

**ADVANCED GCE UNIT
GENERAL STUDIES**

2965

The Scientific and Cultural Domains

WEDNESDAY 20 JUNE 2007

Morning

Time: 1 hour 30 minutes

Additional materials: Answer Booklet (8 pages)



INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the spaces provided on the answer booklet.
- Write your answers in the answer booklet.
- If you use additional sheets of paper, fasten the sheets to the answer booklet.
- Answer **one** question in Section A and **one** question in Section B.

INFORMATION FOR CANDIDATES

- The number of marks for each question 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 Sections A and B.
- **Where an answer requires a piece of extended writing, the quality of your written communication will be assessed, including clarity of expression, structure of arguments, presentation of ideas, grammar, punctuation and spelling.**
- Credit will be given for appropriate use of examples.

ADVICE TO CANDIDATES

- Read each question carefully and make sure you know what you have to do before starting your answer.

This document consists of **4** printed pages.

Section A**The Scientific Domain**

Answer **one** question from this section.

- 1** People studying the history of science have described the following contributions made by four scientists.

Eratosthenes, 2200 years ago, was the first person to measure the circumference of the earth.

Archimedes (287–212BC) found that an object in water experiences an upward force equal to the weight of the water displaced.

Isaac Newton (1642–1727) provided an understanding of why objects fall to the earth, carried out experiments to test theories and worked out three universal laws.

Sun Junying, a Chinese scientist working in 2004, was honoured for her work in Antarctica where she studied chemicals stored by glaciers. Her work has been warmly praised for the dedication shown whilst working through the hardships in glacial environments.

Using examples, discuss why it is difficult for people who study the history of science to be certain of the contribution made by a scientist. [50]

- 2** Developments are continually taking place in telecommunications. Mobile telephones, for example, now include digital cameras and points for access to the internet. Describe and justify a new development that you would wish to see take place in telecommunications. Assess the social implications of your prospective invention. [50]
- 3** What reasons might be used to justify locating an industrial site in an environmentally sensitive or fragile area? How might local authorities reduce the environmental impact whilst allowing such a project to go ahead? [50]

Section B**The Cultural Domain**

Answer **one** question from this section.

4 Describe the central ideas of humanism today and assess the extent to which they provide a satisfactory alternative to religion in everyday life. [50]

5 Explain why some parents are reluctant for their children to go into higher education to study such subjects as architecture, fashion, painting, photography, sculpture, drama and music.

What arguments might be used to persuade reluctant parents that **one** of these subjects is worth studying at university? [50]

6 There have been many different views about the role of creative people. Some attempt to transmit a description of the society in which they live. Others try to transmute or change their society.

Using examples, consider the extent to which creative people whose work you know attempt to describe or change the society in which they live. [50]

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