



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

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THINKING SKILLS

9694/22

Paper 2 Critical Thinking

October/November 2011

1 hour 45 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 or 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.



* 9 5 2 7 9 9 5 3 9 6 *

- 1 Study the evidence and answer the questions that follow.

Source A

Newspaper Article

Rajkhan Times, 05/02/2011

TOXIC THREAT SHOCK!

A report in the journal of the radical environmental group, Green Alliance, alleges that the planning authorities in Rajkhan are intending to build waste disposal incinerators throughout Rajkhan.

The report suggests that claims that incineration

produces 'green' and 'renewable' energy are false, with research showing that a standard waste incinerator produces more carbon dioxide than a gas-fired power station. There have been rumours about this proposal for some time, and now the Green Alliance claims to have confirmation of this from a highly-placed source within the planning authority.

Source B

Rajkahn Local Government

MEMO

To: Senior Planning Officials
 From: Devandra Singh - Chairman of Rajkhan Local Government
 Cc: Hiram Bellringer - Chief Executive, Global Incineration Inc.
 Date: 24/01/2011
 Re: Planning issues on incinerators

HIGHLY CONFIDENTIAL

The authorities have decided to go ahead with plans to build waste disposal incinerators in Rajkhan as the key method of waste disposal. The incinerators will be built by Global Incineration Inc., a leading American waste disposal company. Because of the politically sensitive nature of this decision, it is essential that this information does not get into the public domain. Any employee found to have 'leaked' this information to the press will face instant dismissal. Global Incineration have given us assurances that any public concerns about the supposed toxic effects of incineration are misplaced. Modern incinerators capture all toxic gases and there is no threat to public health. However, to avoid unnecessary alarm or obstruction to these proposals, any announcement will take place after national legislation due in a few months, which will allow planning authorities to override objections and speed up the planning process where environmental issues are involved.

Source C

meal - Message
_ □ ×

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Reply Reply to All Forward

From: Devandra@bestmail.com Sent: Thursday 20th January 2011
 To: Hiram@bestmail.com
 Subject: meal

Hi Hiram

Many thanks for an excellent meal last night. We are obviously making good progress towards achieving our aims and I am sure this will be of benefit to both of us! We have a senior planning officer, David Wasim, who is a 'green activist' but Asha Akbar is his line manager and will deal with him!

Very best wishes
Dev

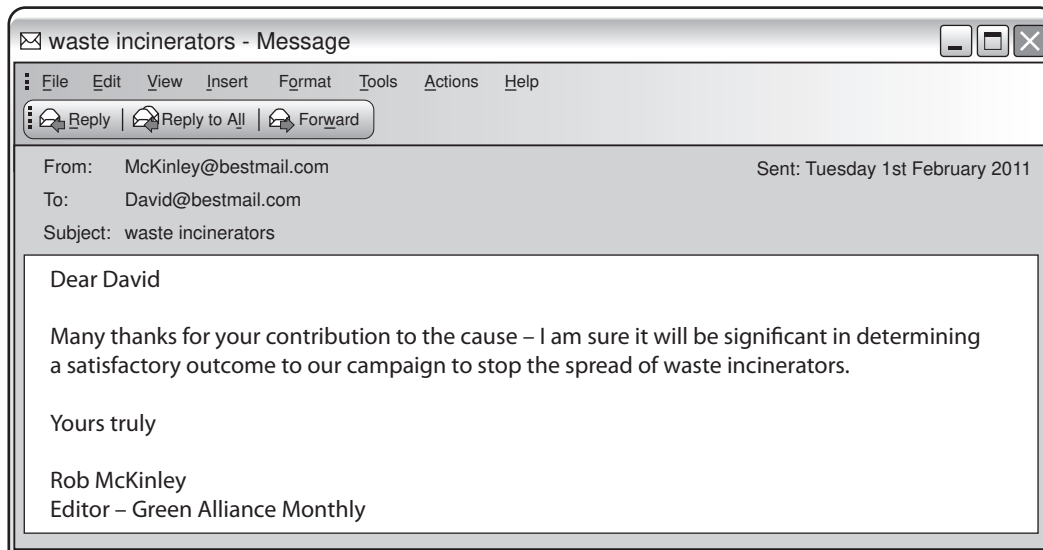
P.S. Asha sends her regards

Source D**David Wasim's Facebook Status**

27/01/2011

Hi to all my friends. Work pretty hectic at the moment – the money is good but it would be nice to wind down a little. Not much chance of that given the mortgage and the costs of putting the kids through university! On the bright side, I am in quite a good position to go for Director jobs and am on the look-out. Am off to a Green Alliance conference this weekend as a delegate for the local branch – main topic is waste incineration which should be interesting; there are actually some good 'green' arguments in favour of this.

Cheers for now – and remember, leave the car in the garage, its healthier by bike!

Source E

- (a) How relevant is the report in the Rajkhan Times (Source A) to public concern about the proposed incinerators? [3]
- (b) How reliable is the information given in Source B? Justify your answer. [3]
- (c) How significant is the e-mail to David Wasim from the editor of the Green Alliance Monthly (Source E)? [3]
- (d) How likely is it that David Wasim leaked confidential information to the Green Alliance? Write a short, reasoned argument to support your conclusion, with critical reference to the evidence provided and considering plausible alternative scenarios. [6]

2 Study the evidence and answer the questions that follow.

Source A

Cancer – treatment or cure?

