



Cambridge International AS & A Level

THINKING SKILLS

9694/22

Paper 2 Critical Thinking

October/November 2024

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.

Section A

Study the evidence and then answer Questions 1 and 2.

Source A**High school textbook**

Insects play several important roles in ecology. They are an essential part of nearly every food chain. Many animals, including birds, bats, amphibians and fish, eat insects and are then themselves eaten by predators. Most plants, including food crops and flowers, rely on being pollinated by insects. Waste-eating insects process materials such as dung, dead plants, and the bodies of dead animals; this releases nutrients for use by the ecosystem.

Source B**News report**

27 professors of ecology and entomology (the study of insects) in UK universities have signed an open letter drawing public attention to a dramatic decline in the populations of insects. Comparative studies have suggested that the total insect population is declining by between 1% and 2.5% each year. 'If insect species losses cannot be halted, this will have catastrophic consequences both for the planet's ecosystems and for the survival of mankind,' according to a researcher from the University of Sydney, Australia. 'The 2.5% rate of annual loss over the last 25–30 years is shocking. In 10 years you will have a quarter less, in 50 years only half left and in 100 years you will have none.' One of the biggest impacts of insect loss is on the many birds, reptiles, amphibians and fish that eat insects.

Source C**Website of company growing and selling plants and trees**

The main causes of decline in insect populations are: loss of habitats, pollution, introduction of disease-carrying microorganisms, importation of non-native predatory insects and climate change. We can all take a few simple steps to help to preserve insect populations by tackling these problems:

- Reduce your carbon footprint
- Leave part of your garden to grow wild
- Reduce use of pesticide sprays
- Buy locally grown plants
- Use alternative growing materials instead of peat

Source D

Article in general interest magazine

According to the UN's Food and Agriculture Organization, insects form part of the diet of at least two billion people. The house cricket (*Acheta domesticus*) is a popular snack in South-East Asia. More than 20 000 farmers in Thailand currently grow crickets for use as food, and production could easily be increased further.

Insects are an environmentally sustainable food source, with a significantly lower carbon footprint compared to meat production. They can be processed and used as a meat substitute (similar to soya or tofu). Research entomologist Dr Duncan Sivell, of London's prestigious Natural History Museum, has said that insects will become a significant part of people's diet in Europe and the US. He explained, 'Economically and ecologically, it's much more efficient to rear insects than livestock. And with the future issues we're going to have, and the energy and land required to maintain our current food consumption, eating insects is going to happen'.

Source E

Advertisement

High in protein, fibre and vitamin B12, our cricket protein powder is also a source of iron and calcium. It is low fat and gluten free and contains no preservatives, artificial colours or flavours. You can blend it into a smoothie, sprinkle it on soup, or mix it with wheat flour when baking. Our crickets are raised in clean and hygienic conditions and fed on a specially designed plant-based diet. They are thoroughly cleaned before being hygienically processed into powder.

- 1 (a) Is Source E an argument? Justify your answer. [2]
 - (b) Explain **two** weaknesses in the statistical claims which a researcher makes in Source B. [4]
 - (c) Source C recommends buying locally grown plants.
 - (i) Identify **one** way in which buying locally grown plants may 'help to preserve insect populations'. [1]
 - (ii) Suggest **one other** possible reason why Source C makes this recommendation. [1]
 - (d) Assess the reliability of Source D. [4]
 - (e) 'Insects will become a significant part of people's diet in Europe and the US.' (Source D)
Suggest **two** reasons why this may **not** happen. [2]
- 2 You are advised to spend some time planning your answer before you begin to write it.
- 'Governments should take action to preserve insects.'
- 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 Most educational systems in the world use national exams in order to assess students at the end of secondary education. Educational experts have for many years been arguing that these exams should be abolished, and their recommendation should now be put into effect. During the COVID-19 pandemic, the replacement of exams with assessment by teachers did not cause civilisation to collapse, as some people seemed to expect. Young people still gained the qualifications they needed in order to progress to university or to their chosen careers – in fact, many of them achieved greater success than they would have done on the traditional system.
- 2 Exams have an immense impact on people's lives, because those who gain high grades in exams at school and college will find success and happiness as adults. Young people approaching adult life need to be encouraged; so assessment should aim to give positive evaluation and encouragement to everyone, not just the talented few.
- 3 School exams are unavoidably inefficient as a means of selecting the people with greatest potential for success, since they have no relationship to the skills required in adult life. After leaving school, you will never again need to sit in silence, without access to people, books or the internet, and attempt to answer questions which are irrelevant to your career.
- 4 The expectation that all school-leavers should take exams has been a bad mistake, because it was introduced only recently. In previous generations, only the most academic students were expected to take exams, while everyone else received an education designed to develop the skills they would need as adults. That policy worked well and it should never have been changed.
- 5 The emphasis put on preparing for exams has pushed out of the curriculum other aspects of a well-rounded life which students should be experiencing. The absence from young people's lives of elements such as sport, the arts and relationships will make them much less fulfilling than they should be.

- 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** from paragraphs 2 to 3. [4]
- (c) Identify the argument element and explain the function of the following words from paragraph 5:
 'sport, the arts and relationships' [2]
- (d) Identify **one unstated assumption** required by the reasoning in paragraph 5. [2]
- 4 (a) Identify and explain **one** flaw or weakness in the reasoning in paragraph 1. [2]
- (b) To what extent is the reasoning in paragraph 2 weakened by a *causal flaw*? [3]
- (c) The reasoning in paragraph 3 relies on the unstated assumption that it will not be possible to change exams to allow reference to the internet and other resources. To what extent does reliance on this assumption weaken the reasoning in this paragraph? [2]
- (d) Identify and evaluate an *appeal* in paragraph 4. [3]

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

'The purpose of education should be to prepare students for employment.'

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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