

Write your name here

Surname

Other names

Pearson
Edexcel GCE

Centre Number

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Candidate Number

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General Studies

Advanced Subsidiary

Unit 1: Challenges for Society

Monday 12 May 2014 – Morning
Time: 1 hour 30 minutes

Paper Reference

6GS01/01

You must have:

Insert (enclosed)
Calculator

Total Marks

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Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Do not return the insert with the question paper.

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Quality of written communication will be taken into account in the marking of your answers
– *you should take particular care with your spelling, punctuation, grammar and clarity of expression.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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SECTION A

Answer ALL questions.

You should aim to spend no more than 20 minutes on this section.

Choose an answer A, B, C or D, and put a cross .
If you change your mind about an answer, put a line through the box
and then mark your new answer with a cross .

Use the information below to help you answer questions 1 to 5.

Trends in UK life expectancy and healthy life expectancy at birth

Year	Women		Men	
	1981	2001	1981	2001
Life expectancy in years (LE)	76.8	80.4	70.9	75.7
Healthy life expectancy in years (HLE)	66.7	68.8	64.4	?
HLE as % of LE	86.8%	85.6%	90.8%	88.5%

(Source: adapted from Postnote 257, Parliamentary Office of Science and Technology)

1 Between 1981 and 2001 life expectancy for women increased by

- A 2.1%
- B 3.6%
- C 4.5%
- D 4.7%

(Total for Question 1 = 1 mark)

2 What is the healthy life expectancy for men born in 2001?

- A 64.4
- B 67.0
- C 75.7
- D 88.5

(Total for Question 2 = 1 mark)



3 Assuming a constant rate of increase in life expectancy, when is life expectancy for men likely to reach 90?

- A 2021
- B 2061
- C 2071
- D 2091

(Total for Question 3 = 1 mark)

4 The figures in the table are predictions, calculated using data gathered in earlier years. This process is best described as

- A deductive
- B axiomatic
- C inductive
- D integral

(Total for Question 4 = 1 mark)

5 The figures for healthy life expectancy are partly obtained from surveys. People respond to a series of questions about their health and their ability to perform common daily tasks. The conclusions drawn from such responses are most likely to be criticised for being

- A empirical
- B objective
- C unreliable
- D random

(Total for Question 5 = 1 mark)

6 In choosing between different scientific theories, Occam's Razor would favour a theory which

- A makes predictions which cannot be falsified
- B has been tested successfully
- C explains the widest variety of observations
- D does not include any mathematical laws

(Total for Question 6 = 1 mark)



7 Which of these can be investigated through scientific experimentation?

- A Should we spend more money on developing renewable energy?
- B Is stem cell research unethical?
- C Should the NHS fund non-essential cosmetic surgery?
- D Is controlled nuclear fusion possible?

(Total for Question 7 = 1 mark)

8 Which of these is **not** associated with the development of scientific knowledge about the structure of DNA?

- A Francis Crick
- B James Watson
- C Rosalind Franklin
- D Marie Curie

(Total for Question 8 = 1 mark)

9 The UK government provides funding for scientific research

- A to ensure there are enough jobs for research scientists
- B so that private companies do not have to fund their own research
- C so that it can restrict who has access to the research results
- D to ensure that large-scale, long-term research is done

(Total for Question 9 = 1 mark)

10 Which of these statements best describes Intelligent Design and Creationism?

- A Intelligent Design is an argument used to support Creationism.
- B Creationism is an argument used to support Intelligent Design.
- C Intelligent Design and Creationism mean the same thing.
- D Creationism and Intelligent Design are incompatible.

(Total for Question 10 = 1 mark)



11 Which of these is **not** true of Utilitarianism?

- A It aims to achieve the greatest happiness of the greatest number.
- B It is based on assessing the consequences of actions.
- C It is an ethical theory to determine which actions are right or wrong.
- D It includes the idea that some actions are inherently right or virtuous.

(Total for Question 11 = 1 mark)

12 Which of these is true of animal testing in the UK?

- A The government regulates tests carried out in universities but not in private companies.
- B The majority of animals used for testing are primates like monkeys.
- C Medicines tested on animals still need to be tested on humans.
- D Animal testing is preferred to other methods because it does not raise ethical issues.

(Total for Question 12 = 1 mark)

13 In the UK 'habeas corpus' means that if the police arrest a suspect

- A they must eventually release the suspect unless charged
- B they can deny the suspect access to legal advice
- C they cannot grant the suspect bail unless this is agreed by a court
- D they must caution the suspect about their rights

(Total for Question 13 = 1 mark)

14 Which of these is based on custom?

- A Civil law
- B Common law
- C Criminal law
- D Canon law

(Total for Question 14 = 1 mark)



15 Which of these is primarily intended to reintegrate criminals into society?

- A Retribution
- B Restitution
- C Rehabilitation
- D Remission

(Total for Question 15 = 1 mark)

Use the information below to help you answer questions 16 to 20.

Photofits from DNA

Police could one day construct photofits using DNA from crime scenes, experts have claimed after identifying five genes which govern facial features such as nose shape.

