



ANDERSON SERANGOON JUNIOR COLLEGE
JC2 TERM 3 TIMED PRACTICE
Higher 3

ECONOMICS

Paper 1

9809/01

12 August 2025

2 hours 15 mins

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer booklets, ask the invigilator for a continuation booklet.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Please start your answer to each question on a fresh page of the answer booklet.

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 pages.

Section A

Answer **all** questions from this section.

1 Global Warming

Extract 1: The Kyoto Treaty

The controversial Kyoto Treaty, agreed in Japan in 1997, commits rich countries to cuts in emissions of greenhouse gases by 2012. But it was dealt a near-fatal blow when George Bush confirmed America's rejection in 2001. The EU, Japan, Canada and over 100 others remained in, but Russia wavered. If it did not ratify, the pact would fail.

The Russians had been bribed with generous emissions targets, which they had expected to sell as credits in the international emissions-trading market envisaged by the treaty. With the departure of America, the biggest emitter, Russia's windfall (mocked as 'hot air') largely vanished. Only clever manoeuvring by the EU, including support for Russian entry into the World Trade Organisation, saved the treaty.

Not everyone is rejoicing. Kyoto-bashers claim the deal is dangerously deluded, citing environmental and economic grounds. That is unfair. Some insist that the emissions targets will slow the warming trend only slightly. That is true, but Kyoto was always seen as the first step in a decades-long journey-akin to the early GATT trade rounds. Some sneer that there are no legal sanctions for non-compliance. That is again true, but misleading. For example, Kyoto rules have the full force of domestic EU law.

Others claim that Europeans will choose to buy Russian 'hot air' rather than tackle the tougher job of making emissions cuts. But EU countries have agreed to meet more than half of their emissions targets at home. Moreover, it is not in Russia's interest to dump its carbon credits and risk a price collapse. Since credits are 'bankable', Russia will do better to hold on and hope that America will enter the market in future, greatly lifting their value. As for costs, the original targets were too ambitious. Economic sense argues for a gentle start to emissions cuts, moving flexibly towards deep cuts in the long term. That would be the surest way to spur the development and adoption of low-carbon energy technologies. These anyway need to be embraced by the Kyoto countries in future if the broader process is to be a success.

The EU's initial rejection of emissions trading (done at the behest of green lobbyists) made it impossible for America to stay in the treaty. But European individualists then realised that Kyoto might put them at a disadvantage and so pushed for carbon trading. Ironically, the EU is about to launch the world's first international carbon-trading system. America, which pioneered such trading, is left out.

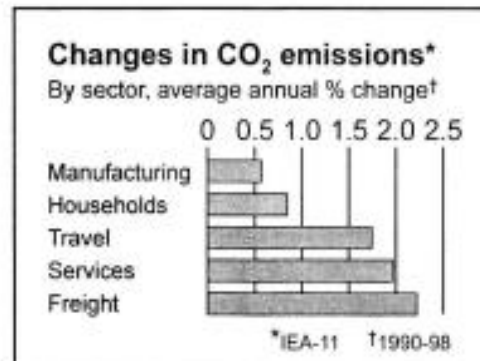
The emergence of this innovative market is the best reason to stick with Kyoto. Because climate change is so complex, any sensible response must be market-based – as Kyoto has belatedly become. It is also a long-term problem, because carbon dioxide stays in the air for a century. That is why the UN framework on which Kyoto rests is rightly long-lived.

Negotiations start next year for the next Kyoto commitment period (which begins in 2012). Informal efforts are underway to bring the 20 biggest emitters on board. That will mean widening the treaty's scope to include developing countries such as China and India.

It will not be easy. Some European greens are foolishly insisting on another rigid Kyoto round. Rather, negotiators must hold on to the best aspects of Kyoto, such as trading, and leave behind a failed "targets and timetables" mindset. More creative proposals, ranging from emissions targets pegged to GDP growth to fuel-efficiency commitments, are needed to persuade America, and perhaps even China, to agree to meaningful participation. A less aggressive treaty that actually works is surely better than a failed one.

Source: *The Economist*, 7 October 2004

Figure 1: Changes in CO₂ emissions



Source: *The Economist*, 7 October 2004

Extract 2: International 'carbon taxes' would be better than Kyoto

The need to assign targets for which there is no objective basis constitutes a major flaw in the Kyoto protocol. An alternative approach would involve an international agreement to institute a minimum level of tax in each country on the consumption of fossil fuels, at rates for each type of fuel that reflect its contribution to global carbon emissions.

