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**THINKING SKILLS**

**9694/21**

Paper 2 Critical Thinking

**May/June 2017**

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.

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This document consists of **8** printed pages.

Question	Answer	Marks
1(a)	<p>Mr Day is likely to be fitter than most people of his age / less likely to be afraid of the intruders / likely to be more inclined to use violence towards enemies / may be suffering from PTSD [1]. So he may well have attacked the intruders [1], In which case his statement would be untrue [1].</p> <p><i>Alternatively:</i> Mr Day is likely to have an intimidating demeanour [1]; so the intruders may well have panicked when he confronted them [1]; this makes his evidence more likely to be true [1].</p>	<b>2</b>
1(b)	<p><i>2 answers required.</i></p> <p>Darren Jones has a vested interest to lie [1], in order to avoid being convicted of burglary [1]. His story is implausible. It is highly unlikely [1] that anyone would enter someone's house without permission in order to investigate a possible burglary, rather than ringing the doorbell or calling the police [1].</p>	<b>4</b>
1(c)	<p>It implies that, even if Mr Day did hit the men, he may be innocent of assault [1], although if he used excessive force he could still be guilty [1]. But it does not help to establish what Mr Day's actions in fact were [1], and does not explain what degree of force would be regarded as 'reasonable' [1].</p>	<b>3</b>

Question	Answer	Marks								
1(d)	<table border="1" data-bbox="304 280 1331 750"> <tr> <td data-bbox="304 280 472 427"><b>Level 3</b> 5–6 marks</td> <td data-bbox="472 280 1331 427">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.</td> </tr> <tr> <td data-bbox="304 427 472 548"><b>Level 2</b> 3–4 marks</td> <td data-bbox="472 427 1331 548">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.</td> </tr> <tr> <td data-bbox="304 548 472 669"><b>Level 1</b> 1–2 marks</td> <td data-bbox="472 548 1331 669">A weak answer, which refers to some of the evidence, possibly including a simple evaluative comment. The conclusion may be unstated or over-stated.</td> </tr> <tr> <td data-bbox="304 669 472 750"><b>Level 0</b> 0 marks</td> <td data-bbox="472 669 1331 750">No credit-worthy material.</td> </tr> </table> <p data-bbox="304 786 560 815"><b><i>Indicative content</i></b></p> <p data-bbox="304 853 695 882">The possible conclusions are:</p> <ul style="list-style-type: none"> <li data-bbox="416 887 1299 954">The two intruders may have fallen without being attacked, as Mr Day alleged;</li> <li data-bbox="416 958 1299 1025">Mr Day may have used a legitimate degree of force in defence of his property;</li> <li data-bbox="416 1030 1299 1097">or he may have used excessive force, in which case he is guilty of assault.</li> </ul> <p data-bbox="304 1128 991 1158">The second of these may be the most likely solution.</p> <p data-bbox="304 1193 783 1223"><b><i>Notes for the guidance of markers</i></b></p> <p data-bbox="304 1258 1129 1288">Simple supported conclusion 1 (if no conclusion cap at Level 2)</p> <ul style="list-style-type: none"> <li data-bbox="304 1323 815 1352">+ simple consideration of alternative +1</li> <li data-bbox="304 1357 836 1386">AND reasoned rejection of alternative +1</li> <li data-bbox="304 1422 1059 1451">+ explicit use of some (3 or fewer) sources of evidence +1</li> <li data-bbox="304 1456 1147 1485">OR explicit use of all or most (4 or more) sources of evidence +2</li> <li data-bbox="304 1520 1150 1550">+ critical evaluation of evidence +1 or (more than one source) +2</li> <li data-bbox="304 1554 1075 1583">+ good inferential reasoning +1 or (more than one case) +2</li> </ul> <p data-bbox="304 1619 389 1648"><b><i>Max 6</i></b></p>	<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>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.	<b>6</b>
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Question	Answer	Marks
2(a)	<p>The reliability is strengthened by the company's specialist expertise [1]. The company would have a vested interest to have people catch colds in order to sell their products [1], but they give advice which may prevent people from ever needing them, which strengthens the reliability of the document [1].</p> <p><i>Allow for 1 mark:</i></p> <p>The company's products are for treating symptoms, but the article discusses preventing colds altogether, so the reliability is not affected. The company has a vested interest to increase sales of its products, and therefore may have lied about colds and flu not being caused by being out in the cold.</p>	<b>3</b>
2(b)(i)	Source C confirms that there is variation in the severity of symptoms experienced by people with a cold, which is the basis of the researcher's suggested explanations for their findings in Source B [1], but does not make any reference to whether the cause of this variation is being chilled [1].	<b>2</b>
2(b)(ii)	<p><i>1 mark for each plausible explanation, for example:</i></p> <p>At least one of the chilled group already had a cold during the experiment, and infected other members of the group</p> <p>More of the chilled group were exposed to cold virus after the experiment than the not-chilled group</p> <p>The chilled group were exposed to a more virulent strain of cold virus than the not-chilled group</p> <p>Being chilled makes people more likely to catch a cold</p> <p>More of the chilled group were already infected with cold virus before the experiment</p> <p>The chilled group were of a personality type more inclined to report symptoms than the not-chilled group</p> <p>The chilled group may have been expecting to catch a cold as a result of the experiment (nocebo effect – <i>accept</i> 'placebo').</p>	<b>2</b>
2(c)	The fact that the virus acts in a similar way to the human cold virus means that the findings could be transferable to humans [1], but this is far from certain, because mice are different from humans and / or the viruses are different [1]. The experiment was not about catching a cold, but about fighting it off [1].	<b>2</b>

