

RAFFLES INSTITUTION
2011 YEAR 6 PRELIMINARY EXAMINATION
Higher 1

ECONOMICS

8819/01

Paper 1

1 September 2011

3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your name, index number and CT 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 diagrams, graphs or rough working.

Do not use paper clips, highlighters, glue or correction fluid.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Answer **each** question on a **fresh sheet of paper**.

At the end of the examination, fasten all your work securely together with this sheet as cover page for your answer script.

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

Name: _____

Civics Class: _____

Economics Tutor: _____

Section	Question	Marks
A	1	/30
	2	/30
B	(please fill in question no.)	/25

This document consists of **8** printed pages and **2** blank pages.



Raffles Institution

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Section A

Answer **all** questions in this section.

Question 1 Rare Earths**Extract 1: China's rare earth monopoly threatens global suppliers, rival producers claim**

The Chinese acquisition of stakes in Australian rare earth miners Lynas Corporation and Arafura Resources has caught the rest of the world sleeping. Following two acquisitions in the past six months for an aggregate US\$163m, Korean, Japanese and Western players may find themselves locked out of the sector. With over 90% of the global rare earth resource held by Chinese companies, the country's monopoly looks unchallenged. The recent Australian acquisitions have brought China's control of the majority of the rare earth deposits outside China.

Rare earth metals are needed for the manufacturing of wind turbines, solar panels, plasma televisions, mobile phones and hybrid car batteries meaning the Chinese monopoly could shift the high-tech manufacturing industry bases from Japan and Korea to China.

Although China is home to the largest rare earth reserves in the world, it is still actively seeking chances to acquire overseas mines. The purpose is to assure resources for the green energy and high-tech industries.

Source: *Mergermarket*, 29 May 2009

Extract 2: China's monopoly on rare earth metals could choke economies

Global demand for rare earths has more than doubled over the past decade, as ever more devices make use of their unique properties. Rare earth phosphors in the television screen make the colours bright, while super-strong rare earth magnets allow electric motors to be compact enough to fit in a car, and headphones small enough to fit in your ear. Japan manufactures many of these goods and is the world's biggest importer of the metals.

The problem is that not only does China dominate the production of rare earths, it also leads the field in extraction. For example, when Japan buys rare earth minerals from countries other than China, it still has to pay Chinese factories to extract the pure metal because most of the technology for refinement is only produced in China. All of this wouldn't be an issue if China was keen to sell. But, increasingly, it isn't. Over the last seven years, China has reduced the amount of rare earths available for export by some 40%.

As China's industries begin to consume most of its own rare earth production, Toyota and other companies are seeking to secure reliable reserves for themselves. It was reported last year that Japanese firms are showing strong interest in a Canadian rare earth site under development at Thor Lake in the Northwest Territories.

There is no viable rare earth substitute. Scientists have had some success in reducing the amount of rare earths needed in products, but not enough. Efforts being made to reuse and recycle the many tonnes of rare earth metals currently thrown away (in discarded mobile phones, hard drives, and so on) are unlikely to make a difference on their own. Even if any of these initiatives do eventually succeed, new mines still take years to build.

Source: *Prospect Magazine*, 18 November 2009

Extract 3: China makes renewable power play to be world's first green superpower

A game-changing moment could be upon us. In recent years, the world has grown used to condemning China as a climate criminal. But over the next few weeks and months, don't be surprised if you hear the same nation being hailed as the planet's first green superpower.

The State Council, China's cabinet, will soon release the details of a staggeringly large "new energy" programme that could propel the world's biggest greenhouse gas emitter past Europe and the US into a global leader in renewable energy and low-carbon technology.

The size of the energy stimulus has not yet been revealed, but reports in the domestic media and from foreign diplomats suggest between 1.4 trillion (US\$200 bn) and 4.5 trillion yuan (US\$600bn) will be invested over the next ten years in nuclear power plants, solar and wind farms, hydroelectric dams, "green transport", "clean coal" and super efficient electric grids.

