

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**

**Advanced Subsidiary GCE**

**CRITICAL THINKING**

UNIT 2: Assessing & Developing Argument

Friday

**26 MAY 2006**

Afternoon

**F492/01**  
**F492/02**

1 hour 45 minutes

Additional materials:  
Answer sheet for Section A Multiple Choice  
Resource Booklet

Candidate Name	Centre Number	Candidate Number										
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**TIME** 1 hour 45 minutes

**INSTRUCTIONS TO CANDIDATES**

- Write your name, Centre number and candidate number in the spaces above and on the answer sheet.
- Answer **all** questions.
- Answer Section A, questions 1–20, on the answer sheet provided. You are advised to spend not more than 40 minutes on Section A.
- Answer Sections B and C in the spaces on the question paper.
- Read the Resource Booklet and each question carefully and make sure 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.
- The total number of marks for this paper is **120**. Section A comprises 33% of the available marks; Sections B and C comprise 67% of the available marks.
- Up to 5 marks are available for quality of written communication in Sections B and C.

FOR EXAMINER'S USE	
<b>Section B</b> /50	
<b>Section C</b> /25	
<b>QWC/5</b>	
<b>TOTAL</b>	

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**This question paper consists of 20 printed 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 Four million new born babies die around the world each year, 99% of them in poor countries. A major barrier to progress in helping these babies has been the widespread belief that expensive 'high tech' solutions are needed to bring down death rates. But this belief is wrong. Recent research shows that just \$1 per baby would save 90% of the babies who die at birth in poor countries. The solutions needed have been shown to be as simple as keeping babies warm after birth and providing common antibiotics.

Which of the following is the **best statement** of the **main conclusion** of the above argument?

- A The solution to the problem of new born deaths in poor countries is far less expensive than previously believed.
- B There are major barriers to reducing the numbers of new born babies who die in poor countries.
- C The solutions to reducing the numbers of deaths amongst new born babies in poor countries are simple.
- D We can easily afford the solutions to the problem of high death rates amongst new born babies in poor countries.

[1]

- 2 The drop out rate from the first year of university arts degrees (such as psychology and history) is 10% compared to 30% from science degrees. Over the three years of a degree course, the drop out rate for sciences must therefore be dramatically higher than for arts degrees. The effect of this will be a great excess of arts students – who often find it very difficult to find employment when they leave university – and a shortage of the degree level scientists desperately needed by our modern industries. These figures are consequently bad news for the economy.

Which of the following is the **best statement** of the **flaw** in the above argument?

- A The health of the economy depends on more than just university science graduates.
- B The drop out rate from some science subjects will be less than the average figure given.
- C The argument does not consider any of the reasons why some students leave science degrees in the first year.
- D The drop out rate in the second and third year of arts degrees may be far higher than for science degrees.

[1]

- 3 It is right that parents who have been wrongly accused of harming their children by doctors or social workers are not allowed to sue the doctors involved. Although this appears to be unfair, we have to consider the long term well being of other children. Doctors who think that they may be sued will be less willing to suggest that injuries, or even deaths, have resulted from child abuse, putting other children at greater risk. This has to override the needs of the individual parents to seek compensation for the injustice resulting from medical errors in identifying signs of abuse in children.

Which of the following, if true, would **most weaken** the above argument?

- A Social workers have been sued for incorrect allegations of child abuse against parents.
- B Doctors are not always able to accurately identify abuse from physical symptoms alone.
- C Court cases against doctors in other areas of medicine have had little effect on medical practice.
- D The fact that doctors think that they may be sued does not mean that they actually will be.

[1]

- 4 It seems odd that gambling can be so addictive when the chances of winning are so small – losing is the more common experience for a gambler. However, psychological research has shown that occasional positive experiences can be far more powerful than constant positive experiences in shaping behaviour – in this case a gambling addiction. The effects of occasional wins establish behaviour that lasts long after the last win and outweigh all the disappointments of losing.

Which of the following is the **conclusion that can best be drawn** from the above passage?

- A Losing constantly will never reduce a gambling addiction.
- B The causes of a gambling addiction can be explained in terms of occasional wins and frequent losses.
- C Losing is always the more common experience for a gambling addict.
- D A gambling addiction is more likely to be reduced by frequent wins than frequent losses.

