

THINKING SKILLS

9694/22

Paper 2 Critical Thinking

May/June 2015

1 hour 45 minutes

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

Answer **all** the questions.

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

This document consists of **6** printed pages, **2** blank pages and **1** insert.



1 Study the evidence and answer the questions that follow.

Source A**Magazine extract**

from 'Winter Pursuits'

Hotels and other businesses in the winter holiday resort of Snowville are suffering from a second poor season. Visitor numbers have declined a further 20% this year. The poor weather, economic recession and increased costs of getting to the resort have all been blamed for this. Hotel owners in particular are struggling, but the bigger hotels, which offer a range of 'in-house' attractions such as spa treatments, are doing a bit better.

Source B**Newspaper report**

from the 'Snowville Echo'

Several people were injured, some seriously, when caught in an avalanche whilst walking near Snowville last week. They all had previous experience of winter conditions. They had been advised by the owner of the hotel where they were staying (Hotel Splendide) that there was a slight avalanche risk but that conditions were suitable for experienced walkers such as themselves. It had been a poor week for weather up to that point and some were thinking of cutting their holiday short – they now wish they had.

Source C**Extract from television interview**

with the owner of the Hotel Splendide

Interviewer:

"It has been suggested that you gave irresponsible advice to your guests when you said it was all right for them to go out walking."

Hotel owner:

"They were all experienced walkers. Walking in the mountains is always a risky business and I am sure they were aware of this. The local tourist information office did indicate there was an avalanche risk. However, if the risk had been serious they would have closed the paths in the mountains."

Source D**Statement**

from mountain walking guide

No matter how experienced one is in walking in the mountains, there is not a lot one can do about the risk of avalanche apart from not walking when there is a risk of them. They happen so suddenly and unpredictably that there is no way that even an experienced guide such as myself can take avoiding action. Many walkers just accept the risk; indeed the element of risk is what attracts many of them to winter mountain walking in the first place.

Source E**Statement**

from one of the injured walkers

The whole resort was rather empty and seemed a bit desperate for visitors. Some businesses seemed to have already closed down. I gather they had suffered from weeks of bad weather. The first few days we were there, it was so foggy one couldn't see a thing. We were thinking of cutting our losses and going home, but the weather cleared so we decided to go for a walk. The hotel owner said it would be OK. We're used to winter walking, though not in quite as much snow as they have here.

- (a) How relevant is the information in Source A in assessing the motives of the owner of the Hotel Splendide in the advice he gave to the walkers? [4]
- (b) How reliable is the report in Source B? [2]
- (c) How significant is the statement on the walkers' degree of experience in the last sentence in Source E? [3]
- (d) To what extent was the hotel owner to blame for the walkers being injured in the avalanche?

Write a short, reasoned argument to support your conclusion, with critical reference to the evidence provided and considering a plausible alternative conclusion. [6]

2 Study the evidence and answer the questions that follow.

Source A

The world cannot go on relying on fossil fuels such as coal and oil. They are finite and a major cause of global warming. Solar energy will be the most important type of renewable energy in the future. While solar panels generate the most electricity on clear days when sunshine is abundant, they continue to work when the weather is cloudy. On a cloudy day, typical solar panels can produce 10–25% of their rated capacity. The exact amount will vary depending on the density of the clouds and also on the type of solar panel being used: some kinds of panel are better at absorbing diffuse light than others. Ultraviolet light also reaches the Earth's surface during cloudy days, as the experience of getting sunburnt on the beach when it is cloudy illustrates.

Source B

In the early days, solar panels were so expensive that they could not compete with fossil fuels for electricity production. However, costs have decreased dramatically over the years. In the 1950s electricity from solar panels cost \$200 per kilowatt of power but by 2010 this had dropped to \$2.70 per kilowatt. As the pricing becomes increasingly competitive, there will be a huge increase in the amount of electricity being produced using solar panels.

Source C

Germany is a country that has many cloudy days. Nevertheless, it is the world's biggest producer of electricity from solar energy. The Germans generate about 25 gigawatts of solar power – half of the entire world's supply. This shows that a country does not have to be sunny in order to produce solar power effectively. This form of energy promises to be the leading alternative to fossil fuels such as coal and oil in the future.

Source D

A number of environmental scientists maintain that large solar installations will be inefficient. They won't produce electricity at night and some of the energy they generate will be lost as it flows through hundreds of kilometres of transmission lines. Industrial-scale solar energy will also come at a steep environmental price, they argue. Groundwater will be depleted to cool machinery operating at high temperatures. Construction will sometimes require scraping native vegetation down to bare soil, destroying the fragile ecosystems which actually help reduce the impact of global warming. Moreover, these huge solar projects will be obsolete almost as soon as they are built because photovoltaic panels, which can be deployed on residential rooftops, are rapidly becoming more efficient and affordable. A further problem, even with this smaller scale solar technology, is that solar panels actually start to malfunction in extremely hot temperatures.

- (a) “This shows that a country does not have to be sunny in order to produce solar power effectively” (Source C). How reliably can this conclusion be drawn? [3]
- (b) “Some of the energy they generate will be lost as it flows through hundreds of kilometres of transmission lines” (Source D). How effective is this statement as an objection to solar energy production? [3]
- (c) ‘Countries with a lot of sun will inevitably choose solar power as their main source of energy supply in the future.’ Suggest **three** factors about such a country that, if true, would undermine this claim. [3]
- (d) ‘Solar energy will be an important source of renewable energy in the future.’

How justified is this statement? 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 Many doctors have doubts about cough medicines which can be purchased over the counter at a pharmacy. They maintain that they do little to alleviate coughing and can actually make it worse. However, doctors would be better advised to deal with their own problems, since a number of the medicines that they prescribe have harmful side effects. This is in spite of their having been tested.
- 2 This attitude is all the more curious given the reliance of doctors on prescribing medicine. The action in the vast majority of cases when they are presented with symptoms is to prescribe a pill. It is hypocritical of doctors to criticise cough medicines; prescribing medicines is what they do most of the time. This is like a doctor eating cream cakes and then saying that people should avoid unhealthy food.
- 3 Buying cough medicine makes economic sense. A typical price for a 125 ml bottle is \$5.00 in the USA. This is a small price to pay in order to get rid of an irritating cough. Coughs often keep people awake at night so the potential economic cost of missed days at work because of tiredness is far greater than the cost of cough medicine.
- 4 Cough medicine is popular and sales of over-the-counter medicines were worth £3 billion in the UK in 2012. This must mean that people are happy to pay for cough medicines and that they think they are good value.
- 5 Finally, throughout the world, medicines sold to people in pharmacies are subject to strict regulation. They have been thoroughly tested, often on people who volunteer for this task. Anybody taking these medicines can be assured that they will come to no harm as a result. So you should reject the doubts that doctors have about these medicines – this is just professional arrogance.

- (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 **three** reasons which directly support the main conclusion. [3]
- (c) Evaluate the strength of the reasoning in the argument. In your answer you should consider any flaws, unstated assumptions and other weaknesses. [5]
- (d) 'People should not be able to purchase medicines on the internet.'

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. [5]

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