiness causes us to focus too much on ourselves and our feelings, leading us to neglect other people close to us. We become selfish and fail to value other people as individuals in their own right, with their own needs, life goals and so on. In turn, our social relationships end up being destroyed. Given that we are basically social creatures, ruined relationships with family and friends cause us loneliness, leading to an unhappy life – the opposite of what we were trying to achieve.

4   Eleanor Roosevelt is said to have claimed that 'Happiness is not a goal… it is a by-product of a life well lived.' This statement has been echoed by most people who have described themselves as happy, saying that they found happiness by getting involved in worthwhile projects, usually with a focus on people other than themselves.

5   Just as archers are often more likely to hit the centre of a target if they don't aim directly at it, it seems that people are more likely to find happiness indirectly.

**3** **(a)** Using the exact words from the passage as far as possible, identify the *main conclusion*. [2]

   **(b)** Using the exact words from the passage as far as possible, identify **two** *intermediate conclusions* in paragraphs 1 to 2. [4]

   **(c)** Identify the argument element and explain the function of the following words from paragraph 3:

   'Given that we are basically social creatures' [2]

   **(d)** Identify **one** *unstated assumption* required by the argument in paragraph 2. [2]

**4** **(a)** Identify an *appeal* in paragraph 1. [2]

   **(b)** Identify and explain **one** flaw or weakness in the reasoning in paragraph 3. [2]

   **(c)** How well does paragraph 4 support the argument as a whole? [3]

   **(d)** Evaluate the *analogy* in paragraph 5. [3]

**5** *You are advised to spend some time planning your answer before you begin to write it.*

   'People need money to be happy.'

   Write your own short argument to support **or** challenge this claim. The conclusion of your argument must be stated. Credit will not be given for repeating ideas from the passage. [8]

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