

INNOVA JUNIOR COLLEGE
JC 2 PRELIMINARY EXAMINATION
in preparation for General Certificate of Education Advanced Level
Higher 3

ECONOMICS

9809/01

Paper 1

15 September 2017

3 hours 15 minutes

Additional Materials: Writing Paper and Cover Page

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid/tape.

Section A

Answer **all** questions

Section B

Answer **two** questions

Please begin each question on a **fresh sheet of paper**.

At the end of the examination, **submit each question separately**.

Attach a **cover page** to **each essay question** and write the **question number** on the cover page.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

You are advised to spend several minutes reading through the data before you begin writing your answers.

You are reminded of the need for good English and clear presentation in your answers.

This document consists of **6** printed pages.

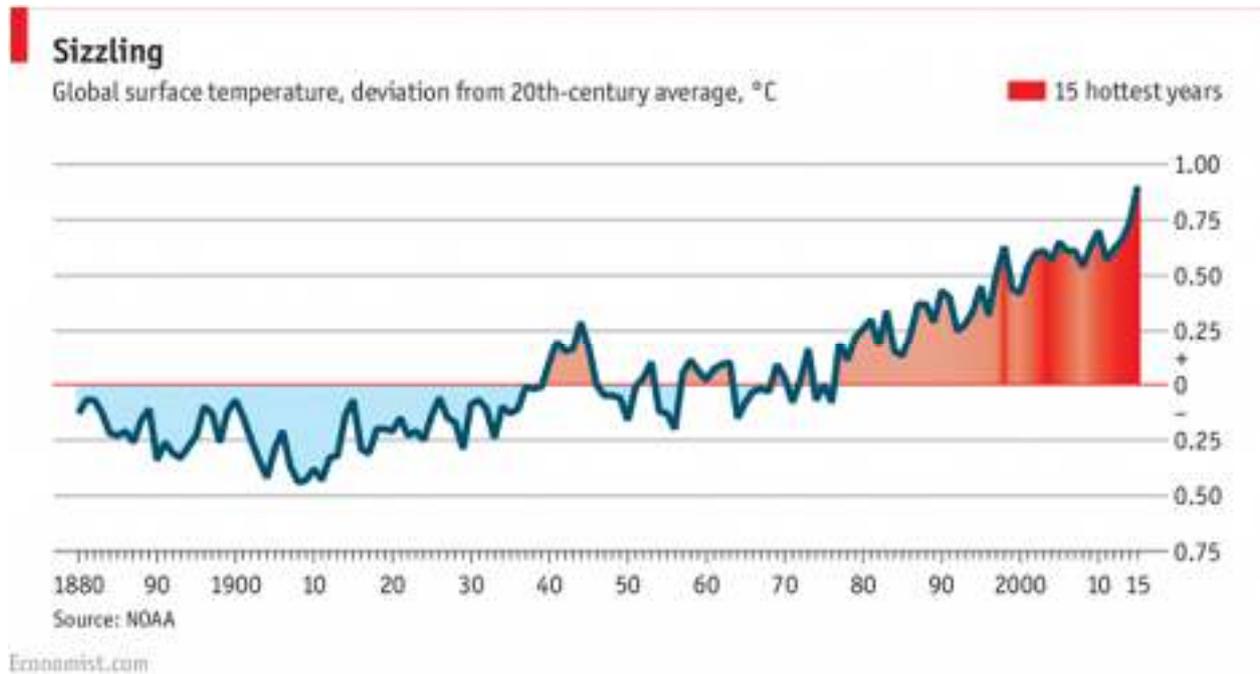


Section A

Answer **all** questions in this section

1 The 'unsolvable' problem of climate change

Figure 1: Global surface temperatures over the period 1980 to 2015



Extract 1: Why climate change is such a difficult problem to solve

Climate change is a problem. It is not something we can vote against or refuse to pay our taxes to protest. Writing letters to our congressperson will not help, nor will recycling our bottles and cans. Individual action—even the individual actions of hundreds of thousands of people in concert—won't be enough. Climate change has too many sources, involves too many interest groups, crosses too many borders, slices through too many political alliances to make possible the kind of united national and international effort required to stop it. Also, doing nothing is too profitable. Perhaps that last is indeed the main thing. Too many people are making money out of feeding the insatiable consumer demand for more.

