



HWA CHONG INSTITUTION
JC2 Preliminary Examinations
Higher 1

**CANDIDATE
NAME**

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CT GROUP

12A/S

**CENTRE
NUMBER**

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**INDEX
NUMBER**

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ECONOMICS
Paper 1

8819/01
20 September 2013
3 hours

Additional Materials: Answer Paper

INSTRUCTIONS TO CANDIDATES

Write your **name** and **CT class** clearly in the spaces at the top of this page and on every page 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 and tape.

Section A

Answer **all** questions.

Section B

Answer **one** out of 2 questions.

Begin your answer to each question on a fresh sheet of writing paper.

At the end of the examination, fasten the answer scripts to Section A: Questions 1, 2 and Section B **separately** with the 3 cover pages provided.

The number of marks is given in brackets [] at the end of each question or part question.

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

This document consists of **8** printed pages.

[Turn over

Section A

Answer **all** questions.

Question 1 Japan and The Future of Energy

Extract 1 World energy outlook

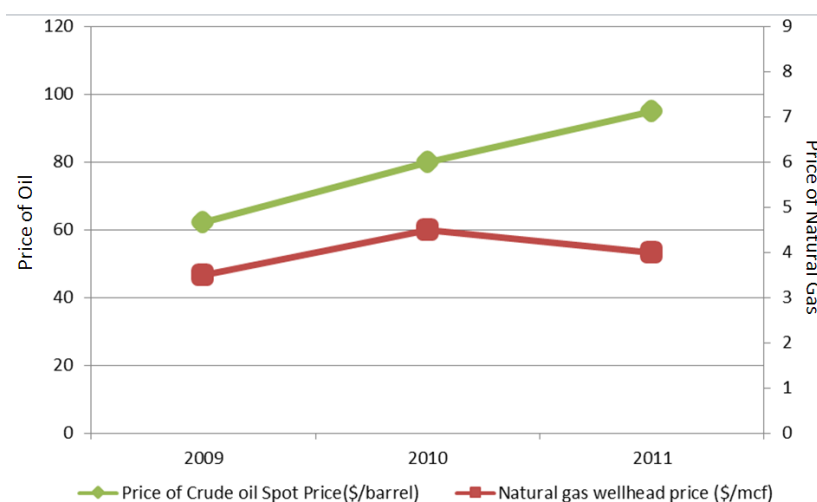
Without a bold change of policy direction, the world will lock itself into an insecure, inefficient and high-carbon energy system. Prosperity and rising population will inevitably push up energy needs and energy prices over the coming decades despite much effort to meet the need. Governments urgently need to introduce stronger measures to drive investment in efficient and low-carbon technologies to accelerate the increase in the production of energy.

The Fukushima nuclear accident leading to a sharp rebound in the demand of conventional oil-based energy and turmoil in parts of the Middle East and North Africa in 2010 had pushed carbon emissions to a record high. The Fukushima accident has also raised questions about the future role of nuclear power, it seems like oil is the necessary evil. Although the accident provided a boost to other renewables, the heightened energy security concerns is making it harder to combat climate change.

Out of the many greener forms of energy sources, the future for natural gas seems to be more certain despite the strong inertia to change. Natural gas is abundant and relatively inexpensive. With technological enhancement, natural gas prices have been presenting itself as a more favorable alternative.

Source: *International Energy Agency*, 2011

Figure 1 Crude Oil prices to Natural Gas Prices (2009-2011)



Source: Energy Information Administration, 18 October 2012.

Extract 2 Golden age of gas

Exploiting the world's vast resources of unconventional natural gas holds the key to a golden age of gas. With the help of technological advancements, natural gas is projected to overtake coal as the second most consumed fuel, after oil by 2025.

Liquefied natural gas (LNG) is envisioned as the fuel of choice for many drivers today. A decade ago, there were few examples of the rise of LNG as vehicle fuel. But that is changing quickly, driven largely by the efforts of many in the oil and gas industry committed to making it work and by the increasing realisation of drivers that converting from petrol to gas makes economic sense. Driving cars that run on alternative fuels like LNG can cut emissions and reduce dependence on foreign fuels.

Rising diesel costs last year forced Waste Management, largest trash hauler in the United States, to charge customers an extra \$169 million, just to keep its garbage trucks fueled. This year, it is buying trucks that will run on cheaper natural gas. In fact, the company says 80% of the trucks it purchases during the next five years will be fueled by natural gas. Though the vehicles cost about \$30,000 more than conventional diesel models, each will save \$27,000-a-year or more in fuel. By 2017, the company expects to burn more natural gas than diesel.

