

**ADVANCED GCE
CRITICAL THINKING**

Unit 4: Critical Reasoning

WEDNESDAY 13 JUNE 2007

F494

Afternoon

Time: 1 hour 45 minutes

Additional materials: Answer Booklet (8 pages)
Answer Sheet
Resource Booklet



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INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the spaces on the answer booklet and answer sheet.
- You must answer **all** questions.
- Section A contains multiple-choice questions which you should answer on the answer sheet provided.
- Read each question carefully and make sure that you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- You should spend no more than 40 minutes answering Section A.
- You will be awarded marks for the quality of your written communication in Section B.
- The total number of marks for this paper is 110.

This document consists of **14** printed pages and **2** blank pages.

Section A: Multiple Choice

Answer **all** questions in this section of the paper.

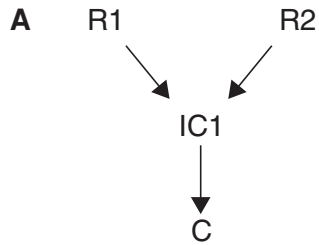
You are advised to spend no more than 40 minutes on this section of the paper.

- 1 Which of the following is an argument?
- A Every time we feel fear our pupils dilate to help us detect movement, glucose is released from the liver to give us fuel and blood is diverted to the large arm and leg muscles.
 - B Pain protects us from damaging ourselves, but it won't protect us from unforeseen danger. Fear prevents us from taking unnecessary risks, such as driving too fast or leaping from great heights. Fear and pain are subconscious mechanisms in all mammals.
 - C People who are scared of spiders often know that these tiny little creatures are completely harmless, yet whenever they see one they run away screaming. This is because their physical reaction occurs before their brains have properly processed the information.
 - D It is important that all the body's natural functions are used in a healthy way. Horror films allow us to use the body's fear mechanisms in a safe situation, so we shouldn't avoid them.

[1]

- 2 Many argue that football is boring because so few goals are scored. However, it is precisely because so few goals are scored in football that the game is exciting. Because so few goals are scored, a single goal can win the match. The crowd therefore becomes hopeful of victory and excited at every goal scoring opportunity.

Which of the following diagrams best represents the structure of the football argument?



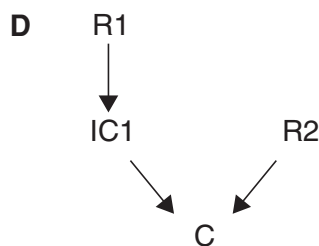
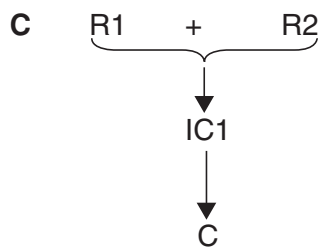
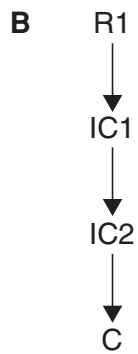
Key

R: Reason

IC: Intermediate Conclusion

C: Main Conclusion

Counter arguments are not normally represented in structure diagrams.



[1]

- 3** Mobile clubbing is more than a fad: it is a force for good. Imagine hundreds of people at the station or on the street suddenly bopping, gyrating and twirling to the music on their headphones. It must be good for all those depressed, grumpy commuters to lighten up and dance alongside young people. Enclosed in a private headphone world, joined in a massive shared experience of togetherness, mobile clubbers enjoy the guerrilla experience of illegal raves without breaking the law. They send a shockwave of happiness through an area.

'I love the idea of random acts of rapture. It suits the age we live in.' Is this additional comment an effective contribution to the argument above?

- A** It is effective because it provides a good reason to support the conclusion that mobile clubbing is a force for good.
- B** It is effective because it recognises the importance of doing things appropriate for our own time.
- C** It is ineffective because it misses the point that mobile clubbing is a mad, pointless thing to do.
- D** It is ineffective because it does not provide a good reason to support the conclusion that mobile clubbing is a force for good.

