
CRITICAL THINKING

9694/23

Paper 2 Critical Thinking

May/June 2017

MARK SCHEME

Maximum Mark: 45

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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Question	Answer	Marks
1(a)	The evidence is inconclusive, so not (very) useful [1]. The evidence strongly suggests that Singh could be responsible for the accident, due to driving too fast (“goes like a rocket”) [1]. If the car was new, he might not be used to driving it [1]. However, it also suggests that, since the car had cost him a lot of money and was his “pride and joy”, he would want to treat it very carefully [1]. Also, he may have been boasting/exaggerating/joking with his friend rather than expressing serious intentions [1].	3
1(b)	It suggests that the farmers may be responsible, as they are not fulfilling their legal obligation to clear mud from the roads [1]. However, we do not know whether the road in question is one where “the traffic is considerable” [1], hence whether this obligation would apply [1]. Source A suggests that the road has seen a “considerable increase in traffic”, but it is not clear whether it has increased considerably enough [1]. Source D suggests that the council may ultimately be responsible, by not enforcing the rules properly [1].	3
1(c)	Not significant as regards reliability [1]. The statement in Source C is from a farmer, so is already affected by bias and vested interest and this information doesn’t add much to this [1]. However, it reinforces the view in Source D that the council puts the interests of farmers ahead of those of other residents [1]. This might be significant in reinforcing the view that lax enforcement of the regulations was the root cause of the accident [1].	3

Question	Answer	Marks								
1(d)	<table><tr><td>Level 3 5–6 marks</td><td>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>Level 2 3–4 marks</td><td>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>Level 1 1–2 marks</td><td>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>Level 0 0 marks</td><td>No credit-worthy material.</td></tr></table> Indicative content The possible conclusions are: • Singh was driving too fast and without taking due care in relation to the muddy conditions. • The farmers are responsible by failing to fulfil their obligation to keep the roads clear of mud. • The council is responsible by failing to enforce the regulations. Farmers certainly create the mud and their changing farming practices seem to have increased the problem. They should not take advantage of a lack of enforcement by the council to leave mud on the roads. However, if they are right in saying that mud is an unavoidable consequence of farming and farming is a central economic activity, then it is perhaps up to motorists to take the possibility of mud on the road into account when they drive. Singh was a local driver and should have known mud on the road was a hazard. Also, they can hardly be held responsible for <i>all</i> accidents. The council bears some responsibility for failing to enforce the law and their letter to Terry Singh bypasses this point. They may also have failed to take in to account increased traffic on the road. However, they may take the view that they are turning a blind eye to an unenforceable and stupid regulation. Notes for the guidance of markers Simple supported conclusion 1 (if no conclusion cap at Level 2) + simple consideration of alternative +1 AND reasoned rejection of alternative +1 + explicit use of some (3 or fewer) sources of evidence +1 OR explicit use of all or most (4 or more) sources of evidence +2 + critical evaluation of evidence +1 or (more than one case) +2 + good inferential reasoning +1 or (more than one case) +2 Max 6	Level 3 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.	Level 2 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.	Level 1 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.	Level 0 0 marks	No credit-worthy material.	6
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Question	Answer	Marks
2(a)	Drugs make some contribution to health damage in sports professionals, but it is not the root cause [1]. Source B suggests that drug use is just a symptom of a wider problem of an over-competitive ethic in professional sport [1]. It is this ethic that is the root cause of health damage [1]; other effects of this, e.g. strain on heart, use of dietary supplements, are not be affected by a ban on drug use [1]. <i>If 0 scored, give 1 mark for evidence that the conclusion of Source B has been identified correctly.</i>	3
2(b)	It may become impossible to agree the descriptors for what qualifies one as 'disabled' [1]. Some athletes may have better access to bionic technology than others, which would interfere with fair competition [1]. But this is not obviously different to the current situation, where some athletes have better access to state of the art training facilities than others [1]. Source C suggests that many disabilities may become correctable (e.g. eyesight), in which case there might not be any competition between disabled athletes at all [1]. Source C also suggests that if gene therapies are undetectable, one could never have any confidence in the fairness of a competition [1].	3
2(c)	<i>1 mark for each plausible explanation, for example:</i> • The richer athletes are able to afford dietary supplements etc. which are not available to the poorer athletes. • The richer athletes have better living standards and diet than the poorer athletes. • Higher average income and greater sporting performance are both effects of an achievement-orientated society. • The richer athletes get better training facilities than the poorer athletes. • Sport is taken more seriously in richer countries where competition is valued. • Professional sport is a genuine opportunity for a greater proportion of the population in richer countries, giving those countries a relatively larger pool of people from which to draw. <i>Award the third mark if two explanations are given and one is fully developed, e.g. with examples or some argumentation, or if three plausible explanations are given.</i>	3

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Indicative content										
• Source A makes a number of points suggesting the distinction between performing-enhancing drugs and other ways of enhancing performance is difficult to maintain. • Source B states that the use of performance-enhancing drugs causes health problems • but implies that drugs are a symptom of a wider problem of sports being over-concerned with performance; • although allowing drugs would exacerbate this and increase the threat to sports men and women. • Source C suggests it may be impossible to maintain the idea of competition free from medical or technical aids. • Source C suggests future performance-enhancing techniques will be undetectable. • The analogy in Source D is weak. • Source D fails to address the problem of how to maintain the distinction between drugs and other forms of performance enhancement. • Source D fails to address the problem of artificial performance enhancement becoming increasingly undetectable. • Source E suggests sportsmen and women in richer countries may have an advantage, • which may be linked to better access to performance enhancement which could be considered unfair.										
The sources suggest that whilst ‘fair competition’ is an ideal, it will be difficult (probably impossible) to maintain this ideal in the future. So sporting organisations should abandon the attempt to ban the use of drugs in sport.										

