

RAFFLES INSTITUTION  
2011 YEAR 6 PRELIMINARY EXAMINATION  
Higher 2

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**ECONOMICS**

**9732/01**

Paper 1 Case Studies

**1 September 2011**

**2 hours 15 minutes**

Additional Materials:      Answer Paper

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**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.

Answer **all** questions.

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

**Begin answering each question on a fresh sheet of answer paper.**

**At the end of the examination, fasten your answer to each question separately.**

**Attach this cover sheet to your answer for Question 1.**

Cover Sheet

**Name** : \_\_\_\_\_  
**Civics Class** : \_\_\_\_\_  
**Economics Tutor** : \_\_\_\_\_

Question No.	Marks
1	/30

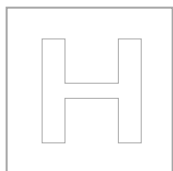
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**Attach this cover sheet to your answer for Question 2.**

Cover Sheet

**Name** : \_\_\_\_\_  
**Civics Class** : \_\_\_\_\_  
**Economics Tutor** : \_\_\_\_\_

Question No.	Marks
2	/30



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Answer **all** questions.

### **Question 1    Rare Earths**

#### **Extract 1: China controls rare earth supplies**

With over 90% of the global Rare Earth resource held by Chinese companies, the country's monopoly looks unchallenged. The recent acquisition of stakes in Australian rare earth miners Lynas Corporation and Arafura Resources has 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.

Acquisitions of the Australian Rare Earth mines are strongly backed by the Chinese Government. Privately-owned Japanese companies are at a disadvantage when competing with state-owned Chinese companies. The Chinese have easy access to government capital while the risk assessment for a Japanese company can take much longer. Acquisition financing can be raised through state-owned banks, guaranteed by the Government. Additionally, the Chinese government, in its determination to increase rare earth resources, is also less risk averse.

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: *www.mergermarket.com*, 29 May 2009

#### **Extract 2: Never enough rare earths for all**

Global demand for rare earth metals has more than doubled over the past decade, as ever more devices make use of their unique properties. Production of both hybrids cars and wind turbines is expected to climb sharply amid the clamour for cleaner transportation and energy alternatives that reduce dependence on fossil fuels blamed for global climate change.

Japan is the world's biggest importer of the metals. The car giant Toyota plans to step up its sales of its Prius hybrid automobile to 1 million units per year starting in 2010. With several kilograms of rare earth metals in each hybrid car, the Prius, is the biggest user of rare earths of any object in the world. Currently, Toyota has 70 percent of the U.S. market for vehicles powered by a combination of an internal-combustion engine and electric motor. The Prius is its No. 1 hybrid seller.

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 found in China. Over the last seven years, China has reduced the amount of rare earths available for export by some 40%. Beijing has maintained that the export cuts are in line with sustainable development. Illegal mining practices and over-exporting rare earths have hurt China's environment and depleted its resources. It's time other countries share the burden of mining the metals, it says.

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. Toyota has looked

at rare earth possibilities in Canada and Vietnam. At the same time, the Japanese have started accumulating stock-piles in response to China's export cuts.

There is no viable rare earth substitute. Other metals have been tested, but they don't work. 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: various

### **Extract 3: Battle for renewable power play**

Don't be surprised if you hear China 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.

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."

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 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 and are harder to extract than the others.

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

Source: various

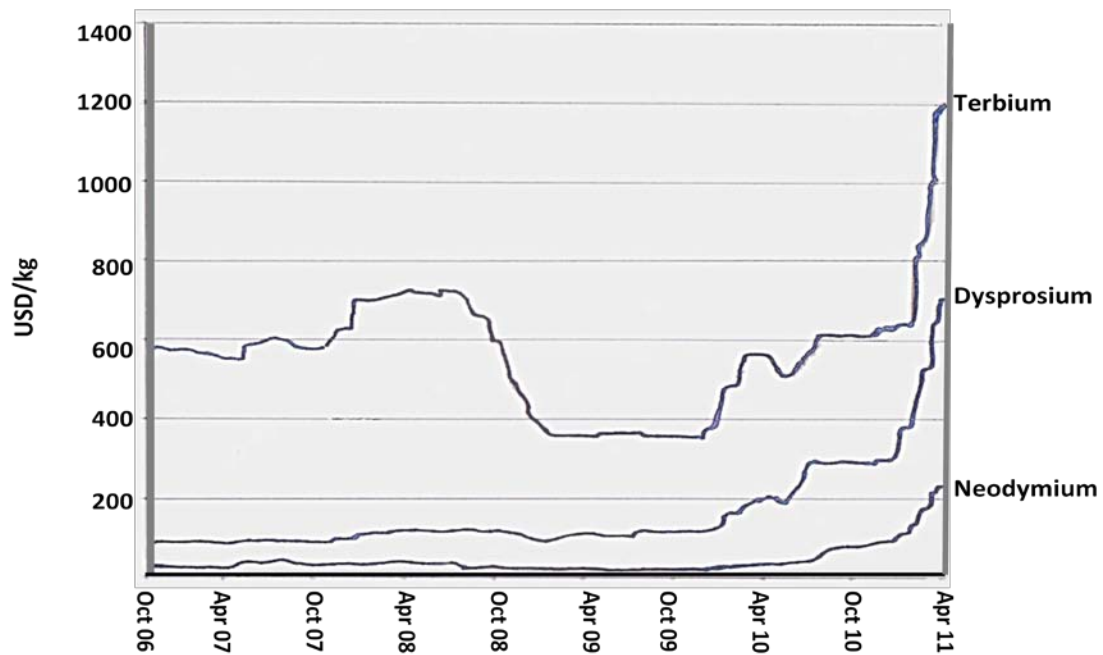
### **Extract 4: Rare Earth Processing is dangerous business**

Rare earth processing and refinery in China is a messy, dangerous, polluting business. It uses toxic chemicals, acids, sulfates, ammonia. The workers have little or no protection. The environmental problems include air emissions with harmful elements, such as fluorine and sulfur, wastewater that contains excessive acid, and radioactive materials, too.

Local villagers whose farmland has been ruined by seepage from the lake pay the price.

Source: *Independent TV News*, 14 December, 2009

**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 Figure 1. [2]
- (ii) With the aid of a diagram(s), account for the above trend. [5]
- (b) Explain the basis of China's monopoly power in the production of rare earths. [5]
- (c) With a cut in the export of rare earths by China, analyse the extent to which profits for Toyota Prius will be affected in the short run and the long run in the US market. [8]
- (d) Discuss whether the Chinese government's intervention in the rare earth market is justified on grounds of efficiency. [10]

[30 Marks]

## Question 2 Trade and Globalisation

### Extract 5: 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 6: 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. Every country has given in to temptation to some degree. 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 7: 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 8: 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

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



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



Source: [www.tradingeconomics.com](http://www.tradingeconomics.com)

**Table 1: China's Trade with the United States (\$ billion)**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
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

**Table 2: Components of Gross Domestic product (% of total)/Gini Coefficient**

<b>2010</b>	<b>China</b>	<b>Singapore</b>
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 3: Selected Indicators for Singapore**

	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
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

## 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]

[30 Marks]

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