[1]

- 4** Under new government plans, instead of using the courts, police could impose fixed penalty fines for crimes such as drunkenness, minor theft and assaulting a police officer. Improving the conviction rate for petty crime and reducing legal bureaucracy are worthy aims, but the government's proposals would undermine criminal justice in the UK. Imposing a fixed penalty fine barely counts as justice at all. These fines, like parking tickets, do not leave an offender with a criminal record or shame them in court, so there is nothing lasting to discourage them from offending again. Even minor incidents can have a lasting effect on the victim. Furthermore, although immediate payment of £100 ought to deter offenders, many people believe that fixed penalty fines do not have to be paid. In 2005 almost half the penalty notices issued by police were ignored. Fixed penalty fines send the wrong message to potential offenders: not only is assaulting a police officer equivalent to parking on double yellow lines, you can get away with it.

Which of the following best expresses the main conclusion of the argument?

- A** Petty criminals may soon face fixed penalty fines instead of court proceedings.
- B** Government plans to increase the use of fixed penalty fines would weaken the legal system.
- C** Fixed penalty fines do not do enough to deter criminals from re-offending.
- D** Using fixed penalty fines would effectively decriminalise offences such as assaulting a police officer.

[1]

- 5 Which of the following is an underlying assumption in the argument about criminal justice (see question 4)?
- A For justice to be done it is important that the offender suffers.
 - B It is wrong to punish assault in the same way as parking offences.
 - C The police should be stricter about enforcing payment of fines.
 - D The most important aspect of justice is preventing more offences.

[1]

- 6 Which of the following would strengthen the argument about criminal justice (see question 4)?
- (i) The court system exists to establish whether an individual is guilty or not. The police will be able to impose fines without the rigorous burden of proof used in court. This could be abused.
 - (ii) Fines can cause lasting suffering to offenders' children by taking money which should be spent on the children. It is wrong to punish the children, because they have not yet committed crimes. So fines are a poor response to crime.
- A (i) only.
 - B (ii) only.
 - C (i) and (ii).
 - D Neither.

[1]

- 7 The Tibetan antelope and the guanaco, a wild relative of the camel, have resisted domestication and have both been hunted almost to extinction by people wanting their soft underfur for wool. The musk ox, vicuna, alpaca and other domestic wool-producing animals, such as the cashmere-producing goat and angora-producing rabbit, are plentiful. This contrast shows that domestication ensures the survival of a species, whereas remaining wild is a one-way ticket to extinction.

Which of the following best expresses the flaw in the argument?

- A It draws a strong conclusion from a small number of examples.
- B It falsely restricts the options to being domesticated or remaining wild.
- C It ignores the fact that people eat animals as well as using their wool.
- D It wrongly suggests that people cannot hunt in a sustainable manner.

[1]

- 8 Five members of the college International Food Club went for a Thai meal. Three of them were wearing glasses. Four people took photos but only two of these people wore glasses. All photos taken that night were used on the club's website. Everyone had a mobile, but only people wearing glasses had camera phones. No one used a phone which belonged to someone else.

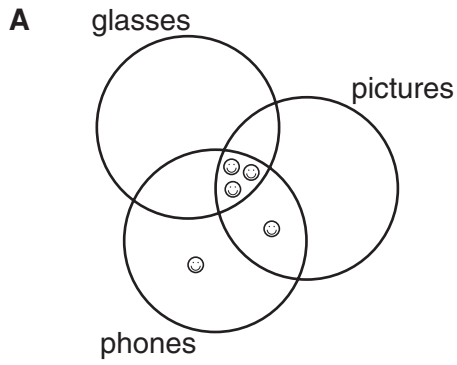
Which of the following can be concluded from the information in the passage?

- (i) One person had a camera phone but did not use it for taking pictures that night.
- (ii) Two people must have had digital cameras.

