



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

THINKING SKILLS

9694/22

Paper 2 Critical Reasoning

May/June 2010

1 hour 30 minutes

Additional Materials: Answer Booklet/Paper

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

Do not use staples, paper clips, highlighters, glue and correction fluid.

DO NOT WRITE IN ANY BARCODES.

Answer **all** the questions.

Start each question on a new answer sheet.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question.

This document consists of **6** printed pages and **2** blank pages.



1 Study the evidence and answer the questions that follow.

Source A**Newspaper Article**

World Weekly Review – 'World political, economic and cultural affairs'

Date: 02 May

Protest: Woman Dies

Following yesterday's protests outside the National Bank, where leading bankers and economic ministers were meeting, a woman has died. Jenufa Chang was 25. More than fifty thousand people gathered in the capital to protest about the way the global financial crisis has been handled. Police lined the streets and there were violent clashes between police and protesters.

Source B**Police Statement**

Date: 02 May

- A police pathologist's report shows that Jenufa Chang suffered a heart attack and died of natural causes.
- The autopsy showed that Ms Chang had a weak heart, and her medical records show that she was severely afraid of very crowded spaces.

Source C**Television News Bulletin**

Date: 05 May

An anonymous man has given the National News Network (NNN) a video, which seems to show three policemen in full riot gear attacking Jenufa Chang with batons and spray gas shortly before she died. This video was taken on the man's cellphone and is rather shaky, but there is a clear view of the woman's face at two different moments...

Source D**Newspaper Article**

World Weekly Review – 'World political, economic and cultural affairs'

Date: 09 May

How did Jenufa Chang die?

Jenufa Chang died on 1 May during protests against banking incompetence. The police first said she died of a heart attack, then they said that she might have fallen and hit her head, and now a third expert is investigating the cause of her death. Jenufa was studying for a PhD at the renowned School of Economics and established the increasingly popular '*yoof 4 gr8 eco-nomics*' website, which explains economics in simple terms and encourages young people to become economically, environmentally and politically active. We have collected witness statements which may cast some light on her last hours.

Source E**Witness Statements**

Amy Lafayette, 22, Banker

I lost my job when the bank I worked for collapsed, that's why I was protesting. There were lots of police with savage dogs and batons and shields and gas. I saw Jenufa Chang. She was shouting.

Anonymous, 27, Graphic Designer

The police attacked several protesters for nothing, as far as I could tell. I was surprised by how angry the police were. You'd think they'd be cross with the bankers too. But people do die suddenly. I had a friend at university who died in a race. He had a weak heart. So you never know.

Misha Singh, 36, Engineer

I saw a small, dark-haired woman shouting abuse at the police. She was extremely rude about the sort of men they were. One of them asked her politely to leave and she started shrieking about her right to protest peacefully. It all got a bit blurred then, there were people everywhere shouting and throwing things. I'm sure I saw the small woman throw a glass bottle at the police, and then the policeman held her hair and pulled her away.

Diego Jones, 24, Jenufa's boyfriend

Jen wasn't even protesting. She was too scared of the crowds. Also, she was making a presentation to the ministers – something about her PhD and her website. She was supposed to meet me afterwards, but didn't. I never saw her again.

Text sent by Jenufa to Diego

CU l8er D crowd 2 thick Jxxx

- (a) How reliable is the police statement? Justify your answer. [3]
- (b) Whose evidence is more useful, the anonymous graphic designer's or Misha Singh's? Justify your answer. [4]
- (c) How much weight should be given to the cellphone video shown by NNN? Justify your answer. [3]
- (d) How likely is it that the police were to blame for Jenufa Chang's death? Write a short, reasoned argument to support your conclusion, using the evidence provided and considering plausible alternatives. [5]

2 Study the evidence and answer the questions that follow.

Source A

Time for Action?

On 3 November 2008 an asteroid came within 45 000 km of the Earth. On 7 October 2008 an asteroid exploded in the atmosphere above Sudan.