Sources: *ExxonMobil Outlook for Energy* and *The Wall Street Journal*, 2012

Extract 3 Future of nuclear power

Prior to the Fukushima Daiichi nuclear power plant accident in 2011, Japan was the world's third largest consumer as well as producer of nuclear power. In 2010, nuclear energy consumption and production accounted for 13 percent and 26 percent of total energy respectively. According to the Federation of Electric Power Companies in Japan, nuclear power has made a great contribution to Japan's energy security by reducing its energy imports requirements. Furthermore, since nuclear energy emits no carbon dioxide, generating electricity via nuclear power reduces Japan's carbon emissions by about 14 percent per year.

Besides generating power via nuclear energy, there are alternative energy sources such as hydropower, which is however a relatively small share of generation. The Japanese government has been promoting small hydropower projects to serve local communities through subsidies.

In contrast, the American government has proposed a bill to help ensure that cohesive and compatible environmental and energy policies are created and executed. One of the policies includes the imposition of taxes on nuclear plants, a policy which has been criticized as 'bad' public policy. Taxes will put upward pressure on electric rates, stunt economic development and job growth. Moreover, like all businesses, electric generators incorporate all costs – including taxes – into the price of their product.

Sources: *US Energy Information Administration* and *The Telegraph*, 18 March 2011

Extract 4 Effects of the Fukushima disaster

The March 11, 2011, earthquake and tsunami that occurred in Japan followed by the nuclear crisis has caused Japan to lose considerable physical and human capital. In excess of 27,000 persons in Japan are killed or missing, and more than 202,000 homes and other buildings have been totally or partially damaged. The quake and tsunami also damaged key ports, and some airports shut briefly. This disrupted the global supply chain of semiconductor equipment and materials. Automakers Toyota, Nissan, Honda, Mitsubishi and Suzuki temporarily suspended production.

Six months after the multiple meltdowns at the Fukushima Daiichi nuclear plant, the streets have been cleared but the psychological damage remains. Millions of people have to re-adjust to levels of radiation that were – until March – considered abnormal. Low-level radiation is an invisible threat with results that do not become apparent for years. Though the vast majority of people remain completely unaffected throughout their lives, others develop cancer.

As Japan considers closing the last of its 54 reactors, which marks a dramatic shift in its energy policy, there's a concern that a nationwide nuclear blackout comes with significant economic and environmental risks attached. Utilities companies would have to turn to coal, oil and gas-fired power plants to keep industry and households supplied with more expensive electricity. The International Energy Agency estimates the closure of all nuclear plants will increase Japanese demand for oil to 4.5 million barrels a day, at an additional cost of about US\$100 million a day. All these imports had contributed to Japan's first trade deficit for more than 30 years last year. In a recent survey, 71% of manufacturers said power shortages could force them to cut production, while 96% said that the additional spectre of higher electricity bills would hit earnings.

Sources: *The Guardian* and *ABC News*, September 2011

Extract 5 Future of Japan economy

Prime Minister Yoshihiko Noda has pledged more than 20tn yen (\$249bn) on reconstruction. Rebuilding will lift the economy a bit, but it will be outweighed by the probable increase to the national debt. Japan's economic growth is powered by its successful export sector. Analysts say that growth will suffer until infrastructure issues are solved and factories start running at full capacity again. After the 1995 Kobe quake, Japan's economy was able to rebound relatively quickly because the government hiked public spending by more than 15 per cent in the following 12 months. This time around, the government cannot afford to spend so freely because it is already straining under a debt load which is double the size of the economy, said the Moody's analysts. Any stimulus package will probably be paid for in later years by austerity measures, they said.

Source: *The Institution of Engineering and Technology*, 16 March 2011

Questions

- (a) (i) Compare the change in price of crude oil and natural gas between 2009 and 2011. [2]
- (ii) Using supply and demand analysis, account for the difference above. [3]
- (b) With reference to Extract 2, explain two demand factors that have led to the booming alternative fuel vehicle market. [4]
- (c) Using a diagram, explain how the production of conventional oil-based energy leads to market failure. [5]
- (d) If you were the advisor to the Japanese Ministry of Environment, would you recommend that the government adopt the policy of taxation on nuclear plants? [8]
- (e) Discuss the extent of the adverse impact of the Fukushima disaster on Japan's macroeconomic performance in view of the government's effort in rebuilding the economy. [8]

[Total: 30 marks]

Question 2 The Uncertain Future of Globalisation

Extract 6 Globalisation at the crossroads

In the aftermath of the financial crisis, the US championed for free trade – at a grave cost to itself. According to a recent joint report by the International Monetary Fund and the International Labour Organisation, 25 per cent of the rise in unemployment since 2007, totaling 30 million people worldwide, occurred in the US. If this situation persists, it will lay the foundations for huge global trade frictions.