China could emerge as the unquestioned global leader in clean energy production, significantly increasing its chances to wean [itself] off coal, and at the same time ushering in an era of sustainable economic growth by exporting these clean-energy technologies to the world."

Source: *The Guardian*, 10 June 2009

Extract 4: The Battle Over Rare Earth Metals

All is not well in the world of rare earths.

For the rest of the world, the problem is that the rare earths which the Chinese deem so important to their technological and green future are already critical for maintaining the West's technological and green present, let alone a future of green growth and sustainable production. For example, China has announced that over the life of the next two decades, it will construct some 133 gigawatts of wind turbine generated electricity. This is likely to dramatically impact the supply of the rare earth metal such as neodymium, dysprosium, and terbium, the last two of which are among the rarest of the rare earth metals. Some rare earth elements such as cerium and neodymium are more abundant and concentrated. In contrast, dysprosium and terbium are less plentiful in world's mining deposits.

This is a direct challenge to the West's march toward a greener future.

Source: *Journal of Energy Security*, 12 January 2010

Extract 5: China's Chokehold On Rare-Earth Minerals Raises Concerns

Chinese officials say that mass extraction of rare earths is causing extensive environmental damage in China and that's why the government has tightened controls over exploration, production and trade. Poisonous chemicals are used to mine rare earths, putting local water supplies and public health at risk.

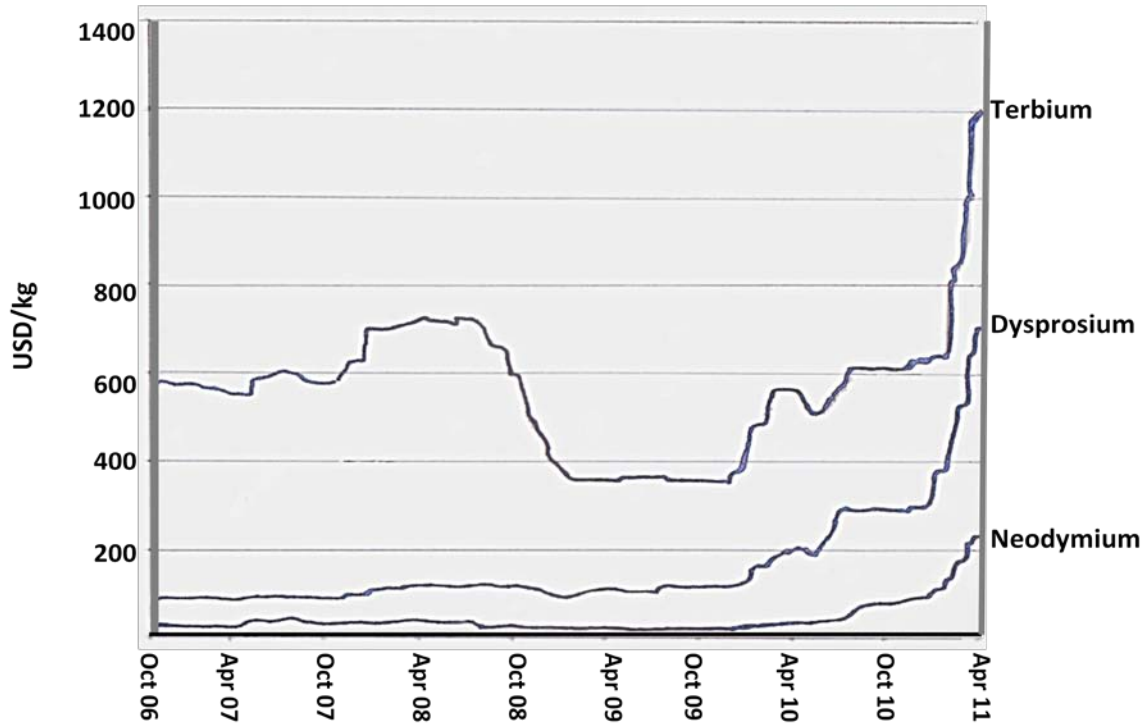
Source: *YaleGlobal*, 8 October 2010

Extract 6: Rare earth prices increase due to new tax

China's Ministry of Finance and State Administration for Taxation in December 2010 announced a new tax on rare earth minerals that would be effective from April 1 2011. Since the new tax will be paid by Chinese miners, China may actually be able to show that it is serious about environment protection.