Source: letter from John Williamson, Institute for International Economics, Washington to the *Financial Times*

Extract 3: Hot air about global warming

In practice, global warming will not be cut below 1990 levels. Kyoto imposes no constraints on developing countries. In this group is China, which generates as much emissions as the European Union, and India, generating as much as Germany.

An effective international agreement would have to cover every significant country. Asked to restrain the growth of emissions, the Chinese and Indians will rightly refuse to be locked into a position of inferiority merely because others exploited global absorptive capacity first. In effect, each country has an incentive to be a free rider. The obvious solution – an equitably distributed set of property rights in the globe's absorptive capacity – would require a strong global authority. This does not exist.

Source: Article by Martin Wolf, *Financial Times*, November 2000

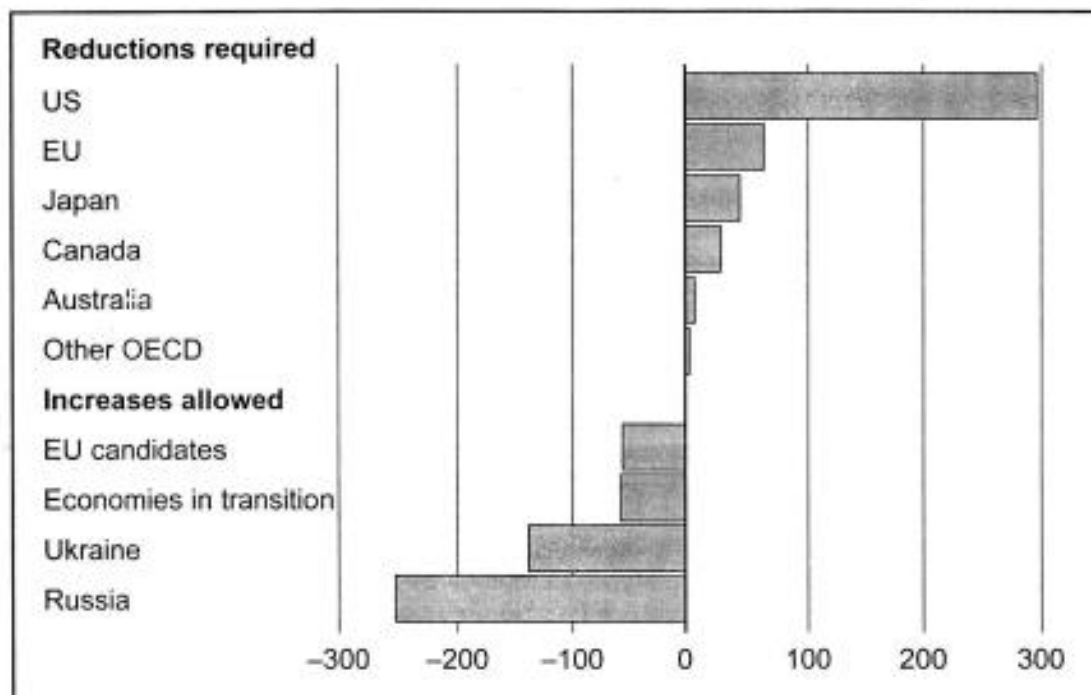
Extract 4: Logical omission in emission regime

"Carbon trading logically makes no sense. Climate change demands we reduce carbon emissions as quickly and by as much as is reasonably possible. If a power utility does not use up its allowance, it is a cause for celebration and congratulation. Why squander the advantage to the planet by allowing someone else to make up the carbon dioxide pollution?"

Source: Letter to the *Financial Times* (October 2004)
from the Head of the Department of Mechanical Engineering at Imperial College, London.

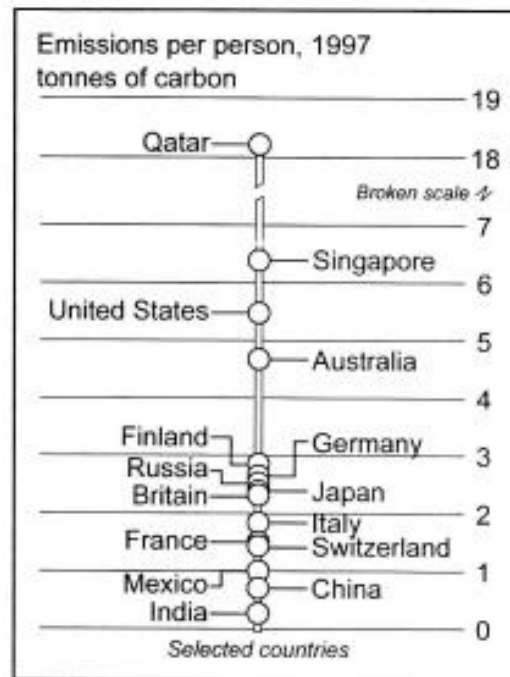
Figure 2: Gap between emissions in 1998 and Kyoto commitments