It is an established fact that the US imports low-cost consumer goods and inputs for production from emerging economies, especially China. So any protectionist measures to reduce unemployment, perhaps in the form of a stiff US tariff on foreign imports, would be profoundly self-destructive, even in the absence of inevitable retaliatory measures.

On the other hand, emerging economies have a great deal of scope for action. India, Brazil and China, for example, continue to exploit World Trade Organisation rules that allow long phase-in periods for fully opening up their domestic markets to developed-country imports, even as their own exporters enjoy full access to rich-country markets. Lacklustre enforcement of intellectual property rights exacerbates the problem considerably, hampering US exports of software and entertainment.

The current rut in which the US finds itself could prove to be a problem for the rest of the world. US unemployment is high. When fiscal and monetary policies have been stretched to their limits, exports are the best way out. But that depends on others opening their markets. Otherwise, simmering trade frictions could suddenly throw globalisation sharply into reverse gear.

Source: Adapted from Kenneth Rogoff, *Project Syndicate*, 7 November 2010

Extract 7 Costs of globalisation

The costs of globalisation have also become apparent in developed countries. The Organisation for Economic Co-operation and Development (OECD) reported in 2010, youth unemployment is rising across the developed world. There are currently 15 million unemployed young people – aged 15 to 24 – across the OECD countries (which includes the US), some four million more than in 2007. This is largely a result of globalisation and technological improvement. Over the past 40 years, the global population has more than doubled in size, from around 3 billion to 7 billion now. Simultaneously, countries that were never part of the global market have joined it – not least India and China from the mid-1990s – while technology has become less labour-intensive. As a result, the wages of the low-skilled workers have fallen, while the wages of the high-skilled have risen extraordinarily.

With the opening up of China and India over the past 20 years, globalisation has lifted millions of people out of poverty. But inequality in developed countries and in other developing countries remains shameful, and should not be left unchallenged. At the same time, average workers in most of the major affluent economies, including the US, have seen the real value of their wages whittled away, as they have found themselves in competition not just with their neighbours, but with workers many thousands of miles away. So as the plight of workers in faraway places reveals the true cost of cut-price consumer gadgets, it is also clear that workers everywhere have been losing out.

However, China's workers are clamouring for higher wages and better conditions and this might push up the price of an iPod in London or New York. It would certainly help the Chinese economy move towards Beijing's aim of establishing a rising middle class with a stronger consumer demand at home, instead of economic growth that depends too heavily on cheap exports. Strong, sustainable Chinese growth, and

rising labour standards, would be good for the West too: they should help to narrow Beijing's yawning trade surplus by opening up vast new markets.

Therefore, it would be wrong to think that the answer is to retreat inwards, and return to a closed-border economy. But it must no longer be a taboo to question whether globalisation brings in its wake the benefits that were promised. On an international scale, it should no longer be taboo to propose limits to foreign takeovers, or to the nonstop, unquestioned flow of capital around the world. A backlash against rising inequality risks derailing the advance of globalisation and represents a key threat to economies worldwide.

Source: Adapted from *The Observer*, 29 January 2012 & *The Telegraph*, 6 February 2012

Extract 8 The United States in the Trans-Pacific Partnership

In the face of growing problems of globalisation, President Obama announced in November 2009 the United States' intention to participate in the Trans-Pacific Partnership (TPP) negotiations. The TPP is a proposed Free Trade Agreement initiative involving eleven countries, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, United States and Vietnam. Through this agreement, the US is seeking to boost US economic growth and support the creation and retention of high-quality jobs at home by increasing American exports to a region that includes some of the world's most robust economies and that represents more than 40 per cent of global trade. In fact the huge and growing markets of the Asia-Pacific are already key destinations for US manufactured goods, agricultural products and services suppliers. The Obama Administration has been working to ensure the TPP addresses the issues that American businesses and workers are facing today, and may confront in the future.

Source: The White House. Office of the Press Secretary
www.whitehouse.gov accessed 12 August 2013