Source: *Critical Strategic Metals*, 6 May 2011

Figure 1: Ten year International price history of selected rare earth metals



Source: Cache Exploration Inc

Questions

- (a) (i) Compare the trend in the prices of the rare earths in Chart 1. [2]
- (ii) With the aid of a diagram, account for the above trend. [5]
- (b) With the help of a diagram, analyze the effects of China's increasing control over rare earths mines on the Japanese economy. [6]
- (c) To what extent would China's reduction in the export of rare earths pose a 'challenge to the West's march toward a greener future'? [8]
- (d) Evaluate the effectiveness of the Chinese government's intervention in the market for rare earths. [10]

Question 2 Trade and Globalisation

Extract 7: Enough about the yuan already

U.S. lawmakers argue that an undervalued yuan hurts U.S. manufacturers and affects jobs. A Senate bill introduced recently would make it easier for the Treasury Department to tag China with trade sanctions for holding down the value of the yuan to gain an unfair advantage.

China became the world's biggest exporter last year, helping it amass a staggering \$2.4 trillion of foreign exchange reserves. The economy grew at its fastest annual pace since the start of the financial crisis, hitting a growth rate of 10.3% in 2010. The World Bank projected China's real GDP growth at 9.3 percent in 2011 and suggested a fully normalized macro policy stance to address the macro risks with respect to inflation.

But China rejected calls to allow appreciation of the yuan against the dollar to help tame inflation. The government is instead fighting inflation with a package of policies, including interest rate increases, and said that rising prices can hardly be the main factor in determining the exchange rate policy.

Source: *CNN Money News*, 2 July 2011

Extract 8: Keeping Protectionism at Bay

The world's big trading nations have done a fairly good job over the last two years of resisting protectionism. But these countries' patience with open markets seems to be wearing thin. This course is not surprising given the sluggish recovery.

U.S. imposed a 35% tariff on tyres imported from China, as the steelworkers' union claimed 5,000 jobs have been lost since 2004 because of low-cost Chinese tyres. And China's decision to counter with chicken tariffs could affect over \$700 million worth of imports from the U.S., accounting for over 70% of China's total chicken product imports. Chicken feet can fetch prices 20 times higher in the Chinese market. China's Fair Trade Office said the tariffs were in response to considerable US subsidies for chicken feed products such as corn and soybeans. China also opened anti-dumping investigations against imports of photographic paper from the European Union and Japan.

Source: *New York Times*, 29 April 2010

Extract 9: Chinese Provinces to Raise Minimum Wages

China's minimum wage will grow by an average rate of at least 13 percent over the next five years. During the first quarter this year, 13 provinces raised their minimum wages amid rising inflationary pressure and growing concern over China's widening wealth gap. The increases averaged 20.6 percent.

"This is a step in the right direction," Stephen Roach, Morgan Stanley's Asia chairman said. "China has a very low personal income share of GDP, and wages, surprisingly low wages, and limited employment growth are part of the problem." The share of wages in China's gross domestic product has fallen to 39.7 percent from 53 percent in 1999. Rising wages may help sustain domestic demand as slower global growth damps the rebound in exports. Higher wages and salaries among China's 468 million industrial and services workers should help China reduce its reliance on exports and investment.

Minimum wages in the more affluent eastern areas are more than double those of poorer inland provinces. The wage gap is encouraging Taiwanese firms such as Foxconn and HTC, which have created an estimated total of at least 7.7 million jobs in China since 1991, to move production to central and western regions.