Researchers into cancer are increasingly thinking that progress in tackling the disease will be through treatment rather than trying to find a cure. This is because there are many more complicated issues than might be the case for other diseases.

Cancer is a problem of cells growing uncontrollably. There are 200 different types of cancer, each requiring a different approach. The actual way the disease develops varies from individual to individual, as a result of the many factors involved such as the individual person's DNA, lifestyle and exposure to trigger factors. So a cure for Person A's lung cancer is not necessarily a cure for Person B's.

The way forward may be to find treatments to control the cancer which are linked to the individual's unique 'genetic fingerprint'. The cancer may well re-occur and require further courses of treatment but the person's life expectancy will still be increased by many years.

In the future, cancer is likely to be seen as a chronic disease, like diabetes, which is controllable with medication rather than curable.

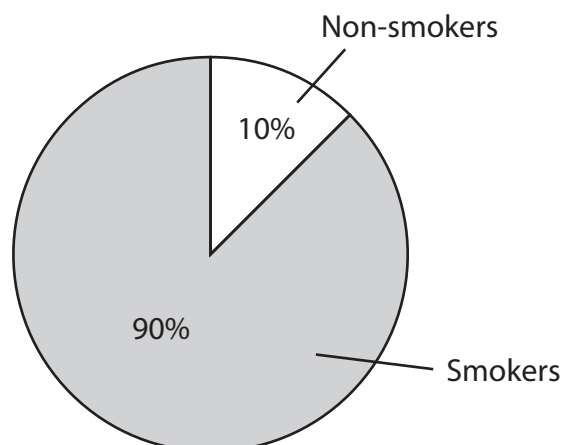
Source B

A cure for cancer – an impossible dream?

Cancer is a condition that is a normal part of the ageing process. A well-known cancer specialist has said that if we all lived to be 200 we would all get cancer. This is because cells have to be constantly renewed during our lifetime and, eventually, one of these cells will malfunction and become cancerous. A search for a cancer-free existence is therefore a bit like searching for eternal youth.

Source C

Lung cancer deaths



Percentage of smokers developing lung cancer: 10%

The vast majority of lung cancer deaths occur in people who are or have been regular smokers. Whilst only a minority of smokers will develop lung cancer it is clear that one will enjoy better health as a result of giving up smoking.

Source D**Medical science still needs to do more for people with diabetes**

It is common to regard Type 1 diabetes as a condition that has been cured in the 20th century through the wonders of medical science. Whilst it is true that regular insulin injections control the condition, there are still distinct problems associated with it.

- Diabetics may be prone to a hypoglycaemic attack where blood sugar levels get dangerously low.
- They also have 15 years lower life expectancy on average due to increased risk of heart disease and stroke.
- They have an increased risk of blindness.

Therefore scientists still need to go on searching for a genuine cure for diabetes.

Source E**New hope for people with diabetes**

Scientists in Cambridge have developed an artificial pancreas which should offer a cure for diabetes in the next few years. Diabetics suffer from a failure of the pancreas to produce insulin. The problem has been how to find a device that is as sophisticated as the human brain in regulating the amount of insulin the body needs. Trials suggest scientists will be able to develop a computer programme which will enable the artificial pancreas to do this.

- (a) Consider Sources A and B. How likely is it that a cure for cancer will ever be developed? [3]
- (b) "...one will enjoy better health as a result of giving up smoking." (Source C.)
How reliable is this conclusion? [3]
- (c) "They have an increased risk of blindness." (Source D.)
How good a reason is this to suggest that more resources should be put into finding a cure for diabetes? [3]
- (d) Should scientists continue to search for a cure for cancer?
Write a short, reasoned argument to support your conclusion, using and evaluating the information provided in Sources A – E. [6]

3 Read the passage and answer the questions below.

- 1 There is much debate about books being replaced by electronic book readers. Whilst some people argue that nothing will ever replace an actual book, it seems likely that future generations will be quite happy reading text on a screen. Some Internet companies are already anticipating a future in which books will only exist online, as indicated by the considerable steps which are being taken to put all the world's existing books in a 'virtual' form.
- 2 If this vision of the future is correct, we will see the end of the library, an institution that has been central to the emergence of learning and civilisation.
- 3 This is because the vast majority of people will be able to access text on the internet, via their phones or personal computers; they will not need a building physically containing texts in book form. Whilst there may be a need for access to computers for those people who do not possess them one does not need a library for this – an internet café or any computer terminal will do.
- 4 So the end of the book also signals the end of the library. If this is the case one can conclude that the era of the mass or 'public' library will have been very short, perhaps as little as 100 years; most libraries up until the relatively recent past were privately owned and therefore only accessible to a small elite.
- 5 However, what is true of borrowing books is not necessarily true of owning them. There will still be people who want to actually own books as physical objects to cherish and admire. So bookshops will probably survive, even in a world of online text, just as there are still record shops selling vinyl records.

- (a) Using the exact words from the passage as far as possible, identify the main conclusion. [2]
- (b) "So the end of the book also signals the end of the library."
Using the exact words from the passage as far as possible, identify **three** reasons used to support this claim. [3]
- (c) Evaluate the reasoning in the argument. In your answer you should consider any strengths, weaknesses, flaws and unstated assumptions. [5]
- (d) 'It is important to own books and not just to read them.'
Write your own short argument to support **or** challenge this claim. The conclusion of your argument must be stated. [5]