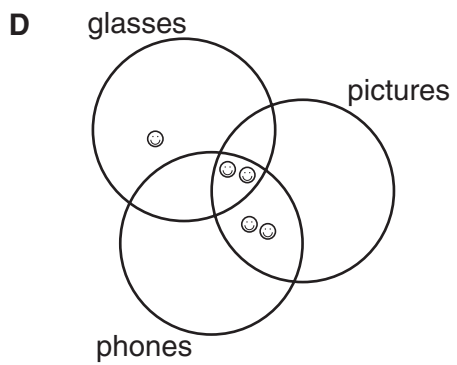
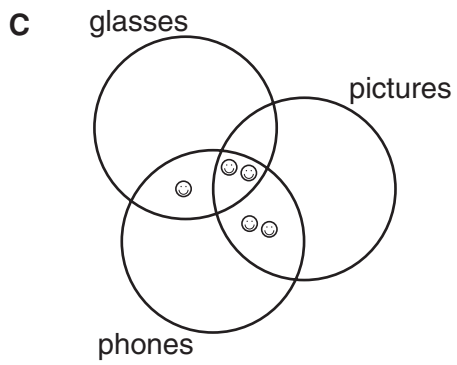
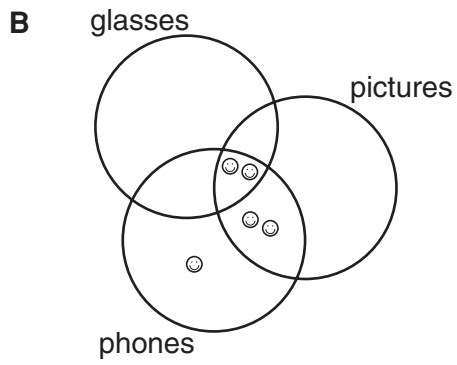
- A (i) only.
- B (ii) only.
- C (i) and (ii).
- D Neither.

[1]

9 Which of the following diagrams best represents the information in the passage in question 8?



<p>Key</p> <p>⊙: a person</p>



[1]

- 10 Which of the following is a valid argument (one in which the conclusion must be true if the premises are true)?
- A Scientists generally work in labs. Anjali does not wish to work in a lab. So Anjali should not become a scientist.
 - B Biochemists are scientists. Kafi is not a biochemist. So Kafi is not a scientist.
 - C Scientists work in labs. Tom works in a lab. So Tom is a scientist.
 - D Cosmology is a specialist field of expertise within physics. Mandi is not a physicist. So Mandi cannot be a cosmologist.

[1]

- 11 The choices and technicalities involved in buying and using digital gadgets are confusing. It can be frustrating trying to make your new gadget work. If you want an MP3 player, for example, you need to choose a manufacturer, choose the right Microsoft software, and surf a multiplicity of Microsoft compatible online music stores. Microsoft claims that this gives the consumer choice. However, many consumers are choosing to buy the iPod which is tied to iTunes software and the iTunes online music store, instead of assembling a package from different manufacturers. Furthermore, consumers buy products, but often don't buy the content and accessories they need to fully use their new gadgets. For example, half the US consumers with high-definition TV sets don't subscribe to HDTV programming. It is clear that digital industries need to sell fully integrated end-to-end experiences such as the iPod rather than stand alone devices. Consumers should welcome Microsoft's development of the Zune as a full digital experience to rival the iPod.

Which of the following best expresses a weakness in the argument?

- A It exaggerates the problems of stand alone digital gadgets in order to support the intermediate conclusion that gadgets should be integrated.
- B It ignores the possibility that digital industries may need to sell stand alone devices as well as integrated experiences.
- C It generalises from just two examples of stand alone gadgets to the whole digital industry.
- D It attacks consumers for wanting high status gadgets which they are incapable of using.

[1]

12 Which of the following, if true, would most effectively counter the claim in the argument about gadgets in question 11 that, 'Consumers should welcome Microsoft's development of the Zune as a full digital experience to rival the iPod'?

