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**THINKING SKILLS**

**9694/22**

Paper 2 Critical Thinking

**October/November 2019**

MARK SCHEME

Maximum Mark: 45

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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This document consists of **11** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks
1(a)(i)	The number of passengers on incoming flights can be known in advance [1]. This information would enable the authorities to know how many staff they would need [1]. A failure to find out this information suggests disorganisation [1].	<b>2</b>
1(a)(ii)	According to Source B, the first instance of a high temperature should have been reported to a specialist consultant [1], so the fact that Patel's temperature was recorded above 38 °C more than once suggests this process was not followed [1]. Seemingly Patel's temperature was recorded by her colleague, who may have had a vested interest to help her get home quickly [1]. One would expect a better-organised process to avoid such conflict of interest [1]. Or Patel's temperature should have been recorded by an official of the screening process [1]; the fact that her colleague recorded it suggests disorganisation [1].	<b>2</b>
1(b)	They have a vested interest to shift blame on to somebody/something else [1]. By suggesting the outbreak is a result of individual misconduct [1] they avoid the charge that the problem lay with the way the screening was organised [1].	<b>2</b>
1(c)	The witness's credibility is increased because of ability to hear what was said [1]. If true, it gives Patel a motive to falsify readings in order to get through the process quickly [1]. She may have taken paracetamol in order to lower the temperature readings in order to achieve this/taking paracetamol may explain the lower reading[1]. The fact she was feeling unwell is significant because it suggests she may have had the virus [1]. However, it is unlikely that as a medical professional returning from an area infected with a deadly virus she would try conceal this if she thought it indicated that she had the virus. [1]. Also, it is not alleged that Patel herself falsified the readings on the screening form [1] though she may have colluded in this [1]. The witness corroborates the information in Source B ('lets get out of here') that Patel/her companions did not want to be delayed.[1]	<b>3</b>

Question	Answer		Marks
1(d)	<b>Level 3</b> 5–6 marks	A strong answer, which provides a reasoned argument including thorough evaluation of all or most of the evidence to support an acceptable conclusion in terms of probability and evaluates the plausibility of at least one alternative conclusion.	<b>6</b>
	<b>Level 2</b> 3–4 marks	An answer which evaluates some of the evidence, draws an acceptable conclusion in terms of probability and may mention the plausibility of at least one alternative conclusion.	
	<b>Level 1</b> 1–2 marks	A weak answer, which refers to some of the evidence, possibly including a simple evaluative comment. The conclusion may be unstated or over-stated.	
	<b>Level 0</b> 0 marks	No credit-worthy material.	
	<p><b>Indicative content</b></p> <p>The possible conclusions are:</p> <ul style="list-style-type: none"> <li>• The failure of the screening process was due to poor organisation and planning by the health authorities.</li> <li>• The failure was due to falsified readings but Patel did not collude in this and therefore cannot be held responsible.</li> <li>• The failure was due to falsified readings which Patel colluded in or even initiated, which would mean she was responsible for the failure of the screening process.</li> </ul> <p>Patel had a motive to collude in the false readings and taking the paracetamol could be construed as an attempt to aid this. However there is no proof of this and if she felt unwell it is unlikely she would have tried to avoid health screening as she would have wanted to ensure she had not contracted the virus. If the health screening had been organised properly there should have been no opportunity for readings to be falsified by those being screened. The falsified reading was only one of several readings and some of these readings were undertaken by the health authorities. It remains the case however that there is some evidence that Patel's temperature was falsely recorded by her colleague in order to speed things up and thus the next stage of the screening process was not triggered. We have no information as to why the colleague did this but she could have had her own reasons to get through the process quickly or just wanted to help Patel. The paracetamol may have lowered Patel's temperature which would explain why the readings taken by the health authorities were normal.</p>		

Question	Answer	Marks
1(d)	<p><b>Notes for the guidance of markers</b></p> <p>Simple supported conclusion 1 (if no conclusion cap at Level 2)</p> <p>+ simple consideration of alternative +1 AND reasoned rejection of alternative +1</p> <p>+ explicit use of some (2 or fewer) sources of evidence +1 OR explicit use of all or most (3 or more) sources of evidence +2</p> <p>+ critical evaluation of evidence +1 or (more than one case) +2 + good inferential reasoning +1 or (more than one case) +2</p>	

