JURONG JUNIOR COLLEGE
PRELIMINARY EXAMINATION 2014

ECONOMICS

Higher 1 **8819/01**

1 September 2014

3 hours

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.

Section A
Answer **all** questions.

Section B
Answer **one** question.

Start each question on a new piece of paper.

Fill in the necessary information on the cover sheet.

At the end of the examination, fasten all your work securely with **the cover sheet at the top.**

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

Section A

Answer **all** questions in this section

Question 1

Use of Shale Gas in UK and Environmental Issue

Extract 1: Global market is pushing up gas prices

UK energy bills are set to go up by 2020 as the country becomes more dependent on imported gas, says energy regulator Office of Gas and Electricity Markets (Ofgem). In 2009, 45% of the natural gas used in the UK was imported, and this figure is expected to reach 69% by 2019. This growing dependence on imports makes it vulnerable to shifts in supply and demand, as well as shocks in supply countries. The recent power outage at a Norwegian gas plant was the main reason for the price jump, further exacerbated by a leaking crude oil pipeline in Scotland blocking the supply of natural gas from fields further up the production chain.

According to Ofgem, while UK needs more gas, world demand for gas is set to rise while domestic supplies are predicted to fall by another 28% by 2020. Asia is set to become the fastest-growing gas consumer. China's consumption alone will grow at 20 per cent per year as the country experience rising GDP growth.

So without measures to reduce dependence on imported gas, higher prices are inevitable. Clare McNeil, PPR's senior research fellow tells Carbon Brief that exposure to volatile international energy prices would be a real problem for consumers, particularly households on low incomes who cannot afford the extra costs. Between 2011 and 2012, domestic gas bill has increased by 11.8% when the price of gas rose by 13.1%.

Source: *The Carbon Brief*, 19 February 2012

Extract 2: Carbon pollution

Experts from three climate bodies conclude there are sound reasons to burn natural gas instead of coal in the country's power stations in the short term. The reason is that gas-powered plants emit less than half the carbon dioxide per kilowatt hour of coal-fired stations. Of all the greenhouse gases that scientists say are heating the planet to potentially dangerous levels, carbon dioxide is the main one caused by both industrial and human activities.

Source: *Financial Times*, 18 March 2013

Extract 3: A carbon tax by any other name

The headlines last week were dramatic: Australia abandons its carbon tax. The move seemed to confirm suspicions that putting a price on carbon dioxide emissions is politically toxic. By next July, the country will shift from its controversial carbon tax system to a cap-and-trade system, which is a different way of limiting greenhouse gas emissions.

Carbon taxes control emissions by establishing a fixed price that polluters must pay. High prices discourage pollution. By contrast, cap-and-trade systems limit amounts of carbon emissions, leaving the market to determine the price for polluting. Economists and policy makers like to argue over which method is best. But both seek the same goal.

Although carbon taxes, with their fixed prices, are easier to implement than cap-and-trade systems, but critics of Australia's announcement, who include the country's Green Party, have a point. Switching to the cap-and-trade system will allow Australian industries to pay less to reduce pollution. That is because the trading system, unlike the tax, will link into a similar system in Europe. In Europe, abundant pollution permits have dramatically reduced the market price of carbon emissions. Hence, Australian industries will be able to take advantage of those low prices to access the pollution credits more cheaply, and ahead of schedule.

Another key question raised by Australia's situation is whether the concept of a carbon tax is too politically treacherous for nations seeking to combat climate change. The Australian government price carbon at A$23 per ton in July 2011. Despite the fact that the tax does not cover agricultural and fuel used by passenger and light commercial vehicles which constitute a total of 30% of carbon emissions in the country, airlines, miners and industries warned that the tax would force major industry to slash production and jobs. Polls have shown voters are resistant to the tax, which is expected to raise consumer prices by 0.7%.

In Australia now, "it will be possible for the government to say that it has removed a 'tax,' and avoid the unpopularity of that word," Mr. Pannell said. "The opposition is arguing that the new system will still be effectively a tax by another name. But the political effect of their arguments is diminished."

Source: *New York Times* ,24 July 2013

Extract 4: UK cannot afford to miss out on shale gas

There will not be "a lot more" onshore wind turbines in the UK, David Cameron has said, as he signaled that hundreds of gas fracking wells could be drilled across the country.