Question	Answer	Marks								
2(d)	<table border="1" data-bbox="304 282 1331 685"> <tr> <td data-bbox="312 282 472 360"><b>Level 3</b> 5–6 marks</td> <td data-bbox="472 282 1331 360">A reasoned argument, which uses and evaluates all or most of the evidence provided.</td> </tr> <tr> <td data-bbox="312 360 472 439"><b>Level 2</b> 3–4 marks</td> <td data-bbox="472 360 1331 439">A simple argument, which uses and/or evaluates evidence.</td> </tr> <tr> <td data-bbox="312 439 472 595"><b>Level 1</b> 1–2 marks</td> <td data-bbox="472 439 1331 595">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.</td> </tr> <tr> <td data-bbox="312 595 472 685"><b>Level 0</b> 0 marks</td> <td data-bbox="472 595 1331 685">No credit-worthy material.</td> </tr> </table> <p data-bbox="304 719 560 748"><b>Indicative content</b></p> <p data-bbox="416 786 1315 1301">The main reason for drawing this inference is that the different sources disagree in their advice. Source A suggests that susceptibility to infection by cold viruses is greatest when people are indoors in close proximity to one another. Source A also gives advice on infection control. Although the hypothesis in Source B is tentative and dubious, It does support a link between being cold and suffering from a cold. Source D gives a different hypothesis for similar findings, Although based on a different species. The reason for uncertainty and disagreement about how to avoid catching a cold may be that, as shown in Source C, many people are exposed to a cold virus without becoming infected, or are infected without having symptoms, or have such mild symptoms that they may not take much notice of them.</p> <p data-bbox="304 1339 783 1368"><b>Notes for the guidance of markers</b></p> <p data-bbox="304 1406 703 1473">Simple supported conclusion 1 OR nuanced conclusion 2</p> <p data-bbox="304 1512 1050 1608">+ <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 summarising or comprehension</i></p> <p data-bbox="304 1646 1123 1675">+ critical evaluation of evidence +1 or (more than one case) +2</p> <p data-bbox="304 1713 1075 1780">+ good inferential reasoning +1 or (more than one case) +2 <i>not speculation</i></p> <p data-bbox="304 1818 592 1848">+ personal thinking +1</p> <p data-bbox="304 1886 384 1915"><b>Max 6</b></p>	<b>Level 3</b> 5–6 marks	A reasoned argument, which uses and evaluates all or most of the evidence provided.	<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.	<b>6</b>
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Question	Answer	Marks
3(a)	<p>2 marks: The expansion of university places has been a mistake. 1 mark: <i>paraphrase of the above</i></p>	<b>2</b>
3(b)	<p>1 mark for each of the following, to a maximum of 3 marks:</p> <p>Too many jobs now require university qualifications. Apprenticeships are more suitable than university courses to equip people for many occupations. We should restore the old training colleges. University courses are not suited to the needs of most students. (Similarly,) they [parents] should discourage young adults from wasting money they do not have on a university education.</p> <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></p> <p><i>2 marks: Valid evaluative point, clearly expressed.</i></p> <p><i>1 mark: Weak attempt at a valid evaluative point.</i></p> <p><i>Paragraph 1</i></p> <p>The epithet ‘catastrophic’ is an appeal to emotion.  The penultimate sentence is a slippery slope.  The last sentence is a false dichotomy.  <i>(Credit this as a slippery slope, but only if the previous sentence has not been credited).</i>  And the last sentence is also an appeal to pity / emotion.</p> <p><i>Paragraph 2</i></p> <p>The first sentence is inconsistent with the final sentence of paragraph 1.  The verb ‘distorts’ begs the question as to the correct way of teaching a subject.  The final sentence relies on the assumption that being trained to challenge theories and facts is not relevant to the world of work.</p> <p><i>Paragraph 3</i></p> <p>The first sentence consists of an appeal to tradition, which relies on the assumption that the nature of school teaching has not and should not have changed.  The penultimate sentence relies on the assumption that the aim of teacher training courses has not and should not have changed.</p> <p><i>Paragraph 4</i></p> <p>The phrase ‘without ever knowing anything for certain’ is an exaggeration or one-sided description of the nature of academic study.  The first and last sentences rely on the assumption that ‘exploring more and more deeply into the nature of their subject’ results in students knowing less about their subject instead of more.  Assumption (between IC and MC): that university courses cannot change.</p> <p><i>Paragraph 5</i></p> <p>The validity of the analogy in this paragraph relies on the assumption that university courses are not cost-effective for students.  The choice of the word ‘wasting’ begs the question, on the basis of the assumption that the expenditure is not cost-effective.  Inconsistency with paragraph 1: if it is difficult or impossible to gain a job without a degree, university courses are not a waste of money.  The final sentence relies on the assumption that students have to borrow money to pay for university education, rather than being subsidized by family, sponsors or the government.</p>	5