Some scientists think it's already too late, but let's say they are wrong, and the scientists who give us ten years or even twenty are right. Let's say that if every developed nation were to drastically cut its greenhouse emissions beginning today, our poor old earth would mostly muddle through. Overlooking the rather large fact that these measures would cause the world economy to collapse, think what would have to happen: everyone goes vegetarian, uses cars and planes only for emergencies, gets rid of air conditioning, and ceases to cut down forests, to build new houses. In short, we radically restrict individual consumption in every conceivable way, while governments force industry, especially the oil, coal and gas industries, to do whatever is necessary to... do whatever is necessary. Given our system, how could any of that happen on the necessary scale, let alone happen in time?

Moreover, while we would be cutting back, India, China, Brazil, Indonesia and other formerly poor nations would still be surging forward. And how could we, who are vastly responsible for global warming in the first place, tell them, “Sorry, you got rich too late: no steak or family car or air conditioner for you? Go back to your villages and swelter.”

Climate change is the tragedy of the commons for the entire globe. For each individual, there is not enough motivation to alter our current behavior except around the edges to feel virtuous, if indeed behavior change were possible. (Americans may be driving a bit less, but how many Americans could do without their car?) For industry, the incentives are almost all the other way, and state and federal governments are largely industry’s captives. Among nations, there are too many competing interests and no sufficiently powerful international mechanism to lay out a course of action and enforce it. By the time the collective damage is done, it will be too late to undo it.

Source: www.thenation.com April 2014

Extract 2: US withdrawal from the climate change agreement will end all hopes of tackling global warming

The United States will be withdrawing from the Paris climate agreement, President Donald Trump announced Thursday from the White House Rose Garden. He added that he hoped to “begin negotiations to reenter either the Paris accord or really entirely new transition on terms that are fair to the United States.”

The withdrawal process takes four years. But when it’s complete, the United States will join a lonely club. Just two other countries — Syria and Nicaragua — have rejected the nonbinding agreement.

The US is the second-largest emitter of greenhouse gases in the world, right behind China. The decision to leave the agreement is a message to the world: We’ll take the lead on contributing to the problem, but not fixing it. Trump actually could have gone further: He did not say he was taking the US out of the underlying United Nations Framework Convention on Climate Change, a global agreement that predates the Paris treaty. Leaving that would mean abandoning all international cooperative efforts on climate change.

Of course, no one knows for sure what will happen. It’s possible that a US withdrawal could have a galvanizing effect on the rest of the world, and other governments would redouble their efforts to promote clean energy and curb emissions. Most nations still have a vested interest in avoiding drastic temperature increases. But there’s a real risk that momentum for stronger action would be blunted.

There’s also the prospect that the US could face serious diplomatic repercussions for leaving. Europe, China, and other countries could threaten to withhold cooperation on other issues the US cares about. In the most extreme scenario, other countries could threaten to impose carbon tariffs on the US, sparking a trade war. In 2020, delegates are supposed to reconvene and provide updates about their emission pledges, and report on how they’re becoming more aggressive on accomplishing the 2 degree goal.

Source: www.vox.com. Jan 2017

Extract 3: US withdrawal from the climate change agreement does not mean anything

Since Donald Trump announced last month that he would withdraw the US from the landmark Paris climate agreement, there has been much hand-wringing. But in reality, as analyst Kevin Book of Clearview Energy Partners in Washington notes: "What you have is a president making a non-binding withdrawal from a non-binding agreement." The US exiting the accord "will not make one iota of difference" to US wind power, adds Amy Grace, head of North American research at Bloomberg New Energy Finance (BNEF). What matters is legislation and regulations put in place within the US, she insists.

But Chuck McConnell, executive director of Texas-based Rice University's Energy and Environment Initiative and a former assistant secretary at the US Department of Energy under Barack Obama, disagrees that Trump's announcement was just symbolic or window-dressing. Trump also announced that the US will try and re-enter the Paris Agreement on more favourable terms, an idea that was soon dashed by leading signatories to the agreement, including France, Germany and Italy.

Trump's move was no surprise. He had repeatedly promised his campaign supporters that he would take the US out of the accord because, he claimed, it was hurting US jobs and the economy. He is going to overhaul the Clean Power Plan (CCP) which regulates carbon emissions from fossil fuel burning electricity plants and set a framework for emission standards.