Question	Answer	Marks
2(a)	<ul style="list-style-type: none"> <li>• Older buildings will not have these features.</li> <li>• These features might not be able to be fitted to older buildings.</li> <li>• Could be too expensive to install in many buildings.</li> <li>• The degree of reduction of shaking might not be sufficient to stop flying objects.</li> <li>• Many people will be outside when the earthquake strikes.</li> <li>• The techniques will not stop people panicking and doing unwise things.</li> <li>• Increased complacency of the occupants of such buildings may offset the reduction on risk.</li> <li>• The techniques are aimed at reducing the damage to buildings so they can go on functioning – this is not necessarily the same as trying to reduce the number of injuries or deaths.</li> </ul>	<b>3</b>
2(b)	<p><i>2 marks for each clearly expressed reason 1 mark for unclear or incomplete reason</i></p> <ul style="list-style-type: none"> <li>• New concrete buildings may have sufficient pillars/bars to prevent the problem occurring.</li> <li>• Using concrete would not present a problem in places where there are no earthquakes</li> <li>• Concrete may be the only suitable material available for some buildings like office blocks</li> <li>• There may be many advantages in using concrete which outweigh the earthquake risk involved</li> <li>• Techniques such as those described in Source A may get round the problem.</li> <li>• Buildings made of other materials may still be at risk in the event of an earthquake.</li> </ul>	<b>3</b>
2(c)	<p><i>2 marks for each developed explanation. 1 mark for undeveloped/unclear explanation.</i></p> <ul style="list-style-type: none"> <li>• Earthquakes may be increasing in frequency and/or severity over this time period. This would cancel out the reduction in deaths through scientific and technological advance.</li> <li>• The figures for the earlier periods may be inaccurate/underestimates. The impression of a lack of reduction is simply because data has become more accurate.</li> <li>• Scientific and technological advances may not have been implemented because of cost.</li> <li>• In spite of general scientific/technological advancement, techniques to strengthen buildings to withstand earthquakes may not have occurred before 2005.</li> <li>• Increased population density, particularly because more people live in cities, may have cancelled out any reduction in deaths through scientific and technological advancement.</li> <li>• The nature of modern buildings, e.g. skyscrapers may make people more vulnerable to earthquake.</li> <li>• There a more people around to become victims of earthquakes. This means the % of victims may have gone down because of scientific advance but the absolute numbers have remained the same.</li> </ul>	<b>3</b>

Question	Answer		Marks
2(d)	<b>Level 3</b> 5–6 marks	A reasoned argument, which uses and evaluates all or most of the evidence provided.	<b>6</b>
	<b>Level 2</b> 3–4 marks	A simple argument, which uses and/or evaluates evidence.	
	<b>Level 1</b> 1–2 marks	A weak answer, which makes some correct reference to evidence but consists of opinion and/or assertion rather than argument <b>or</b> a weak argument which makes no reference to evidence.	
	<b>Level 0</b> 0 marks	No credit-worthy material.	
	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Source A counters the claim by suggesting there are techniques that can make buildings earthquake proof</li> <li>• However, these techniques might only apply to new buildings</li> <li>• Also this does not eliminate all causes of death in earthquakes</li> <li>• Source A may have a vested interest in claiming earthquake proofing is successful</li> <li>• Source B suggests ways of surviving in an earthquake which might challenge the claim</li> <li>• however, this is not ‘taming the forces of nature’ as such</li> <li>• and there is no guarantee they will actually work.</li> <li>• Source C supports the claim by suggesting many modern buildings are prone to earthquake damage</li> <li>• it backs this up with examples</li> <li>• Source D supports the claim by showing that deaths from earthquakes have remained fairly constant in spite of scientific and technological advancement</li> <li>• if anything there has been a slight increase</li> </ul> <p>Overall: The sources suggest modern crowded urban conditions have actually increased the threat from earthquakes. However, the claim about ‘forces of nature’ as a whole is generalised from the particular example of earthquakes.</p>		

Question	Answer	Marks
2(d)	<p><b>Notes for the guidance of markers</b></p> <p>Simple supported conclusion 1 or nuanced conclusion 2</p> <p>+ <u>use</u> of 1 or 2 sources +1 or <u>use</u> of all or most (3 or more) sources of evidence +2 <i>not just mentioning or summarizing or comprehension</i></p> <p>+ critical evaluation of evidence +1 or (more than one case) +2</p> <p>+ good inferential reasoning +1 or (more than one case) +2 <i>not speculation</i></p> <p>+ personal thinking +1</p>	

Question	Answer	Marks
3(a)	<p><b>2 marks:</b> everybody should own a dog. <b>1 mark:</b> Dogs can have a negative reputation with some people but everybody should own a dog.</p>	<b>2</b>
3(b)	<p><b>1 mark for each of the following, to a maximum of 3 marks:</b></p> <ul style="list-style-type: none"> <li>• Dogs are an essential part of the cultural development of human society.</li> <li>• (So,) dog ownership makes a key contribution to the maintenance of the health of the population.</li> <li>• (so) there is bound to be one that suits individual requirements.</li> <li>• They [the weak and the vulnerable in society] would benefit especially from this advantage of dog ownership.</li> </ul> <p><i>Allow one additional element or one significant omission in each case. If more than three answers are offered, mark the first four only.</i></p>	<b>3</b>

