

General Certificate of Education
January 2007
Advanced Subsidiary Examination



ECONOMICS **ECN1/2**
Unit 1 Part 2 Data Response: Markets and Market Failure

Thursday 18 January 2007 9.00 am to 10.00 am

For this paper you must have:

- an 8-page answer book
- the question paper for Part 1 (ECN1/1).

You may use a calculator.

Time allowed: the total time for papers ECN1/1 and ECN1/2 together is 1 hour

Instructions

- Use blue or black ink or ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is ECN1/2.
- Answer **EITHER** Question 1 **OR** Question 2.

Information

- The maximum mark for this paper is 25.
- The marks for questions are shown in brackets.
- You will be marked on your ability to use good English, to organise relevant information clearly and to use specialist vocabulary where appropriate.

Advice

- You are advised to spend at least 45 minutes on paper ECN1/2.

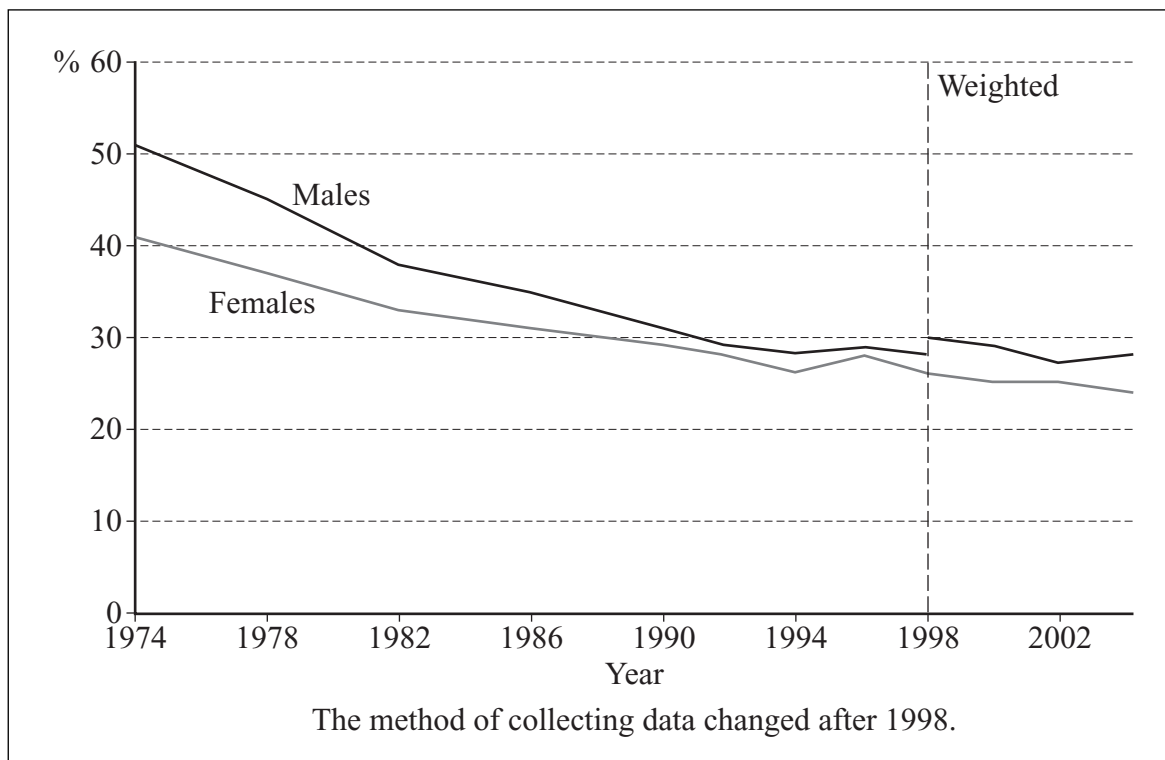
Answer **EITHER** Question 1 **OR** Question 2.