[1]

- 5 We should support the introduction of new identity cards that will contain biometric data, such as finger prints and iris scans (part of the eye). The pattern on the iris is a unique record of each individual that cannot be guessed or forged. This means that it will be very difficult for criminals to forge or steal someone else's identity – a process often called identity theft. These stolen identities are valuable to criminals as they can be used to buy goods and cover other illegal activities.

Which of the following, if true, would **most strengthen** the above argument?

- A New identity cards will be no bigger than a conventional credit card.
- B The cost of the technology required to produce the cards will reduce over time.
- C Current security, such as passwords and pin numbers, fails if people forget their passwords.
- D Current security, such as passwords and pin numbers, fails to prevent over 100,000 identity thefts a year.

[1]

- 6 The belief of some world leaders and scientists that there is no such thing as global warming is puzzling. They may point to the fact that Antarctic temperatures in the 1990s were the lowest ever and that the Antarctic ice sheet is thickening enough in the middle to create a 0.12 mm drop in sea levels each year, but this is the worst kind of selectivity. The overall temperature trend is up and the edge of the ice sheet is melting by enough to cause a 0.16 mm rise in sea level each year. The net effect is clearly a rise in sea levels – one of the most accurate indications of a warming planet.

Which of the following is the **best statement** of the **main conclusion** of the above argument?

- A It is difficult to understand the belief about global warming of some world leaders and scientists.
- B Some world leaders and scientists should accept the evidence of rising sea levels.
- C Some world leaders and scientists are poorly informed about global warming.
- D The belief of some world leaders and scientists is based upon very selective evidence.

[1]

- 7 Most asthmatics are able to successfully treat their condition with doses of inhaled steroids (the most commonly prescribed asthma treatment), but the situation for smoking asthmatics is very different. Over a 12 week test period, smoking asthmatics were found to have 6 times more asthma-related incidents than non-smoking asthmatics, for the same level of steroid inhalation. Higher levels of steroids may be more effective, but may also have more pronounced side effects. It is also very important that smoking asthmatics avoid the potentially fatal consequences of asthma attacks.

Which of the following is a **further conclusion that can best be drawn** from the above passage?

- A Smoking asthmatics would be wise to take higher levels of inhaled steroid drugs.
- B Smoking has been found to be a precipitating factor in the development of asthma.
- C Smoking asthmatics who do not give up smoking would be wise to take additional, non-steroidal medication to relieve their asthma.
- D Smoking asthmatics who do give up smoking do not need to take additional, non-steroidal medication to relieve their asthma.

[1]

- 8 Whilst the Government has continued to restrict immigrants from entering the country, the wishes of employers are radically different. 27% of employers have been found to be actively seeking immigrant employees. The skills shortage in British workers has forced employers to make use of the greater skills and excellent work habits of many immigrants. Suggestions that it is all about the reducing the wage bill are contradicted by the fact that only one in 20 employers is looking for cheap labour. On this basis, the Government should not restrict immigrants from entering the country.

Which of the following is the **best statement** of the **flaw** in the above argument?

- A The author makes an unjustified generalisation from the wishes of a minority of employees.
- B The author does not consider other factors that might support the need for a change in Government policy.
- C The author dismisses the Government's perspective without considering their argument.
- D The author does not consider the possibility that some immigrants are not skilled or employable.

[1]

- 9 The decline in the numbers of giant pandas is of major concern to everyone, not just committed environmentalists. At one stage estimates put their numbers at about 400, suggesting that extinction was a real possibility. However, a new, detailed count covering all of China has shown that there are about 1600 of these wonderful creatures. This dramatic increase in their numbers demonstrates that the pandas are breeding more successfully than previously thought and that we no longer need to worry as much about their long term survival.

Which of the following is the **best statement** of the **flaw** in the above argument?

- A The increase from 400 to 1600 is not enough to guarantee the survival of giant pandas.
- B The increase in numbers may be accounted for by a change in the method of counting rather than an actual increase in numbers.
- C The figure of 1600 may be incorrect because of the difficulty of finding giant pandas in remote areas.
- D There is insufficient information about giant pandas breeding cycles.

[1]

- 10 It is very fashionable to try to remember and seek meaning in our dreams. However, science has suggested that dreams may be random brain activity that helps remove useless information stored in our brains. This process keeps the nervous system working effectively and helps us to be in a good mood the next day. If this is the case, remembering and analysing our dreams will certainly be bad for us. We might be wise to base our approach to our dreams on the science of the brain rather than fashion.

