

ADVANCED GCE

GENERAL STUDIES

Culture, Science and Society: Making Connections

F734

Candidates answer on the answer booklet

OCR supplied materials:

- 8 page answer booklet
(sent with general stationery)

Other materials required:

None

**Tuesday 14 June 2011
Morning**

Duration: 1 hour 30 minutes



INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the spaces provided on the Answer Booklet.
- Use black ink. Pencil may be used for graphs and diagrams only.
- If you use additional sheets of paper, fasten the sheets to the Answer Booklet.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **both** questions.
- Do **not** write in the bar codes.

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 **100**.
- You are advised to divide your time equally between the questions.
- **The quality of your written communication will be assessed, including clarity of expression, structure of arguments, presentation of ideas, grammar, punctuation and spelling.**
- This document consists of **4** pages. Any blank pages are indicated.

Answer **both** questions.

Consider the following source material concerning human genetic engineering and then answer the question which follows in the form of an essay.

SOURCE 1

In January 2009 the Daily Mail published an article about the birth of a girl who was free of a gene known to cause Breast Cancer. The parents had taken the decision to follow pioneering treatment carried out by the NHS because the father's grandmother, mother and sister had all suffered with the disease.

The technique, 'pre-implantation genetic diagnosis', was described as the same as that used at 12 weeks for screening conditions such as Down's Syndrome. The major difference was that this technique was used on embryos, not foetuses. It has already been used in the UK to free babies of inherited disorders such as cystic fibrosis and Huntington's disease. Two embryos were implanted in the womb, one of which led to pregnancy. This process had to be licensed by the Human Fertilisation and Embryology Authority which grants permission on a case-by-case basis. 5
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There was mixed reaction.

The LifeLeague campaign group felt that this was not a move 'towards designer babies, it *is* designer babies ... today it is cancer, next year it will be IQ, and the year after that blue eyes and blond hair'. 15

Cancer charities offered a cautious welcome to the breakthrough, though fearing that some couples with a family history of cancer might feel morally compelled to do the same thing.

A spokesman for the British Fertility society said that doctors in the USA had been using the process for selecting embryos carrying the 'cancer gene' for some years and added that this would not open the floodgates to general embryo screening. 'It does not involve genetic engineering – this is not a designer baby'. 20

(adapted from the Daily Mail, January 2009)

SOURCE 2

In July 2009, researchers at Newcastle University and the NorthEast England Stem Cell Institute announced that a new technique had been developed which made possible the creation of human sperm in the laboratory using embryonic stem cells.

The research was described as an important development as it would allow scientists to study how cells involved in reproduction are affected by toxins; for example why young boys with leukaemia who undergo chemotherapy can become infertile for life. It could lead to a solution to the particular problem as well as to a better general understanding of how genetic diseases are passed on.

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It was stressed that these In Vitro Derived sperm will not and cannot be used for fertility treatment. The researchers understood that some people might have concerns. "This does not mean that humans can be produced 'in a dish' ... This work is a way of investigating why some people are infertile and the reasons behind it."

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(adapted from Newcastle University Press Release, July 2009)

- 1 Using the sources and your own knowledge and experience, outline the cultural, scientific and social issues raised by developments in human genetic engineering such as those referred to. How far do you think such research should be allowed to go? **[50]**

Consider the following source material concerning selfishness and individualism, and then answer the question which follows in the form of an essay.

SOURCE 3

Children's lives 'blighted by the me-first society'

Children's lives are being blighted by Britain's selfish society, a landmark report concluded.

The Good Child Inquiry, commissioned by 'The Children's Society', claimed that almost all of the problems young people faced stemmed from the culture of 'excessive individualism' that has developed in recent decades. 5

It said the "me-first" attitude of adults causes family breakdowns, competition in education, a growing gap between rich and poor, unkindness among teenagers and premature sexualisation caused by advertisers.

The two-year investigation backed by Dr Rowan Williams, the Archbishop of Canterbury, and based on interviews with 35000 children, parents, and professionals, claimed British children are less happy than those in almost any other developed country. 10

The number of children with emotional or behavioural problems rose from 10% in 1986 to 16% now, according to the report. Children in broken homes are 50% more likely to suffer problems at school or become depressed. A third of 16-year-olds live apart from their fathers, while Britain has the highest rate of teenage pregnancy in western Europe. 15

It placed the blame for this problem on the growth of a struggle for personal status and success, which it said filled the vacuum created by the decline in religious belief and community spirit.

The Chief Executive of The Children's Society commented that 'there is one common theme that links all these problems: excessive individualism. This is the widespread belief among adults that the prime duty of the individual is to make the most of their own life, rather than contribute to the lives of others'. 20

Asked what caused this selfish culture to develop in Britain, Lord Layard, the Labour peer who wrote the final report replied, "You have a decline in religious belief and a decline in what you may call socialism, that kind of social solidarity which was quite strong in the first half of the twentieth century. I don't want to pin this on capitalism". 25

(adapted from The Daily Telegraph, 3 February 2009)

- 2 Using the source and your own knowledge and experience, outline ways in which developments in culture, science and society have contributed to the problems of a 'me-first society'. How far do you believe individualism can be a benefit to society? [50]



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