Table 1 Annual percentage change of world merchandise trade and GDP, 2008-2013^a

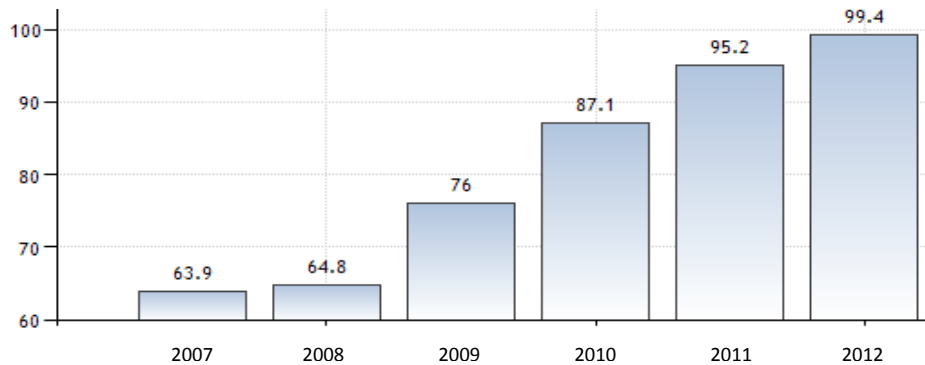
	2008	2009	2010	2011	2012 ^a	2013 ^a
Volume of world merchandise trade ^b	2.3	- 12.5	13.9	5	2.5	4.5
Real GDP at market exchange rates						
Developed economies	1.3	- 2.4	3.8	2.4	2.1	2.4
Developing countries and CIS ^c	5.6	2.2	7.3	5.3	4.9	5.2

^a Figures for 2012 and 2013 are projections

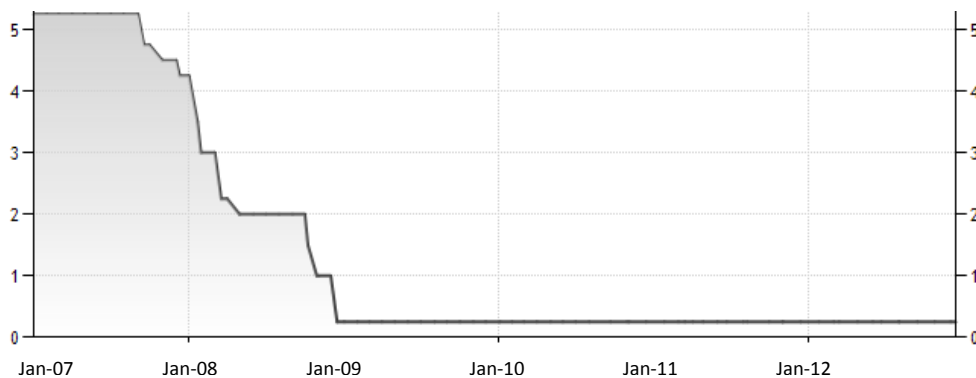
^b Average of exports and imports

^c CIS: Commonwealth Independent States

Source: World Trade Organisation

Figure 2 United States government debt to GDP (percentage of GDP)

Source: US Bureau of Public Debt

Figure 3 United States interest rates

Source: US Federal Reserve

Questions

- (a) (i) Describe the trend in volume of world merchandise trade between 2008 and 2013 as shown in Table 1. [2]
- (ii) With reference to Table 1, explain an economic factor that contributed to the above trend. [2]
- (b) Consider whether the data in Table 1 and Extract 7 are sufficient to assess changes in living standards in the developing economies from 2008 to 2011. [4]
- (c) Using Figures 2 and 3, explain why for the US, “when fiscal and monetary policies have been stretched to their limits, exports are the best way out.” [4]
- (d) Explain how the West may gain from a rising middle class in China. [2]
- (e) Using the evidence from the case and your own relevant knowledge, discuss the view that globalisation may not bring about the benefits it promises. [8]
- (f) Discuss whether US membership in the Trans-Pacific Partnership will solve the economic problems it currently faces. [8]

[Total: 30 marks]

Section B

Answer **one** question from this section.

- 3 (a) Explain why government intervention is advocated in the markets both for public goods and merit goods. [10]
- (b) There is free wireless connectivity in public areas through Wireless@SG in Singapore. Discuss whether wireless connectivity should be provided free by the government. [15]
- 4 (a) Explain the main causes of unemployment in Singapore in the recent years. [10]
- (b) Discuss the view that supply side policies are the best option for the government in reducing unemployment. [15]

Copyright acknowledgments:

Question 1	Extract 1	© International Energy Agency, 2011
Question 1	Figure 1	© Energy Information Administration, 18 October 2012
Question 1	Extract 2	© ExxonMobil Outlook for Energy and The Wall Street Journal, 2012
Question 1	Extract 3	© US Energy Information Administration and The Telegraph, 18 March 2011
Question 1	Extract 4	© The Guardian and ABC News, September 2011
Question 1	Extract 5	© The Institution of Engineering and Technology, 16 March 2011
Question 2	Extract 6	© Project Syndicate, 7 November 2010
Question 2	Extract 7	© The Observer, 29 January 2012 & The Telegraph 6 February 2012
Question 2	Extract 8	© The White House Office of the Press Secretary (www.whitehouse.gov), retrieved on 12 August 2013
Question 2	Table 1	© World Trade Organisation
Question 2	Figure 2	© US Bureau of Public Debt
Question 2	Figure 3	© US Federal Reserve

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