EITHER

Total for this question: 25 marks

1 Study **Extracts A and B**, and then answer **all** parts of Question 1 which follows.

Extract A: Changes in adult cigarette smoking, Great Britain



Source: ONS General Household Survey, *Living in Britain, 2004/5*, published in December 2005

Extract B: South Korean smokers face the pain of withdrawal

South Korea has the highest proportion of male smokers (62 per cent) in the world's developed countries. The government has recently embarked on an all-out advertising campaign to encourage Koreans to quit, as well as by imposing large tax increases.	1
But Koreans are not known for doing things in moderation and quitting smoking is no exception. While some countries, including Ireland and Cuba, and cities, such as New York, have banned smoking in bars and public places, South Korea is preparing to join Bhutan, the tiny Himalayan kingdom, as the only countries to ban the sale of cigarettes. Law-breakers would be punished with five years in prison or a fine of £26 000. If passed, the new law will not come into full effect for 10 years, to give tobacco farmers and retailers, not to mention the government, a chance to find alternative revenue sources.	5 10
Even by Korean standards, it is ambitious. "Prohibiting tobacco? That's absurd. It can hardly be acceptable," says the director of the Korean Smokers' Protection Association. "Even if the government passes the law, smoking will never disappear." So meanwhile, the government is running a more orthodox campaign. At the end of 2003, the price of a packet of cigarettes was 78 pence. Having increased the tax on a packet of cigarettes by 26 pence in 2004, the Korean government intends to increase the tax by the same amount again in 2005. The health ministry estimates the 2004 increase led to an 8.3 per cent fall in smoking among Korean males.	15 20
But there remains a sizeable group of smokers not deterred by the price rises. "I'm going to buy cigarettes even if they cost £5.00," says Lee Young-Hoon, a computer engineer. "This campaign is silly. I may decrease smoking but I will never quit." Cigarette manufacturers are, on the whole, resisting any change. Korea Tobacco and Ginseng, the former state-owned monopoly that still commands more than 75 per cent of the market, claims price rises have no long-term effect. "Past data show the rate of smoking reduction doesn't last long. Demand usually goes back to the ordinary level a few months after a tax increase," said a spokesman for Korea Tobacco and Ginseng.	25 30

Source: adapted from an article by ANNA FIFIELD, *The Financial Times*, 3 May 2005

Question 1

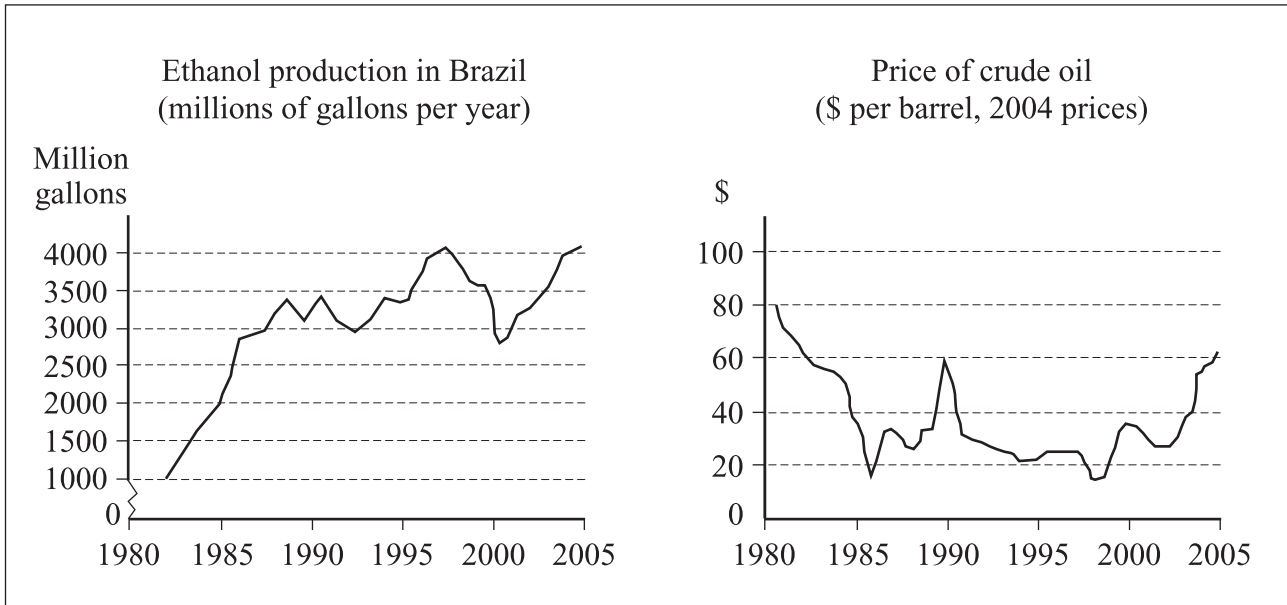
- (a) Using **Extract A**, compare the changes in the percentage of male and female adults in Great Britain who smoked over the period shown. (4 marks)
- (b) With the use of a supply and demand diagram, explain how the tax increase levied by the Korean government in 2004 may have affected the market for cigarettes (**Extract B**, lines 17–21). (6 marks)
- (c) Using the data and your economic knowledge, evaluate the case **for** and **against** a government completely banning the sale and consumption of cigarettes. (15 marks)