Source: *China Daily*, 29 June 2011

Extract 10: Taiwan Jobs Sucked to China

With an exodus of factories to the lower-cost mainland, Taiwan's failure to develop new growth industries has caused it to fall behind Singapore and Hong Kong. While electronics manufacturers including HTC and Foxconn benefit from producing at a lower cost on the mainland and reaching the Chinese market, Taiwanese companies tied to the domestic market are suffering from slowing sales gains.

Taiwan's unemployment rate of 4.4 percent is more than twice as high as Singapore's. Joblessness is about four times higher than a low reached three decades ago, while household income adjusted for inflation was lower in 2010 than in 2000.

While Singapore and Hong Kong have also seen a decline in the importance of manufacturing to their economies, Singapore has lured pharmaceutical and biotechnology investments, and opened two casinos, to spur growth. Hong Kong has attracted China's biggest companies to list on its stock exchange. Taiwan's opening to the mainland also includes reductions in barriers to commerce, with a trade deal signed in June 2010 that will cut tariffs on more than 800 products and boost access to services including banking, securities and insurance.

Source: *Bloomberg News*, 3 July 2011

Table 1: Components of Gross Domestic Product (% of total)/ Gini Coefficient

Year 2010	China	Singapore
Private Consumption	37	41
Government Consumption	14	11
Gross Fixed Investment	44	29
Exports of goods and services	39	203
Imports of goods and Services	31	182
Gini Coefficient	0.47	0.47

Source: United Nations Statistics Division

Table 2: Selected Indicators for Singapore

	2006	2007	2008	2009	2010
Real GDP growth (%)	8.7	8.8	1.5	- 0.8	14.5
Growth Rate in Average Monthly Nominal Earnings (%)	3.2	6.2	5.4	- 2.6	5.6
Inflation Rate (%)	1.0	2.1	6.6	0.6	2.8
Unemployment Rate (%)	2.7	2.1	2.2	3.0	2.2

Source: Singapore Department of Statistics

Figure 2: Value of Yuan (average rate per US\$)



Figure 3: China – Annual Change in Consumer Price Index (%)



Source: Tradingeconomics.com

Table 3: China's Trade with the United States (\$ billion)

	2003	2004	2005	2006	2007	2008	2009	2010
US exports	28.4	34.7	41.8	55.2	65.2	71.5	69.6	91.9
% change	28.9	22.2	20.5	32.0	18.1	9.5	-2.6	32.1
US imports	152.4	196.7	243.5	287.8	321.5	337.8	296.4	364.9
% change	21.7	29.1	23.8	18.2	11.7	5.1	-12.3	23.1

Source: US-China Business Council

Questions

- (a) (i) How does the value of the yuan in January 2011 compare to its value in 2001? [1]
- (ii) Describe the trend in China's consumer prices from January 2008 to January 2011. [2]
- (b) To what extent do you agree with the view that the US trade position with China over the period was a result of China 'holding down the value of the yuan'? [5]
- (c) Explain why the Chinese government 'rejected calls to allow appreciation of the yuan to help tame inflation'. [4]
- (d) Discuss whether a national minimum wage would be 'a step in the right direction' for Singapore. [8]
- (e) In view of the challenges arising from globalisation, discuss whether the measures in the case material are likely to be effective in boosting economic growth and creating jobs. [10]

Section B

Answer **one** question from this section.

3. As Indian economist Amartya Sen has said, “The invisible hand of the market has often relied heavily on the visible hand of government.”
- (a) Explain how the invisible hand works in the allocation of resources. [10]
- (b) Evaluate the view that a government such as that of Singapore should subsidize entry to museums and tickets to watch arts performances. [15]
4. Higher rentals and oil prices are among the factors that have prompted the Monetary Authority of Singapore (MAS) to revise its inflation forecast for this year to between 4 and 5 per cent, up from between 3 and 4 per cent.
- (a) Examine the effects of a higher rate of inflation. [10]
- (b) Assess the view that monetary policy is the best way for the Singapore government to achieve price stability. [15]

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