Source: <http://www.newstatesman.com> May 2017

Extract 4: Scaling innovation for climate change

New techniques and technologies for climate-smart agriculture have already shown great potential and impact. These include farm ponds, micro irrigation, drought-resistant seeds, solar pumping, shade netting. Beyond agriculture, other climate-related sectors have seen a similar surge of innovation. From the clean energy sector with advances in solar power and battery storage to the water sector with new point-of-use water purification systems, a plethora of proven solutions to climate challenges have emerged.

It is likely that even more innovative technologies will arise from labs across the world in coming years. Initiatives like Mission Innovation, in which more than 20 major countries plan to double R&D spending on clean energy, will only increase the speed of the ongoing clean technology revolution.

So, if climate solutions exist and climate threats are dire, why aren't these solutions being deployed at scale with the requisite urgency? With the Paris Agreement entering into force this month, the political will is evident; with the many public and private commitments to increase climate funding, a great deal of money is available, as well.

One key challenge to deploying climate solutions on a large scale – particularly in developing countries – is the capacity of local innovation ecosystems to adapt these solutions for local markets, and to provide a sustainable delivery model so these solutions can reach end users. The shift to a climate-smart world is not incremental but transformational, and the capacity to implement innovation must be established at the local level. Unfortunately, such capacity is often lacking in developing countries, where the effects of climate change are most severe and the needs for innovative solutions most acute.

The World Bank's Climate Technology Program (CTP) has been working for over five years to address this challenge. Its network of seven Climate Innovation Centers supports local tech firms that develop climate solutions for local markets. The more than 300 companies supported by the centers have helped improve climate resiliency by commercializing innovative technologies, such as hydroponics, solar-powered pumps, and micro irrigation systems.

Source: <http://blogs.worldbank.org> Nov 2016

Extract 5: Impact of climate change on Singapore

Sea level rise

As a low-lying island, the rise in sea level poses the most immediate threat to Singapore. Much of our nation lies only 15 m above the mean sea level, with about 30% of our island being less than 5 m above the mean sea level.

Water resources

An increase in the intensity of weather variability could present significant challenges to the management of our water resources. Periods of drought can affect the reliability of Singapore's water supply, while sudden episodes of intense rainfall could overwhelm our drainage system and lead to flash floods.

Biodiversity and greenery

A mean temperature increase of 1.5°C to 2.5°C could affect the natural diversity of Singapore's plants and animals at risk, as this alters our ecosystem's natural processes such as soil formation, nutrient storage and pollution absorption.

Effect on public health

Singapore is situated in a region where vector-borne diseases are endemic. Most cases of vector-borne diseases like dengue are observed during warmer periods of the year. In addition, frequent and severe instances of warm weather may lead to more occurrences of heat stress and discomfort among the elderly and sick.

Urban heat island effect

Urban areas tend to be warmer due to the replacement of natural land cover with buildings and other infrastructure that retain or produce heat. Higher annual temperatures can also lead to heat stress as well as greater use of air-conditioning, increasing Singapore's energy demands. This in turn results in higher domestic carbon emissions.

Food security

The effects of climate change, such as intense storms, flooding and prolonged droughts, are one of the trends threatening global food security. In Singapore, we are particularly vulnerable to fluctuations in global food supply and prices, as we import more than 90% of our food.

Source: <https://www.nccs.gov.sg> Feb 2017

Questions

- (a) Explain why climate change is “such a difficult problem to solve”. [6]
- (b) Assess whether USA is likely to get a better bargaining position on climate change by exiting the Paris accord. [8]
- (c) Discuss how Trump’s overhaul of the Clean Power Plan could affect the decisions of producers in the energy industry. [8]
- (d) Evaluate the extent to which international cooperation through international climate change agreements can mitigate the effects of climate change. [8]

Section B

Answer **two** questions in this section

- 2 Standard economics assume that agents are rational and have perfect information. Behavioural economics discover that agents are easily confused, not that smart and often irrational.
- Discuss the relative values of standard and behavioural economics in helping economic agents to make better decisions. [35]
- 3 Assess the relevance of game theory in helping firms choose strategies to maintain their long term competitive advantage. [35]
- 4 When it is well managed, tourism provides an incredible economic boost to host communities. For these reasons, almost every country in the world wishes to expand its tourism sector and increase the number of tourism arrivals.
- Assess whether all countries should focus on tourism to boost economic growth. [35]
- 5 Discuss the view that compulsory national healthcare insurance is the best way to solve the market failures associated with providing cost-effective healthcare to all citizens. [35]
- 6 Evaluate the impact of Brexit on UK and assess the policies that might be adopted to improve the economic performance of UK. [35]

- End of Paper -