- A Manufacturers used to sell complete computer packages but these products were replaced by parts from multiple suppliers.
- B Consumers find it extremely difficult to assemble their own systems from a variety of parts that might never have been tested together.
- C Some consumers may not believe that it is worth trading choice of gadget, software and function for simplicity of use.
- D Manufacturers of end-to-end products can easily overcharge customers for the services and accessories linked to their gadgets.

[1]

13 Which of the following is an argument?

- A **An extract of text has been removed due to third party copyright restrictions**
 Details: An extract of text adapted from an article in New Scientist about the similarities of Science and poetry
Adapted from Where Science and Poetry Meet, Simon Armitage, New Scientist, 26 August 2006
- B Primary school children should soon have the opportunity to learn about Shakespeare's plays. The government believes that knowing Shakespeare is an important part of being British. Shakespeare's comedies have a bawdy humour.
 - C It's not the government's job to tell people what being British is. Being British means different things to different people. People object to being told how they should live their lives. The government should do a better job of improving Britain.
 - D British scientists have joined a team of people at Scott Base. They are working to preserve the hut which Shackleton used as a base for his 1907 expedition to the South Pole. Despite the wind, ice and low temperatures, even cans of food left by Shackleton have survived, although some need to be treated for rust.

[1]

- 14** Few people would question that what we eat affects our health. We are all aware that eating badly can lead to a range of serious diseases. Yet it is hard to say what a healthy diet is. When nutrition researchers have attempted to find definitive links between diet and health, they have too often failed to find any. This is partly because of poor study designs and the difficulty in getting research subjects to stick to a particular diet. However, it might be worth considering that there may be no strong link between diet and disease as not all the research has been of poor quality.

Which of the following is the best expression of the main conclusion of the argument about diet?

- A** Everyone knows that a poor diet can cause serious illness.
- B** It is unclear what the healthiest foods are.
- C** We should take seriously the possibility that poor diet does not lead to ill health.
- D** Some of the research done into the link between food and diet has been of high quality.

[1]

- 15** 'We cannot blame poor research for the failure to find a link between food and diet.'

Is this claim:

- A** not an assumption which is required by the argument?
- B** an assumption which acts as a reason?
- C** an assumption which acts as an intermediate conclusion?
- D** an assumption which is part of the counter argument?

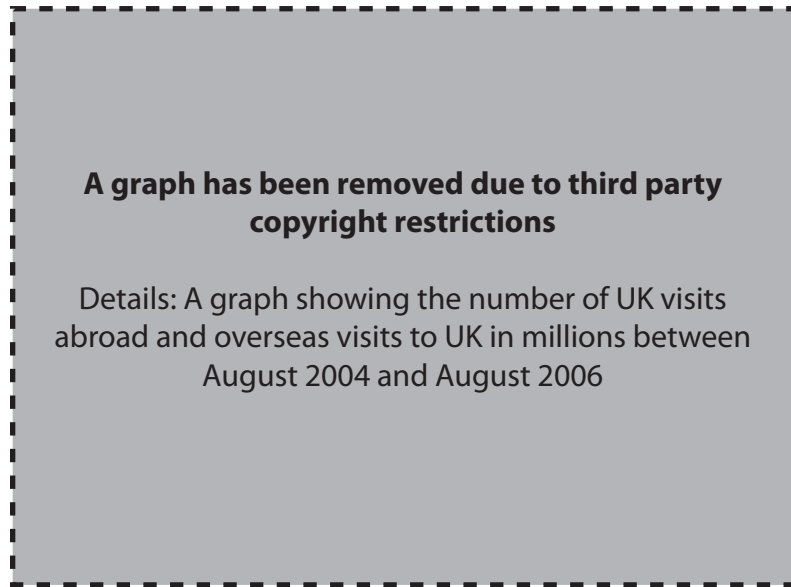
[1]

- 16** 'It is not worth eating a healthy diet to avoid illness.' Is this:

- A** A conclusion which can reasonably be drawn from the passage about diet?
- B** A conclusion which is too strong to be drawn from the passage?
- C** An assumption which underlies the passage?
- D** A contradiction of the passage?