Turn over ►

OR

Total for this question: 25 marks

2 Study Extracts C, D and E, and then answer all parts of Question 2 which follows.

Extract C: Brazilian ethanol production and the world price of crude oil**Extract D: Sugar powers a revolution on Brazil's roads**

Brazilians increasingly prefer ethanol-based fuel for their cars. Ethanol, which is a form of alcohol, is made from agricultural products such as sugar. Brazil grows a lot of sugar cane and, as with samba dancing and football, making fuel from ethanol is an area in which Brazil leads. As long as the price of crude oil is more than \$37 a barrel, producing ethanol from sugar is profitable. Soaring crude oil prices have recently caused petrol to cost 70 per cent more to produce than ethanol-based fuel. In this situation, the lower relative price of ethanol-based fuel encourages motorists to buy cars which burn the fuel, despite the fact that, compared to petrol, 25 per cent more fuel is used.

However, car manufacturers believe that using ethanol-based fuel makes no economic sense in European countries. Brazil has dozens of vegetable species which can be used to make bio-fuels. The sheer cost of copying Brazil's lead in Europe makes it prohibitive. The entire network of service stations would have to be rebuilt, together with the need for new factories to produce bio-fuels made from agricultural products such as sugar and maize. Brazil incurs few of these costs because the ethanol-processing factories and the necessary infrastructure were built in Brazil in the 1980s.

Source: adapted from an article by TOM PHILLIPS and DAVID GOW in *The Guardian*, 23 November 2005

Extract E: Producing ethanol from sugar cane

Brazil's ethanol is obtained from sugar cane, which, like other plants, absorbs carbon dioxide from the atmosphere. Burning ethanol made from sugar thus returns to the atmosphere what was recently there, rather than adding carbon that was previously underground. However, converting sugar cane into ethanol uses more energy than making petrol from crude oil. Overall, Brazil's present method of making ethanol fuel from sugar leads to net savings of about 50 per cent in greenhouse-gas emissions per kilometre travelled, compared with running cars on petrol. 1 5

The growing of sugar cane is notorious for reducing soil fertility, but treated sewage could be used to fertilise sugar cane grown for fuel production rather than for food. This would provide a use for the growing quantities of human waste emerging from Brazil's cities. 10

Source: adapted from an article in *The Economist*, 2 September 2002

Question 2

- (a) Using **Extract C**, compare the changes in the quantity of ethanol produced in Brazil with the changes in the price of crude oil over the period shown. (4 marks)

- (b) **Extract D** (lines 7–8) states that ‘the lower relative price of ethanol-based fuel encourages motorists to buy cars which burn the fuel’.

Explain how the lower price of ethanol-based fuel, relative to the price of petrol, may affect incentives **and** resource allocation in the Brazilian economy.

(6 marks)

- (c) Using the data and your economic knowledge, assess the case **for** and **against** government intervention to encourage car manufacturers to build cars that use fuels other than petrol. (15 marks)

END OF QUESTIONS

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Extract E: © The Economist Newspaper Limited, London (2 September 2002)

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