Question	Answer	Marks								
3(d)	<table border="1" data-bbox="304 280 1331 719"> <tr> <td data-bbox="311 288 464 465"><b>Level 3</b> 4–5 marks</td> <td data-bbox="464 288 1324 465">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.</td> </tr> <tr> <td data-bbox="311 465 464 551"><b>Level 2</b> 2–3 marks</td> <td data-bbox="464 465 1324 551">A simple argument. One reason + conclusion – 2 marks. Two or more separate reasons + conclusion – 3 marks.</td> </tr> <tr> <td data-bbox="311 551 464 636"><b>Level 1</b> 1 mark</td> <td data-bbox="464 551 1324 636">Some relevant comment.</td> </tr> <tr> <td data-bbox="311 636 464 714"><b>Level 0</b> 0 marks</td> <td data-bbox="464 636 1324 714">No relevant comment.</td> </tr> </table> <p data-bbox="304 752 1262 815"><i>Maximum 3 marks for wrong conclusion or if conclusion is implied but not stated.</i></p> <p data-bbox="304 819 1075 853"><i>No credit for material merely reproduced from the passage.</i></p> <p data-bbox="304 889 671 922"><b>Specimen level 3 answers</b></p> <p data-bbox="304 956 572 990"><i>Support (118 words)</i></p> <p data-bbox="304 1023 1302 1189">Every country needs a constant supply of young people who have the knowledge, skills and personal qualities which are developed by university education. Those are the people who will eventually ensure the prosperity of the country. Paying for university education from taxation therefore benefits everyone, not just the students who receive the free education.</p> <p data-bbox="304 1225 1329 1391">Not charging the recipients also ensures that the young people who receive a university education are those who are judged to have the greatest potential to benefit from it, rather than those whose parents are wealthy enough to afford the costs. It is good for a society if access to higher education is based on ability.</p> <p data-bbox="304 1426 1035 1460">Therefore university education should be free of charge.</p> <p data-bbox="304 1494 603 1527"><i>Challenge (108 words)</i></p> <p data-bbox="304 1561 1329 1693">The best investment any young person can make in their own future is to go to university. The expenditure will be repaid many times over in increased earnings over their lifetime. It is therefore only fair that students themselves should pay the costs.</p> <p data-bbox="304 1729 1310 1895">In addition, most people would have much less incentive to work hard and to achieve as much as possible if they could not use their earnings to buy advantages for their children and grandchildren. Therefore it is indirectly beneficial to the whole community if students or their families have to pay the cost of university education.</p> <p data-bbox="304 1930 991 1964">So university education should not be free of charge.</p>	<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>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.	5
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