Emissions (million tonnes of carbon)



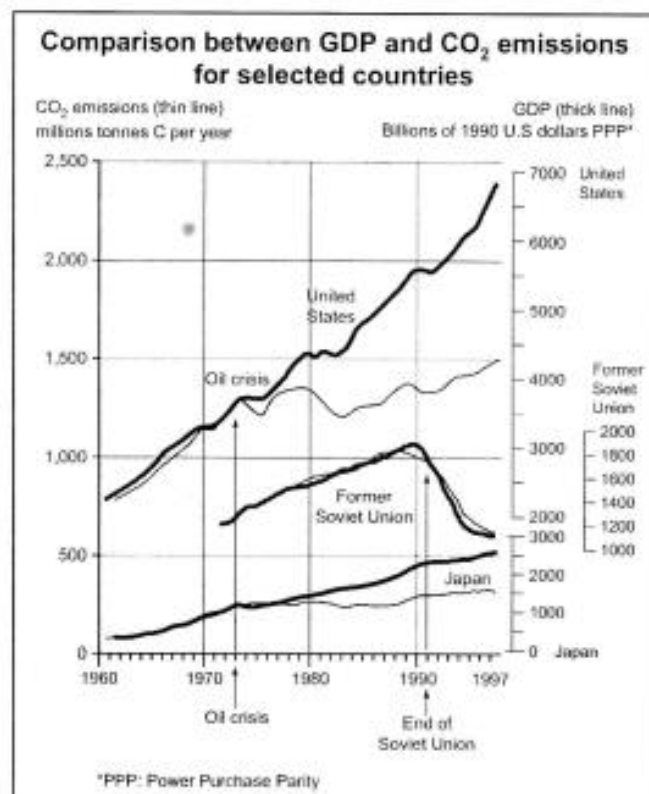
Source: *Climate Strategies*

Figure 3: Emissions per person, 1997, tonnes of carbon (selected countries)



Source: Oak Ridge National Laboratory

Figure 4: Comparison between GDP and CO₂ emissions for selected countries



Source: Intergovernmental Panel on Climate Change, www.carto.eu.org

Note: 'Former Soviet Union' = Russia, Ukraine, Belarus, Estonia, Latvia, Lithuania and nine other republics.

Table 1: Change in greenhouse gas emissions 1990-2002

Country	%
Australia	22.2
Belarus	-44.4
Belgium	2.9
Bulgaria	-56.0
Canada	20.1
Czech Republic	-25.6
Denmark	-0.4
Estonia	-55.2
France	-1.9
Germany	-18.6
Greece	26.0
Hungary	-31.0
Ireland	28.9
Italy	8.8
Japan	12.1
Latvia	-62.8
Lithuania	-65.7
Luxembourg	-19.5
Monaco	31.7
Netherlands	1.1
Norway	6.1
Poland	-32.2
Portugal	40.5
Romania	-48.0
Russia	-38.5
Spain	40.5
Sweden	-3.5
Switzerland	-1.7
Ukraine	-47.4
UK	-14.5
USA	13.1

Source: *The Guardian* website.

Questions

- (a) What are the advantages and disadvantages of the market-based solutions to climate change referred to in the resource materials? [8]
- (b) The 1997 Kyoto Protocol committed developed countries to making legally binding reductions in CO₂ emissions by 2010. The amounts agreed included reductions from 1990 levels of 6% by Japan, 7% by the USA, and 8% by the EU countries.
- (i) What progress has been made in meeting these targets? [6]
- (ii) How should target reductions in emissions be allocated between different countries in any future treaty? [6]
- (c) Consider the relevance of (i) game theory and (ii) the Coase Theorem to the issues of tackling the problem of climate change. [10]

Section B

Answer **one** question from this section.

2. Economic models generally assume that economic agents are rational and seek to maximise their self-interest. Yet in reality, there are boundaries to which individuals and firms make rational and self-interested decisions.

Discuss the extent to which decisions that are suboptimal or altruistic invalidate the assumptions of rationality and self-interest. [35]

3. What determines the extent to which established firms can deter the entry of new firms into their industry? [35]

4. Multinational enterprises (MNEs) have expanded rapidly in the past decade and they now account for around one third of world output and gross domestic product. This expansion is expected to continue in the foreseeable future.

Explain why MNEs engage in foreign direct investment and assess whether it will bring about positive impacts on both home and host countries. [35]

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