[1]

Visits to the UK from overseas up by 5% in July 2006



Source: Department of National Statistics, www.statistics.gov.uk

The caption to the graph reads 'Visits to the UK from overseas up by 5% in July 2006.'

Which additional pieces of information do we need to know to verify the caption?

- (i) Exact numbers of visitors to the UK.
- (ii) Information about terrorist threats or airport strikes.
- (iii) Which month July 2006 is being compared to.

- A (i) and (ii).
- B (ii) and (iii).
- C (i) and (iii).
- D (i), (ii) and (iii).

[1]

Refer to the following paragraph for questions 18, 19 and 20.

18

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Details: An extract of text adapted from an article in The Times about tidiness

Adapted from Simon Barnes, Should your desk be tidy? Or your house? What about the countryside? © The Times, London, 14 October 2006

'Farming and wildlife are not two eternal opposites.' This responds to an unstated counter assertion. What is the best expression of this unstated counter assertion?

- A Wildlife can only flourish away from intensive farming.
- B Farmers need to control wildlife in order to farm.
- C Farms ought to be clean enough to eat off.
- D Tidy farms can support biodiversity.

[1]

19 Which of the following best expresses a problem with the analogy between untidiness in a house and untidiness on a farm?

- A People constantly battle against untidiness in their houses, just as farmers try to keep their farms tidy.
- B Houses should be untidy. Farms should be tidy.
- C Untidy farmers sacrifice valuable food production. Untidy householders sacrifice only space.
- D People generally only live in a house for a few years, whereas they farm the land for generations.

[1]

20 Which of the following best expresses a flaw in the argument?

- A Just because untidy houses are alive does not mean that dead things must be tidy.
- B Just because untidy houses are alive does not mean that dead things cannot be tidy.
- C Just because tidy houses are dead does not mean that dead things can only be tidy.
- D Just because untidy houses are alive does not mean that alive things can only be untidy.

[1]

Section B: Analysing and evaluating argument

Read the article, “New technology may be changing the human brain”, and answer questions 21 to 25.

Analyse

- 21 Identify and briefly explain the function of the following elements in the structure of the argument in the passage:
- (a) ‘This is not just the obvious ageing person’s whinge because my kids can sort out computer or digital camera problems that baffle me. It is about the way they absorb information and entertainment.’ (paragraph 2) [2]
 - (b) ‘There are the icons of the iPod or Windows.’ (paragraph 3) [2]
 - (c) ‘A recent survey of 8 – 18 year olds suggests that they are spending 6.5 hours every day using electronic media and multi-tasking is rocketing.’ (paragraph 7) [2]
 - (d) ‘Is this perhaps, the source of the hyperactivity and attention deficit disorders now being treated with industrial quantities of prescription drugs to help sustain attention in the classroom?’ (paragraph 10) [2]
- 22 Analyse in detail the structure of the argument in paragraph 11 by identifying reasons, intermediate conclusions etc. [9]

Evaluate

- 23 ‘In just a couple of decades, we have slipped away from a culture based essentially on words to one based essentially on images, or pictures’ (paragraph 1). Evaluate the support given to this claim by the reasoning in paragraphs 1–5.

Support your evaluation by **selectively** referring to:

- flaws in the reasoning and their impact on the strength of the reasoning;
- assumptions which must be made and their impact on the reasoning;
- the effectiveness of the use of evidence and examples. [15]

- 24 Politicians, ‘could take a valuable ten minutes to read and reflect on Baroness Greenfield’s fine speech’ (paragraph 12). Evaluate the support given to this claim by the reasoning in paragraphs 6–12. [15]

Develop your own reasoning

- 25 ‘Technological change should be welcomed.’

Write your own argument to support or challenge this claim. [18]

Total marks for Section B [65] marks

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