



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Advanced Level

**GENERAL PAPER**

**8001/21**

**October/November 2010**

**1 hour 30 minutes**

Additional Materials: Answer Booklet/Paper



**READ THESE INSTRUCTIONS FIRST**

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **one** question.

The total time of 1 hour 30 minutes includes 10 minutes for you to study the questions before you begin your answer. You may make notes during this time if you wish.

Up to 15 marks will be given for the quality and accuracy of your English throughout this paper.

Dictionaries are **not** permitted.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **7** printed pages and **1** blank page.



- 1 Study this dialogue between two colleagues and then answer all the questions (a)–(d) which follow.

Inwo:	Another coffee?	
Jubka:	Why not? We're not due back yet.	
Inwo ( <i>To waitress</i> ):	Same again, please.	
Jubka:	Jubka, what's that you're looking at?	
Jubka:	'The Weekly Sentinel'. It features the 'Kurebo Holocaust', if you can call it that.	5
Inwo:	The what?	
Jubka:	The so-called 'Kurebo Holocaust'. You know, the year before last's massive bush fire. They've just published the findings of the Official Independent Enquiry. Interestingly –	10
Inwo:	Oh, that? Terrible business! All those properties destroyed on the outskirts just because the wind was in the wrong direction.	
Jubka:	The wind, the drought, and, it seems to me, a lot of human error.	
Inwo:	You mean the farmers? They ought to be shot for letting it get out of control in the first place. Of all the –	15
Jubka:	Slash and burn's a tried and tested practice in the right conditions, how else can they clear the ground for the next crop? But when –	
Inwo:	The ground's tinder dry, a gale is blowing, and thousands are living nearby –	20
Jubka:	Well, perhaps, not nearby, but not too far away, and the wind came after, but still –	
Inwo:	And the cheek of it! They blamed the city folk coming away from the Nature Reserve and dropping lighted cigarette ends all over the place.	25
Jubka:	Really? ( <i>To waitress</i> ) Thanks very much. Sugar?	
Inwo:	That's what the RTV News said, so it's a fact.	
Jubka:	Because the RTV News said?	
Inwo:	Yes, because the RTV News said. Anyway, the authorities should have replaced all those fire-warnings that had been vandalised. You can't blame the odd day tripper if they're not posted up. And fancy hiring mere kids as fire-wardens!	30
Jubka:	Perhaps. All the same ...	
Inwo:	Typical false economy! The result, all the fire-engines in the region had to be mobilised.	35
Jubka:	All?	
Inwo:	Together with a fleet of combat helicopters. Now there was a waste!	
Jubka:	I thought we only had –	40
Inwo:	And half the National Guard to keep the looters at bay once the evacuation of everyone living in the path of the fire started in earnest. Meanwhile, there was a crime wave everywhere else. It's high time that lot was booted out!	
Jubka:	That lot?	45
Inwo:	All the politicians and officials up at Kurebo. How incompetent –	
Jubka:	Just because of one fire? And haven't they paid out millions, in the past few months, to all those who were made homeless?	
Inwo:	Money they've borrowed. Then, of course, all the office workers were laid off because of that pall of smoke hanging over the city centre.	50
Jubka:	Still, no-one actually died, did they? Nowhere, at any stage.	

Inwo:	I'm sure they have, but they'll have hushed it up, that's what always happens. Anyway, did you hear about Hermes?	
Jubka:	Hermes, who's he?	55
Inwo:	You don't read the papers with a personal angle, do you? He's that Fire Chief from Lussus who received the summons to proceed to the capital like everyone else but never made it.	
Jubka:	Why ever not?	
Inwo:	His engine got stuck up a dirt track when it turned off the main road to deal with what the <i>Daily Thrill</i> called a 'minor conflagration.'	60
Jubka:	All things are relative, I suppose.	
Inwo:	And, meanwhile, two of his colleagues lost their lives in a blazing inferno a long way from home. And a reporter died in the course of duty. His –	65
Jubka:	From the <i>Daily Thrill</i> ?	
Inwo:	Yes, how did you guess?	
Jubka:	And what did this Hermes say in his defence?	
Inwo:	Oh, some nonsense about immediate priorities coming first and that he knew the lady whose cooking pan had caught fire. I ask you, have you ever...	70
Jubka:	So, he wouldn't have been exactly popular in his neighbourhood if he had ignored her and raced on past? Surely –	
Inwo:	You must be joking! Come on, we must get moving.	75

Note: When a question asks for an answer IN YOUR OWN WORDS and you select the appropriate material from the passage for your answer, you must still use your own words to express it. Little credit can be given to answers which only copy words or phrases from the passage.