If we don't back this technology, we will miss a massive opportunity to help families and businesses with their bills and make our country more competitive. Without it, we could lose ground in the tough global race. In fact, one recent study predicted that 74,000 jobs could be supported by a thriving shale-gas industry in this country. It's not just those involved in the drilling, there would be a whole supply chain of new businesses, more investment and fresh expertise. A similar shale gas boom to the one in the US has transformed the country's energy landscape, driving down gas prices and prompting hopes of energy independence.

Cameron further said that he would never sanction something that might ruin their landscapes and scenery. Shale gas pads are relatively small – about the size of a cricket pitch and international evidence shows there is no reason why the fracking process should cause contamination of water supplies or other environmental damage, if properly regulated. And the regulatory system in this country is one of the most stringent in the world. If any shale gas well were to pose a risk of pollution, then we have all the powers we need to close it down.

But pursuing a new "dash for shale gas" policy in the UK could be dangerous in the long term as it could discourage low carbon investment. Hence, it would make it harder – and more expensive – to meet the UK's mandatory 2050 target of cutting greenhouse gases by at least 80 per cent from 1990 levels. According to the New Scientist, it says that if the UK's shale gas reserves are not as large as Chancellor Cameroon thinks, UK could be locked into a carbon intensive strategy that remains vulnerable to rising gas import prices. To provide the UK with greater energy security, investment in renewable technologies should not be neglected.

Source: *The Telegraph*, 11 August 2013 and *Financial Times*, 18 March 2013

[Turn Over

Table 1: Fuel Price Components of the Retail Price Indices (RPI) relative to all items RPI, Jan 1987=100

Year	Coal & Smokeless Fuel	Gas	Electricity
2006	95.7	90.1	84.6
2007	99.1	120.0	102.2
2008	103.6	100.9	93.7
2009	136.1	152.5	122.1
2010	131.6	138.3	108.4
2011	127.5	130.2	104.8
2012	131.5	147.2	112.1
2013	135.2	171.5	124.6

Source: Various

Questions

(a) Compare the prices of gas and coal & smokeless fuel in the UK between 2008 and 2013. [2]

(b) Using information in Extract 1, explain one demand and one supply factor causing the price of gas to rise in the UK. [4]

(c) According to Extract 1, UK consumers' domestic gas bill increased by 11.8% when the price of gas rose by 13.1%.between 2011 and 2012. Comment on what this might imply for the price elasticity of demand for gas. [4]

(d) Using economic analysis, explain why economists would support the burning of natural gas rather than coal in a country's power station. [4]

(e) Discuss the policy measures adopted by the Australian government to correct market failure resulting from carbon emissions. [8]

(f) Do you agree with the view that UK's "dash for shale gas" policy (Extract 4) would bring about more benefits than costs to the UK economy? [8]

[Total:30]

Question 2

The Global Recovery

Extract 5: A case of austerity or stimulus for Europe

Spending cuts and tax increases have helped to reduce fiscal debts across the 17 EU countries that use the euro, but the region's debt to GDP burden ratio rose after economic growth flat lined and fewer companies and households paid taxes. Calls for a more growth-led approach dominated last week's informal EU summit. The debate over the future of the eurozone continues to veer between two extremes: stimulus or austerity. "You cannot spend your way out of a debt-fuelled recession", shout those on one side of the divide. Others respond that economic recovery is not possible without a major influx of public spending.

It has become painfully obvious that simply downsizing bloated public sectors does not work if there are no jobs for people to turn to as seen across Europe, 40 million people are now unemployed, causing a vicious, downward spiral of recession. The International Monetary Fund also added that it had underestimated the effects of fiscal tightening as the previously assumed fiscal multiplier did not consider the effects of unemployment on savings.

But the state is no silver bullet for economic growth either without austerity. Restoring confidence is highly needed as providing employment opportunities by ploughing money back into the public sector would provide only temporary respite, and would push countries even further into unsustainable debt.

Source: *The Guardian* and *Daily Telegraph*, June 2012 and October 2012

Extract 6: US stirred a currency war

The World Trade Organisation (WTO) has recently detected a steady rise in trade barriers. The restrictions range from higher tariffs to costly import licences or a competitive devaluation, in which many policymakers all over the world lower their exchange rates in order to increase their competitive advantage. Governments often justify these steps as short-term remedies responding to the global downturn.