We must act now to avoid a serious asteroid impact. A 250 m wide asteroid would land with more than 30 000 times the explosive power of a nuclear bomb. An asteroid probably hit the Earth 65 million years ago, destroying the dinosaurs. The surface of the moon – pitted with craters from asteroid impacts – tells us what Earth will look like if we do not take action.

Source B

The Risk

- Scientists know of 5968 near-Earth objects of all sizes.
- Impacts like the one which killed the dinosaurs happen, on average, once every 100 million years.
- Smaller impacts, like the 1908 asteroid explosion over Siberia, which would have flattened a modern city, occur every few hundred years.
- There are no records of any deaths by asteroid.
- The probability of an asteroid hitting Earth and the scale of destruction that would result are used to give an asteroid a rating from 0 to 10, called a Torino rating.
- At the present time, the highest rated near-Earth object is 1 on the Torino scale (1 means 'Normal = a pass near Earth is predicted').

Source C

Scientists have suggested the following possible responses:

- Nuclear weapons could be fired at a large asteroid to explode it.
- A space shuttle could be crashed into an asteroid to change its path.
- Space mirrors could be used to heat an asteroid until it turns to gas.
- An object with high gravity could be used to pull the asteroid off course.
- Painting an asteroid could change its course because of the way it absorbs heat from the sun.
- We could do nothing.

Source D

Bl0gga_19 I agree with Carl Sagan, the respected astronomer and science-fiction writer. People should not create defences against large asteroids. Anything which can be used to deflect a space object that big could be used as a weapon. People with weapons are more dangerous than rocks floating round in space.

- (a) Consider Source A. How reasonable is it to suggest that the surface of the Earth will look like the surface of the moon if we do not act? [3]
- (b) 'The immediate risk of a significant impact by an asteroid is very low.'
Can this be reliably concluded from the information in Source B? Explain your answer. [3]
- (c) 'Scientists have already crashed a spacecraft into a large asteroid.'
How useful is this additional information in evaluating possible responses to the threat of an asteroid colliding with the Earth? [3]
- (d) How should world leaders respond to the threat of an asteroid colliding with the Earth?
Write a short, reasoned argument to support your conclusion, using and evaluating the information provided in Sources A – D. [6]

3 Read the passage and answer the questions below.

- 1 World financial collapse has brought many benefits that did not come with high levels of borrowing and economic prosperity. Communities are becoming closer because hard times are making people reassess their lives. They are beginning to realise that friendship and neighbourliness are more important than competing to own the best car or smartest new clothes. Success isolated us all in our selfish worlds, setting us against each other in the drive to be the most successful. Hardship is bringing the feeling that 'we're all in this together', which is, in turn, bringing cooperation and helpfulness.
- 2 Hardship is actually better for people than success, so we are all becoming mentally and physically healthier now that the economic bubble has burst. People are seeking inner balance and true values to replace the shopping they can no longer do. They are making friends and talking, which is improving their general well-being. People can no longer afford to drive, so they are walking and exercising more, and people who do not wish to pay for expensive restaurant meals are eating at home more. This increase in fresh fruit and vegetables can only be beneficial.
- 3 Of course, some people will argue that many people around the world are really suffering because of the financial crisis, especially as it has come at the same time as a food crisis with rising food prices. And it is true that some people have lost work, and that some people may not have enough to eat. But if we look at the big picture, we can see that the benefits of the financial collapse outweigh the inconvenience to some people. The food crisis was caused by rich countries growing fuel crops instead of food crops. If we are driving less, if factories are producing fewer goods, then we will need less fuel. So the land can be used for food crops again. In addition to this, of course, the financial collapse will prevent total world collapse due to global warming. So, overall, we should be very glad that the world financial system has collapsed.

- (a) Identify the main conclusion. [1]
- (b) Identify **three** reasons given to support the main conclusion. [3]
- (c) Evaluate the reasoning in the argument. In your answer you could consider any strengths, weaknesses, flaws and unstated assumptions. [6]
- (d) 'The disadvantages of the financial collapse significantly outweigh any advantages.'
Write your own short argument to **support** this claim. [5]

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