- (a) Look at the following quotations from the dialogue and, in each case, **briefly** explain what it tells us about either Inwo or Jubka.
- (i) 'the "Kurebo Holocaust", if you can call it that.' (lines 5–6)
  - (ii) 'They ought to be shot for letting it get out of control'. (lines 15–16)
  - (iii) 'That's what the RTV News said, so it's a fact.' (line 28)
  - (iv) 'Perhaps. All the same...'. (line 34)
  - (v) 'Oh, some nonsense about immediate priorities coming first'. (line 70) [10]
- (b) In about **100 of your own words**, compose the final paragraph in the Official Independent Enquiry report praising the authorities over the whole affair of the 'Kurebo Holocaust'. You must base your paragraph on the conversation above but you need to interpret the facts. [10]
- (c) In about **100 of your own words**, compose the final paragraph in the Official Independent Enquiry report criticising the authorities over the whole affair of the 'Kurebo Holocaust'. You must base your paragraph on the conversation above but you need to interpret the facts. [10]
- (d) Bearing in mind the situation referred to in the dialogue, develop one objection to the claim by Hermes that immediate priorities come first. Answer in about **50 of your own words**. [5]

Note: Up to an additional 15 marks will be available for use of English.

2 Study the information and then answer all the questions (a)–(d) which follow.

You are the Managing Director of a small but long-established firm that specialises in the manufacture of high-quality furniture for export.

As a result of the global recession and a sharp fall in orders, you have had to cut back on overheads such as training, sponsorship and advertising. As a further economy measure, you now have to decide on which member of your Senior Management Team should leave the firm. (Apart from their own particular responsibilities, this Senior Management Team advises the Managing Director on the overall running of the business.)

Below are the notes you have made on your three colleagues.

**A Felix Momsenta**

1. He plays too much golf.
2. Much loved by the workforce.
3. Two children in the Armed Forces.
4. Great grandson of the original founder of the firm.
5. In the past, he has invested heavily in the company.
6. Hopeless with figures.
7. Family still owns the site on which our factory stands.
8. Can't stand paperwork or long business meetings.
9. Lost a fortune in the recent financial meltdown.
10. Nice manners. Can always be trusted with foreign visitors.

**B Grace Nautienne**

1. It was her flair for publicity that gained us worldwide fame.
2. Almost always exceeds her budget.
3. I do like the biscuits she brings for our Team meetings.
4. She's my wife's best friend.
5. Puts in long hours every day.
6. She will make the odd unfortunate remark that everyone hears.
7. She has often applied for 'more rewarding' positions elsewhere.
8. Her husband's the Minister for Overseas Trade.
9. Can be very bossy. Won't take no for an answer.
10. A pity I've had to turn down so many of her 'brilliant' ideas.

**C Henry Ordoma**

1. Must be nearly 60.
2. Who else could put the finishing touches to our products?
3. He's never complained when we've had to freeze everyone's salary in the past.
4. Tends to come into work only when it suits him.
5. His mind goes blank as soon as we suggest anything new.
6. Without him, that strike would have gone on for weeks.
7. He devotes much of his spare time to deserving charities.
8. His family have been skilled craftsmen here for three generations.
9. He's much too fond of gossip.
10. He often shows a great deal of commonsense.

Note: When a question asks for an answer IN YOUR OWN WORDS and you select the appropriate material from the passage for your answer, you must still use your own words to express it. Little credit can be given to answers which only copy words or phrases from the passage.

- (a) As Managing Director, which member of the Senior Management Team would you be most inclined to ask to leave, and why? Justify your reasoning in about **100 of your own words**. Do not refer to the two other members of the Senior Management Team. [10]
- (b) As Managing Director, which member of the Senior Management Team would you be least inclined to ask to leave, and why? Justify your reasoning in about **100 of your own words**. Do not refer to the two other members of the Senior Management Team. [10]
- (c) Which of the thirty comments recorded above has, in your opinion, the least relevance to the decision that has to be taken? Answer in about **50 of your own words**. [5]
- (d) In about **100 of your own words**, describe the effects of the recession on one specific business or enterprise in your area. [10]

Note: Up to an additional 15 marks will be available for use of English.

3 Read the following passage, and then answer all the questions (a)–(e) which follow.

Much attention over the coming months will focus on the two great scientific anniversaries of 2009. First, there will be a double dose of Charles Darwin, who was born 200 years ago next February and published his masterwork, *On the Origin of Species*, 150 years ago next November. Then there is Galileo Galilei, who in August 1609 demonstrated to the Venetian authorities the ability of a telescope to gaze into the heavens. 5

In many ways, the most exciting research of today is following the trail blazed by these two pioneers. Darwin, for example, gave us our first coherent, compelling explanation of where we came from – but the quest to understand precisely how natural selection operates has taken us deep into the world of genetics, to the point where we can analyse and alter DNA to make entirely new kinds of creature. 10