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2(d)	<i>Notes for the guidance of markers</i> Simple supported conclusion 1 OR nuanced conclusion 2 + <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> + critical evaluation of evidence +1 or (more than one case) +2 + good inferential reasoning +1 or (more than one case) +2 <i>not speculation</i> + personal thinking +1 <i>Max 6</i>	

Question	Answer	Marks
3(a)	<i>2 marks:</i> this trend [for people in the UK to have wooden floors...] is regrettable. <i>1 mark:</i> It has become fashionable in the UK for people to have wooden floors instead of carpet in their homes: this trend is regrettable.	2
3(b)	<i>1 mark for each of the following, to a maximum of 3 marks:</i> • These noise-reducing qualities make carpet a far superior floor covering to wood. • Using carpets would (eliminate this risk and so) relieve the pressure on health services. • (Therefore) there is a harmful effect on the economy (as a result of the declining popularity of carpet). • The environment would benefit from a shift back to carpets as the floor covering of choice. • The supposed advantages of wooden floors for those with allergies are illusory. <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>	3

Question	Answer	Marks
3(c)	<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> <i>Paragraph 2</i> - Assumption – that there is no solution to the problem of noise created by wooden floors. - Flaw – noise reduction not a sufficient condition to conclude that carpet is “far superior”. <i>Paragraph 3</i> - Appeal to pity: reference to children and elderly persons. - Assumption – that there are no other hard surfaces in homes which would cause injury. - Assumption – that there are no other health risks (which put pressure on health services) created by carpets e.g. dust allergies. - Assumption – the number of such accidents is high enough to create significant pressure on health services. <i>Paragraph 4</i> - Appeal to tradition: “long-established”. - Assumption – jobs in wooden flooring manufacture have not outweighed loss of jobs in carpet industry. <i>Note to markers – accept this for 2 marks if expressed as a counter</i> <i>Paragraph 5</i> - Assumption – tropical hardwoods are used in manufacturing wooden floors. - Assumption – there are not environmentally negative effects from rearing sheep. - Assumption: that the difference in speed for renewing wool and wood is significant. <i>(May be expressed as an inconsistency etc.)</i> - Flaw – <i>ad hominem</i> – reference to ‘old hippies’. - Flaw – straw man: ‘old hippy’ argument would be more selective on which natural materials should be used. - Fails to justify claim that hippies are being inconsistent. <i>Paragraph 6</i> - Assumption – artificial fibres do not harbour creatures such as dust mites. - Assumption – other causes of allergies have not increased. - Flaw – inconsistency: in para 5 the reasoning is based on the idea that carpets are made of wool but in para 6 it is stated that most US carpets are made of synthetic materials.	5

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3(d)	<table><tr><td>Level 3 4–5 marks</td><td>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>Level 2 2–3 marks</td><td>A simple argument. One reason + conclusion – 2 marks. Two or more separate reasons + conclusion – 3 marks.</td></tr><tr><td>Level 1 1 mark</td><td>Some relevant comment.</td></tr><tr><td>Level 0 0 marks</td><td>No relevant comment.</td></tr></table> <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> Specimen level 3 answers <i>Support (91 words)</i> Before the development of synthetic materials, such as plastics, many everyday purchases such as buckets were cumbersome and expensive. Natural materials such as wood also wear out quite quickly. Therefore, in an age before synthetic materials, people spent a great deal of their income on such everyday objects, meaning they had less money to spend on their own leisure and enjoyment. Synthetic materials have also been key in the development of a number of technologies including those in the medical sphere. Therefore synthetic materials such as plastic have been a life-enhancing development. <i>Challenge (105 words)</i> The use of synthetic materials, particularly plastics, has been a major contributor to the ‘throwaway society’. People now use plastic bags when shopping and dispose of them afterwards. The result is that even the remotest parts of the world’s oceans are contaminated with plastic. Plastic is not bio-degradable, meaning an individual piece of plastic can last hundreds of years bobbing around in the sea. Many synthetic materials, including plastics, are derived from oil – a fossil fuel. So synthetic materials are a key contributor to the environmental damage of the planet. Therefore synthetic materials such as plastic have not been a life enhancing development.	Level 3 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.	Level 2 2–3 marks	A simple argument. One reason + conclusion – 2 marks. Two or more separate reasons + conclusion – 3 marks.	Level 1 1 mark	Some relevant comment.	Level 0 0 marks	No relevant comment.	5
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