Researchers used MRI scans and photographs to map out different facial features and then linked these to an analysis of the genes of 10,000 people, looking for common genetic variants. It is already possible to predict certain eye and hair colours with high accuracy.

Prof Manfred Keyser from the Erasmus University in Rotterdam, who led the study, said: 'Perhaps some time it will be possible to draw a phantom portrait of a person solely from his or her DNA left behind, which provides interesting applications such as in forensics.'

The research was published in the online journal *Public Library of Science Genetics*.

16 The phrase 'Police could one day construct photofits using DNA from crime scenes' contains

- A fact only
- B opinion only
- C fact and opinion
- D no fact or opinion

(Total for Question 16 = 1 mark)

17 The phrase 'Researchers used MRI scans and photographs' contains

- A fact only
- B opinion only
- C fact and opinion
- D no fact or opinion

(Total for Question 17 = 1 mark)



18 Paragraph 3 contains an argument based on

- A** induction
- B** deduction
- C** analogy
- D** authority

(Total for Question 18 = 1 mark)

19 Which of these do **not** contain DNA?

- A** Skin cells
- B** Red blood cells
- C** Cheek cells
- D** Hair cells

(Total for Question 19 = 1 mark)

20 In the UK the police do not need consent to take DNA samples from someone

- A** stopped in a random search
- B** suspected of committing an offence
- C** arrested for an indictable offence
- D** convicted for any offence

(Total for Question 20 = 1 mark)

TOTAL FOR SECTION A = 20 MARKS



SECTION B

Answer ALL questions.

You should aim to spend no more than 30 minutes on this section.

Read Source 1 on the separate insert and then answer questions 21–27.

21 Source 1 only gives specific information about kidney transplants. Name three types of organ transplant not mentioned in the source.

1

2

3

(Total for Question 21 = 3 marks)

22 From paragraph 1, identify three reasons why there is an increasing difference between the number of people awaiting transplants and the number of people receiving them.

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(Total for Question 22 = 3 marks)



23 Using your own knowledge, give three reasons why the demand for organ transplants is increasing.

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(Total for Question 23 = 3 marks)

24 Use the information in paragraph 2 to calculate the percentage of the patients on the waiting list for a kidney transplant who did not receive a transplant organ.

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(Total for Question 24 = 3 marks)



25 What is meant by 'presumed consent' and 'informed consent'?

Presumed consent

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.....

.....

Informed consent

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.....

.....

(Total for Question 25 = 2 marks)



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Turn over for Section C



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Handwriting practice area with 28 horizontal dotted lines.

(includes 4 marks for Quality of Written Communication)

(Total for Question 28 = 20 marks)



29 In recent years the prison population in the UK has increased. At the same time recorded levels of crime in almost all categories have fallen. Nevertheless, fear of crime seems to be greater than ever. We are told that the elderly are trapped in their homes on crime-ridden estates, afraid to venture out after dark. (In fact, it is the young who are more likely to be victims of crime.) Late-night travel on public transport is seen as risky. The tabloid press portray prisons as holiday homes for criminals, which encourage crime rather than provide a harsh deterrent.

To what extent can it be argued that reducing fear of crime is as important as reducing the levels of crime?

Dotted lines for writing.



Handwriting practice area with 20 horizontal dotted lines.



Handwriting practice area with 20 horizontal dotted lines.

(includes 4 marks for Quality of Written Communication)

(Total for Question 29 = 20 marks)

TOTAL FOR SECTION C = 40 MARKS
TOTAL FOR PAPER = 90 MARKS



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General Studies

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Insert

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Source material

Organ Transplants in the UK

Many lives have been saved by human organ transplantation, but worldwide some 60% of patients die before a suitable transplant organ is available for them. In the UK, increases in diseases such as hepatitis C and diabetes have led to greater demand for transplants. However, the supply of suitable organs has decreased as fewer people are killed on the roads. Improved medical care has also increased survival rates in intensive care units.

The growing gap between demand and supply is clear in the case of kidney transplants, the most common form of transplantation. In 2003, there were 1838 transplants in the UK but 6592 patients were awaiting a kidney transplant. The use of organs from genetically modified animals may provide an answer, although for many people this raises ethical issues. Stem cell therapy also holds out the possibility of reducing the need for transplants, by enabling treatment rather than replacement of failing organs. A utilitarian argument might also focus on the cost of treatment, with an estimated 1.5% of the NHS budget being spent on treatments for approximately 0.05% of the population who suffer from chronic kidney conditions.

But perhaps there is a simpler solution to this problem. The UK has a legal opt-in system for organ donors, which means that medical staff have to confirm that a potential donor has given informed consent for their organs to be used. For most people this means registering as an organ donor and carrying a donor card. Some other countries have adopted a legal system of presumed consent whereby everyone is assumed to be a potential donor unless they opt out. Spain has such a system and its number of donors is almost three times the UK figure.

We do not need fancy science like GM pigs or human organs growing in the laboratory to solve the problem of a lack of donors. Persuading healthy adults that they should be a little more altruistic has done the trick elsewhere, so why shouldn't it work here?