Which of the following is an **underlying assumption** of the above argument?

- A Dreaming is the only way that useless information can be removed from the brain.
- B Analysing dreams may interfere with the processes that remove useless information from our brains.
- C Dreams are the best method of maintaining a good mood during the day.
- D The explanation of dreams as random brain activity is the only scientific explanation of dreaming.

[1]

- 11 A survey in an accident and emergency department in Wales has shown that attendances for injuries related to assaults increased on days when the national football or rugby team was playing. Not surprisingly, over consumption of alcohol has been suggested as a possible cause as fans tend to drink more on big match days, leading to more violence. There is also evidence that the result of matches affects the level of violence. Given the pressures on emergency departments, maybe we should all start hoping our national teams lose big matches, as this is bound to reduce the amount of violence surrounding the matches.

Which of the following is an **underlying assumption** of the above argument?

- A Fans are likely to drink even more alcohol when they are in a good mood.
- B Alcohol has a different effect on happy people than on unhappy people.
- C Most admissions to emergency departments on big match days are alcohol related.
- D Assaults are caused by a small minority of fans who have drunk too much alcohol.

[1]

- 12 Portable music players have become integral to teenage society. Sadly, many teenagers do not realise that in order to fit a thousand tracks onto their player, the original music is heavily compressed – up to 50% of the musical information is ‘thrown away’ resulting in poor quality sound. Many teenagers also listen to compressed music downloaded from the internet. There will be no need for record companies to make expensive quality recordings when so many teenagers are used to, and expect, very poor quality. Therefore, the quality of the original studio recording will ultimately also fall.

Which of the following, if true, would **most strengthen** the above argument?

- A Record companies have always produced popular music at a much lower quality than classical music.
- B Advances in technology mean that in the future the number of tracks that can be stored on personal music players will increase significantly.
- C Some popular bands now release their music via the internet before release on high quality uncompressed CDs.
- D Sales of high quality uncompressed CDs have dropped dramatically since compressed music downloaded from the internet became easily available.

[1]

- 13 Businesses often use expensive incentive packages to keep their workers happy. However, research in the US showed that three quarters of companies rated as the best places to work provided free snacks to their employees. One company even provided huge bowls of M&Ms which were changed to a single colour when targets had been met. It is hard to imagine a simpler way of thanking workers for their efforts. The message from this evidence seems clear – if businesses want to have happy workers, they should provide free snacks rather than expensive incentive packages.

Which of the following is the **best statement** of the **flaw** in the above argument?

- A There is no information about how many companies in the US have adopted the free snacks approach.
- B It is not possible to draw a general conclusion about what businesses should do from the evidence of one company that provided free M&Ms.
- C The companies rated as the best places to work may have used free snacks as one of many incentive packages offered to workers.
- D There may be ways for companies to thank their workers that do not involve free snacks or incentive packages.

[1]

- 14 When we do well, or win, most of us will attribute our good performance to our own skills and talents. However, we all seek to attribute our poor performance to some outside problem, such as poor decisions by umpires or referees. This is particularly true when we lose and in a competitive situation there is obviously some chance that any team or individual *will* lose. It is possible that umpires and referees make unfair decisions, but the source of all the complaints is more likely to be our natural ways of explaining our performance.

Which of the following, if true, would **most weaken** the above argument?

- A Managers of teams at the top of a league table were found to be less likely to complain about referees than managers of teams at the bottom of a table.
- B Managers of teams at the top of a league table were found to be more likely to complain about referees than managers of teams at the bottom of a table.
- C The number of complaints about referees is far greater in team sports than in individual sports.
- D Managers of teams at the top of a league table were found to make fewer but stronger complaints about referees.

[1]



- 15 A recent survey of employers showed that the trend towards positive comments on CVs is so dramatic that some applicants are now fabricating qualifications, skills and abilities. It is unsurprising that job adverts are asking for ever higher levels of qualifications and abilities. This exaggeration is bound to lead to difficulties for both employers and employees. In order to avoid the appointment of inadequately qualified applicants, we need job applicants to be far more accurate in their description of their qualifications and abilities.

Which of the following is the **best statement** of the **flaw** in the above argument?