Competitive devaluations started with the Fed keeping US interest rates near zero until 2013. This will affect capital flows and lead to a prolonged devaluation of the dollar. For export nations, the temptation is to fight back by pushing their own currencies lower to make their exports more competitive. A weaker currency might also encourage foreign investment due to lower costs. However, competitive devaluations are futile and would delay the recovery of US, turning a global slowdown into dreaded stagflation.

Source: *Reuters,* August 2012

Extract 7: UK's productivity

Productivity is not everything, but in the long run it is almost everything. In Britain especially, though not uniquely within Europe, productivity growth has been extremely poor and highly concerned, as it ranked way below the average of other G7 industrialised nations. On this basis, average of UK worker would have to work ten hours to produce the same output a worker in the US could produce in eight hours.

[Turn Over

The UK's productivity gap has been attributed to poor labour productivity as well as poor capital productivity. This creates disadvantages compared with other countries, notably a relative failure to invest or innovate, technological backwardness, lack of entrepreneurship and trade distortions.

As such, there is serious and rapidly mounting pressure on the government to come up with more reforms and measures to boost business investment and productivity given the economy's current lack of scope for fiscal stimulus.

Source: *The Guardian*, September 2012

Extract 8: Economic self-interest jeopardises recovery for all

In an economically integrated world, there is increased recognition that despite the virtues of an open market that include trade specialization and foreign investment jump; it leaves economies vulnerable to changes in opportunity costs of production, currency values and even higher gini-coefficient. Protectionism hence has been a traditional way to deal with these pressures.

The WTO has recently expressed concerns on one of the protectionist measures European governments often justify, to slap dumping on the Chinese goods. According to WTO rules, the claim that targets China's cheap-labour-intensive exports can be more lax in its criteria to determine dumping. On the same note, the WTO has also advised US to reconsider its protectionistic tax. Although US has long reported the need of the tax to neutralize China's export subsidies that has stolen its factories, jobs and created a chronic trade deficit, the WTO believes that the tax would only distort markets and in the long run, it could be economically self-defeating.

The WTO recommended that some policies should be changed in order to reduce the high trade deficits in Europe and US. European governments should work on reducing funding on state-subsidised agricultural industry which still absorbs nearly half their budgets, while improving funding on infrastructure, education, skills and innovation. Investing heavily in education and training for the unemployed and giving incentives to businesses to hire and train new workers would be a far more worthwhile investment. Huge potential could also be unleashed when liberalisation in competitive sectors has been combined with continuing state involvement in more vulnerable areas of the economy, helping to develop latent comparative advantages.

If economies start closing markets or blocking trade, their prospects will be pushed down even further in a downward economic spiral most are in already. Policymakers should instead be ahead of the game to take advantage of those changes. Germany for instance, has positioned itself well to ride on a third wave of globalisation, characterised by rapid growth in a number of developing countries.

Source: *The Economist and BBC News*, June 2012 and September 2012

Table 2: Fiscal Balances (% of GDP)

	2007	2008	2009	2010	2011	2012
Euro area (15 countries)	-0.7	-2.1	-6.3	-6.2	-4.1	-3.3
UK	-2.8	-5.0	-10.9	-10.1	-8.3	-6.6
United States	-2.9	-6.6	-13.3	-11.4	-10.2	-8.5

Source: *International Monetary Fund: World Economic Outlook*

Questions

(a) **(i)** Using Table 2, compare the change in fiscal balances of the UK, US and Euro area between 2007 and 2012. [2]

(ii) With reference to the data, discuss whether spending cuts and tax increases are the most appropriate for Europe's recovery. [8]

(b) Explain the impact of near-zero interest rates (Extract 6) on employment in the US. [2]

(c) Explain possible effects on the balance of payments of the US when its currency weakened. [4]

(d) Comment on how a low productivity growth in UK will affect its economy. [6]

(e) Using the evidence in the data and your own knowledge, assess the validity of countries practising protectionism. [8]

[Total: 30]

Section B

Answer **one** question from this section.

3 Globalisation can result in an influx of cheaper imports but the intense foreign competition may force inefficient domestic firms to close down.

(a) Analyse the benefits and costs of globalisation. [10]

(b) Discuss the impact of the abovementioned effects of globalisation on domestic steel and car markets. [15]

4 The Singapore government is moving to reduce its reliance on foreign workers and increase productivity. This includes support to upgrading efforts by businesses and subsidising training for local workforce.

(a) Explain why governments aim to achieve economic growth and full employment. [10]

(b) Discuss the extent to which a reduction in the reliance on foreign workers would slow down growth in Singapore. [15]