This year, Dr J. Craig Venter, one of those who mapped the human genome, and his team could become the first to create artificial life. This could include a microbe that scrubs carbon dioxide from the air, helping to alleviate the effects of global warming. After piecing together the genetic code of the mammoth, we await the publication of the code and analysis of our Neanderthal cousins, along with those of maize, soybeans, oranges, tomatoes and a host of other crops. 15

On the health front, the ability to scan our genes for links to cancer, diabetes or mental illness will transform the landscape of medical research. Yet the implications of this quantum leap in knowledge are not just scientific. An example of controversies that lie in wait came this August, when U.S.A.'s legislature passed the Genetic Information Nondiscrimination Act, which forbids insurers and employers from discriminating against people on the basis of genetic tests. 20

While Darwin's heirs are busy looking inside our bodies, Galileo's have their eyes on the skies. Although delays and budgetary constraints could make 2009 a tough year for space exploration, there are still exciting things happening: the Hubble Space Telescope, which is due for repairs, will be joined by the Herschel telescope and the Planck probe, which will analyse the cosmic radiation left by the Big Bang. The search for Earth-like planets will be stepped up: following the exploration of Mars's icy poles by Nasa's Phoenix lander, a Russian craft should be voyaging to one of the planet's moons. 25 30

Equally exciting, there is at last the sense that space exploration is becoming a genuinely open market, as – credit crunch permitting – nations such as China and India seek prestige alongside U.S.A., Russia and Europe. Private enterprise is also on the verge of making a truly significant contribution: Virgin Galactic will be testing its commercial shuttle, Spaceship Two, ahead of taking paying passengers in 2010. Indeed, as we approach the 40<sup>th</sup> anniversary of the first Moon landing, the bulk of those who have experienced zero gravity could soon be tourists rather than scientists or explorers. 35

All this is, of course, barely scratching the surface of the potential for discovery in 2009. As our oil supplies dwindle, and climate change becomes more of a threat, research into renewable energy, nuclear fission and fusion, and techniques to compensate for the damage we have inflicted on the planet's climate, will redouble. Materials science is also making tremendous strides, whether it be creating 'intelligent' fabrics that repel mosquitoes or become warmer in cold weather; bendable, paper-thin television screens; or employing nanotechnology to construct tremendously effective new substances and devices. 40 45

We will also march further down the path to artificial intelligence and quantum computing, creating lightning-fast machines that understand and respond to our needs with ever greater intelligence and accuracy. One might, indeed, argue that we already have such a facility in the form of the Google database, which is absorbing more and more of the body of humanity's knowledge, and getting even better at interpreting it for meaning. 50

And let's not forget the Large Hadron Collider. So far, the results have been unimpressive – not least because it broke down before the particles being sent round the vast tunnel were actually smashed into each other. But, once it is up and running, we will have access to a wealth of information about the nature of the subatomic world, and hopefully an explanation for the existence of the mysterious 'dark matter' and 'dark energy' that apparently make up so much of our universe. 55

Note: When a question asks for an answer IN YOUR OWN WORDS and you select the appropriate material from the passage for your answer, you must still use your own words to express it. Little credit can be given to answers which only copy words or phrases from the passage.

(a) From the passage identify:

- (i) a mention of our humanoid predecessors
- (ii) the name given to the process from which our universe originated
- (iii) evidence outside the first paragraph that the article was written towards the end of 2008 rather than at the beginning of 2009
- (iv) a reference to how the internet is growing more powerful. [4]

(b) Although much of the article is decidedly optimistic, it does suggest a number of factors that may slow down the advance of science. **In about 30 of your own words**, explain what **three** of these factors are. [3]

(c) To what extent is the article directly concerned with 'the trail blazed by these two pioneers' (Darwin and Galileo)? **Answer in about 100 words. Use your own words wherever possible** as you develop your argument. [10]

(d) Select **one** area of research mentioned in the article and, **in about 60 of your own words**, explain how it might affect you personally in the years to come. [6]

(e) (i) Explain the meaning of **six** of the following words or phrases as they are used in the passage. You may answer in one word or a short phrase.

coherent (line 8)  
 alleviate (line 14)  
 controversies (line 20)  
 prestige (line 34)  
 verge (line 35)  
 fusion (line 42)  
 devices (line 47)  
 wealth (line 57)

[6]

(ii) For each of the words that you have chosen from the list, write a separate sentence to illustrate its meaning as used in the passage. Your six sentences should **not** deal with the subject matter of the passage. [6]

Note: Up to an additional 15 marks will be available for use of English.

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*Copyright Acknowledgements:*

Question 3      © Robert Colvile; *What does the year hold for science?* [www.telegraph.co.uk/scienceandtechnology/902522](http://www.telegraph.co.uk/scienceandtechnology/902522); 9 April 2009.

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