Question	Answer	Marks
3(c)	<p><i>Marks for each evaluative point as follows, up to a maximum of 5 marks:</i>  <i>2 marks: Valid evaluative point, clearly expressed.</i>  <i>1 mark: Weak attempt at a valid evaluative point.</i></p> <p><i>Paragraph 1</i></p> <ul style="list-style-type: none"> <li>• Irrelevant appeal to history/assumption that past cultural developments continue to have relevance (doesn't support the MC).</li> <li>• <i>Assumption</i> – the subjects of cave paintings are necessarily things that are important in that culture/they depict real life.</li> </ul> <p><i>Paragraph 2</i></p> <ul style="list-style-type: none"> <li>• <i>Assumption</i> – the dog owner is the person who exercises the dog.</li> <li>• <i>Assumption</i> – the contact with other dog owners is meaningful.</li> <li>• <i>Assumption</i> – lack of meaningful contact produces health problems.</li> </ul> <p><i>Paragraph 3</i></p> <ul style="list-style-type: none"> <li>• <i>Assumption</i> – all noise is equally annoying/disturbing.</li> <li>• <i>Assumption</i> – regulation/complaining tackles the problem.</li> <li>• <i>Assumption</i> – Antarctica is noiseless</li> <li>• <i>Straw man</i> – critics of barking dogs are not denying that there are worse things that can happen to you.</li> <li>• <i>tu quoque</i> – reference to traffic noise.</li> <li>• Inconsistency – noise cannot be escaped from then a source of escape offered (to Antarctica).</li> </ul> <p><i>Paragraph 4</i></p> <ul style="list-style-type: none"> <li>• <i>Assumption</i> – size is a sufficient criterion for judging suitability.</li> </ul> <p><i>Paragraph 5</i></p> <ul style="list-style-type: none"> <li>• Inconsistency. The category 'weak and vulnerable' would include the elderly yet the previous paragraph has argued that smaller dogs are more appropriate for them.</li> </ul>	5

Question	Answer		Marks
3(d)	<b>Level 3</b> 4–5 marks	Developed, coherent argument. Reasons strongly support conclusion. Development may include intermediate conclusion or apt examples. Simply structured argument – 4 marks. Effective use of IC, etc. – 5 marks.	<b>5</b>
	<b>Level 2</b> 2–3 marks	A simple argument. One reason + conclusion – 2 marks. Two or more separate reasons + conclusion – 3 marks.	
	<b>Level 1</b> 1 mark	Some relevant comment.	
	<b>Level 0</b> 0 marks	No relevant comment.	
	<p><i>Maximum 3 marks for wrong conclusion or if conclusion is implied but not stated.</i> <i>No credit for material merely reproduced from the passage.</i></p> <p><b>Specimen level 3 answers</b></p> <p><i>Support (129 words)</i></p> <p>Whilst descended from wolves which are wild animals and arguably in some sense ‘free’, dogs are now domesticated and unable to fend for themselves. This means they need to part of a human group in order to survive.</p> <p>Whilst there are some examples of people being cruel to dogs, the vast majority of dogs are well-cared for in a loving family environment. They get fed and exercised regularly and medical care is often on a par with that given to humans. So, being owned by humans is a very happy experience for the vast majority of dogs.</p> <p>Humans obviously benefit from dog ownership as well but they need not feel any guilt about this. It is not a one-way relationship. Dogs have benefited from their association with humans.</p> <p><i>Challenge (161 words)</i></p> <p>Like many animals, dogs are exploited for the benefit of humans. Particularly popular breeds are over-bred by unscrupulous dog breeders in order to satisfy demand. The degree of in-breeding in these cases has led to genetic defects that increase in severity with each generation. An example is short-nosed dogs such as pugs, which often suffer from severe breathing difficulties.</p> <p>Whilst they do their best, dog-rescue centres are, by their own admission, overwhelmed with the task of finding new homes for unwanted and abandoned dogs. This shows that many families treat a dog as just another possession which can be disposed of when the kids get tired of it.</p>		

<b>Question</b>	<b>Answer</b>	<b>Marks</b>
3(d)	Dogs have become a commodity in advanced capitalist society. They are produced in an industrial way to satisfy demand and people are persuaded to acquire them as a result of the way they are presented in the media like any other commodity. Dogs have not benefited from their association with humans.	