- A The author fails to recognise that the skills and abilities needed by some jobs are very high.
- B The author does not consider the other processes, such as interviews, involved in a successful job application.
- C The author fails to recognise that the increase in unrealistic demands in job adverts may have led applicants to fabricate CVs.
- D The author chooses an extreme example of fabricated CVs in order to argue about a general problem in the usefulness of CVs.

[1]

- 16 The offside law in football requires assistant referees to make split second judgments about the relative position of the football and 6 or 7 players. These players may not be within the field of view of the assistant referees, requiring a small head movement to take in the positions. The physical limitations of the eye mean that the process of taking all this in is likely to take up to 0.3 of a second, during which time a fast running player may have covered 2 metres of ground, radically altering the relative positions of the players. The position is even more complicated given that players may be running towards or away from the assistant referee.

Which of the following is the **conclusion that can best be drawn** from the above passage?

- A Assistant referees can never make correct decisions about offside in football.
- B Assistant referees are not the best way of judging offside in football.
- C Using assistant referees to judge offside is likely to lead to some incorrect decisions.
- D We should have better training for assistant referees so that they can accurately judge offsides.

[1]

- 17 The amount of electricity used by items such as TVs and videos in 'standby mode' is as much as 6% of the total national domestic electricity bill, a staggering £500 million a year. Common items such as hairdryers or mobile phone chargers also contribute, as they use electricity when they are plugged in but not in use. Although it would be good for the environment to unplug all electrical items when we are not using them, each of the 25 million British households would save only about £20 each a year as a result. A larger sum of money would be needed to change people's habits and we will therefore continue to waste huge amounts of electricity.

Which of the following is an **underlying assumption** of the above argument?

- A A significant proportion of British households use hairdryers or mobile phones.
- B A significant majority of British households do not already switch off or unplug their electrical items when they are not in use.
- C Cost is the only factor affecting the use of electricity in a significant proportion of British households.
- D A significant proportion of British households do not understand the effect of electricity consumption on the environment.

[1]

- 18 It is natural for parents to want their children to succeed. Unfortunately, over-competitive parents, shouting until they are hoarse from the sidelines and exhorting their children to win during school sports days have become a common feature of school life. The intense pressure applied by these parents has been shown to reduce the performance of children. It also goes against the experience of teachers who know that 'do *your* best' is a far more successful message than 'do *the* best'. Some parents have got so carried away that some schools have had to ban parents from sports days to prevent children becoming upset.

Which of the following is the **conclusion that can best be drawn** from the above passage?

- A Parents who want their children to win school sports events would be well-advised to encourage their children to do their best.
- B Parents should not be allowed to attend school sports days.
- C Parents who want their children to win school sports events would be well-advised to stay away from school sports days altogether.
- D Schools should abandon sports days to avoid upsetting children.

[1]

- 19 Over the years environmentalists have suggested several alternative fuels for cars to reduce emissions. Their current favourite is hydrogen because it produces only water as the combustion product. However, this fuel is unlikely to be successful because of the difficulty of storing enough of the hydrogen gas in the car to allow it to cover a reasonable distance without re-fuelling. Pressurising the gas is the most common solution, but even at dangerously high pressures, the amount of hydrogen that can be stored will take a car only about 100 miles. The problem is compounded by the difficulty of 'refuelling' at such high pressures.

Which of the following is an **underlying assumption** of the above argument?

- A Pressurising the hydrogen is the only way that it is possible to store hydrogen in a car.
- B Nobody would ever use a fuel which will take a car only 100 miles before refuelling.
- C Other 'alternative' fuels, such as ethanol, do not allow cars to travel more than 100 miles on a 'full tank'.
- D Better ways of storing hydrogen in cars without using high pressures will not be developed.

[1]

- 20 Avoiding degenerative brain diseases, such as Alzheimer's, later in life is a major issue for our ageing society. The best way to do this seems to be to become a nun! Research at a convent showed that not only were the nuns particularly long lived, the rates of dementia were significantly lower than would be expected. We could do a lot worse than copy some of the nuns' habits – there is clearly a lot to be learnt from this group of people, whose busy schedules seem to support the 'use it or lose it' view of mental capacity. The positive spiritual attitude of the nuns also seems to have had a very positive effect on their mental capacities late in life.

Which of the following is the **best statement** of the **main conclusion** of the above argument?

- A The positive spiritual attitude of the nuns explains their low rates of dementia in later life.
- B Copying some of the nuns' behaviour might be one of the better ways to avoid degenerative brain diseases in later life.
- C Busy schedules are the explanation for nuns living longer and having less degenerative brain disease in later life.
- D Nuns could teach us a great deal in the battle against degenerative brain diseases in later life.

[1]

**Section B: Analysing and evaluating argument**

Read document 1, 'Single sex success', and answer questions 21 to 28.

**21** Identify the main conclusion of the argument presented in the passage.

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.....[1]

**22** Identify **five** reasons that are given to support the conclusion.

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2 .....  
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3 .....  
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4 .....  
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5 .....  
.....[10]

**23** The author uses the example of a school in Wales to support the argument in paragraph 2. Give **two** assumptions that the author must make about this school or its teaching in order to see this example as relevant to the argument in paragraph 2.

1 .....  
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.....[2]  
2 .....  
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.....[2]

24 (a) In paragraph 3, the author suggests that teenagers are unable to concentrate in lessons because of being too interested in the opposite sex. What other explanation could there be for teenagers being unable to concentrate in lessons?

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.....[1]

(b) How does evidence about adolescents being unable to concentrate in lessons support the author's argument that 'single sex schooling would solve the problem of poor concentration in all our schools'?

You should give **two** points, strengths and/or weaknesses that illustrate how successfully the author argues their case.

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.....[2+2]

25 At the end of paragraph 4, the author makes use of exam results statistics to support the claimed better academic record of single sex schools. Give **two** weaknesses in the author's use of this evidence.

1 .....  
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.....  
.....[2]

2 .....  
.....  
.....  
.....[2]

26 (a) In order to argue that single sex schools break down gender barriers in paragraph 5, what must the author assume about the choices that boys make in all-boys schools?

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.....  
.....[2]

(b) At the end of paragraph 5, the author dismisses the views of those who see single sex schools as discriminatory. Name and explain the flaw in the author's reasoning behind this dismissal.

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.....[1+2]

27 (a) Give **one** assumption that the author must make in order to argue that 'single sex schools are more likely to provide positive male role models' in paragraph 6.

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.....[2]

(b) How does the author explain the unpopularity of boys-only schools with some parents in paragraph 6?

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.....[1]

(c) Using evidence **in paragraph 4**, what else could explain the unpopularity?

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.....[2]

(d) Identify **one** piece of selective evidence used in paragraph 6.

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.....[1]

28 Identify **one** inconsistency in the author's overall reasoning.

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.....[2]

Read Document 2, 'The American perspective', and answer questions 29–32.

**29 (a)** When suggesting that California 'led the way', what inference would the author like us to draw?

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**(b)** What would the author like us to believe about the outcome of the California trial?

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.....[1]

**30** The author sees the extra money allocated as a 'huge vote of confidence'. What alternative explanation could there be for the extra money allocated to the single sex academies in California?

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.....[2]

**31** Name and explain a flaw in the author's reasoning that 'America is once again showing us the way forward'.

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.....[1+2]



32 (a) At the end of this passage the author dismisses anti-American arguments by using an analogy. Explain what is being compared in this analogy.

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.....[2]

(b) Give **one** relevant similarity and **one** relevant difference (or dissimilarity) in the comparison.

Similarity

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.....[2]

Dissimilarity

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.....[2]

**Total marks for Section B [50] marks**

**Section C: Developing your own arguments**

Questions 33 to 37 refer to Document 1, 'Single sex success?'

**33 (a)** The choice is not as simple as all mixed schools or all single sex schools. Identify a compromise position using information given by the author in the passage.

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.....[1]

**(b)** Describe a possible advantage of this compromise position.

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.....[2]

**34** In paragraph 4, the author sees evidence that girls are more likely to choose traditional male subjects in single sex schools as 'important'. Give **one** reason why it might not be.

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.....[2]

**35** State a general principle used by the author in the passage.

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.....[2]

- 36** The author refers to the decline in the number of single sex schools over the last 40 years in this country – evidence which might usefully be used by opponents of single sex schooling. In order to support the author of ‘single sex success’, construct an argument that shows why this decline is **not** relevant to the merits of single sex schooling in 2006.

Marks will be given for a well-structured argument that contains several reasons that support an intermediate conclusion and an overall conclusion. Your argument may also contain examples or evidence and counter assertions.

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