



HWA CHONG INSTITUTION
C2 Preliminary Examinations
Higher 2

**CANDIDATE
NAME**

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CT GROUP

17

**CENTRE
NUMBER**

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**INDEX
NUMBER**

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ECONOMICS

Paper 1 Case Study Questions

9757/01

23 August 2018

2 hours 15 minutes

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

Write your **name, CT group, Centre and Index numbers** 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 an HB pencil for any diagrams, graphs or rough working.

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

Answer **all** questions.

Begin Question 2 on a fresh sheet of writing paper.

At the end of the examination, fasten your answers to Question 1 and Question 2 **separately**.

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 questions 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 **8** printed pages.

[Turn over

Answer **all** questions

Question 1: Waste Recycling

Extract 1: US recyclers battered by global commodity plunge

US recyclers are fighting to stay alive. Prices for new materials have fallen so much in the past few years that recycled materials have lost their edge in the market. Besides, some states such as California had cut their subsidies in state-run recycling programs.

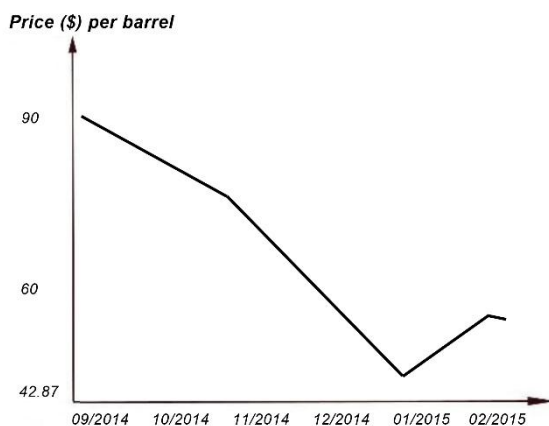
Global forces have put the squeeze on recyclers. Growth in China, the largest buyer for several types of recycled materials, has slowed significantly. Beijing even erected a so-called "Green Fence," which enacted standards on imports of Americans' recycling. Add to that a strong dollar, which makes buying U.S. materials more expensive for customers in other countries.

Meanwhile, oil prices have dropped to the lowest level in around 13 years. This is expected to have a further negative effect on the price paid for recycled materials such as recycled plastics. As new plastics, which are produced from petroleum, become more cheaply available, manufacturers buy less recycled plastics.

"Being green costs money," laments Waste Management CEO David Steiner. "When prices are high we'll pay you to recycle. When prices are low we have to charge you," Steiner says.

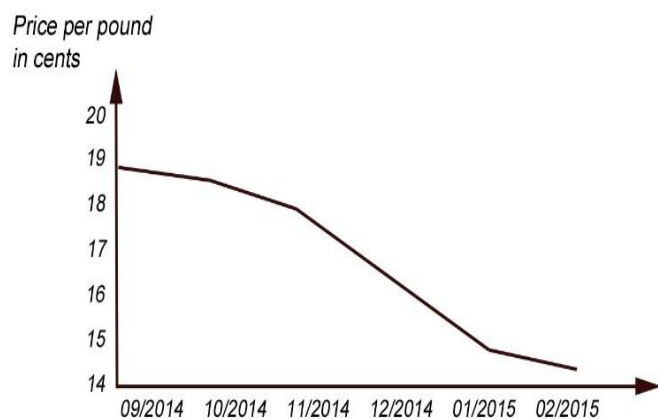
Sources: *The Seattle Times*, 5 March 2016 and *Forbes*, 14 September 2016

Figure 1: Price of Crude Oil



Source: US Department Of Energy

Figure 2: Price of Recycled Plastics



Source: SecondaryMaterialsPricing.com

Extract 2: The benefits of recycling

Recycling is the process of turning old used materials into new ones. Through recycling, energy and raw materials are saved. Moreover, studies have shown that for every one job in waste management there are four jobs in recycling. Jobs would be created by a new breed of companies that embrace recycling and servicing goods to prolong their lifespan. Examples include designing goods that last longer and can be repaired easily. It has been estimated that recycling and remanufacturing industries create more than \$1 billion in revenue and hundreds of thousands of jobs. According to the Darla Moore School of Business, if just one percent of all households in South Carolina were to recycle an additional eight newspapers per month, it could mean a gain of \$3.8 million in economic activity annually for the state.

Recycling reduces pollution because manufacturers are reusing materials instead of creating new ones, and toxic chemicals and greenhouse gases are not released into the atmosphere through incineration. Recycling also prevents hazardous waste from being dumped in landfills which can potentially contaminate water sources. Increasingly, many countries including the US have turned to recycling given the high opportunity cost of using precious land for the disposal of waste in landfills. Indeed, recycling is better than landfill, because it replaces new materials in the manufacturing process.

From the perspective of sustainable development, recycling helps to prevent resource destruction. It takes 4.4 tons of trees to create one ton of paper pulp, and recycled paper reduces solid waste by 29%. Meanwhile, recycling one ton of plastic bottles conserves about 3.8 barrels of oil.

Sources: *Institute For Local Self-Reliance*, 22 December 2016, *Renewable Resources Coalition*, 15 December 2016, *Eco Cycle Solutions*

Extract 3: Problems with recycling

The standard waste hierarchy generally demarcates between waste avoidance and waste management, with recycling squarely in the waste management zone. But recycling sits fairly low down the waste hierarchy. Reducing total waste created in the first place and reusing material as many times as possible, are higher up in the hierarchy as compared to recycling.

Besides, recycling process still consumes energy (and other resources) and costs money. In order to repurpose certain recycled materials, separate manufacturing plants need to be built and used. This would counteract the advantage recycling has in creating less pollution, since more may actually be generated as a result of the additional factories.

Recycling sites are also commonly unsafe. As with any waste, materials to be recycled have to be transported and processed somewhere. This means creating additional locations of potentially hazardous waste. These heaps of trash are grounds for bacteria, disease, and a laundry list of other unsafe conditions. In addition to this, recycling sites are also industrial plants. This means they are not without their own forms of pollution.

So recycling needs to be seen as what is – a last line of defence. Minimising waste is more important than managing it, and we need to keep our focus there.

Source: *Renewable Resources Coalition*, December 2016, Planet Green Recycle

[Turn over]

Extract 4: How Pay-As-You-Throw works

Traditionally, residents pay for waste collection through property taxes or a fixed fee, regardless of how much trash they generate. Pay-As-You-throw (PAYT) breaks with tradition by treating trash services just like electricity, gas, and other utilities. Households are charged based on the amount of household trash they throw away. They would then purchase trash bags that correspond to the weight and size of the trash that they dispose. This creates a direct economic incentive to recycle or reuse more, and to generate less waste.

One of the most important advantages of a variable-rate program may be its inherent fairness. When the cost of managing trash is hidden in taxes or charged at a flat rate, residents who recycle and prevent waste subsidise their neighbours' wastefulness. Under PAYT, residents pay only for what they throw away.

Source: *United States Environmental Protection Agency*

Questions

- (a) (i) State the relationship between the price of crude oil and the price of recycled plastics shown in Figure 1 and Figure 2. [1]
- (ii) With reference to Extract 1, explain how a fall in the price of crude oil might impact the price of recycled plastics. [3]
- (b) Explain what Waste Management CEO David Steiner meant when he said, "when prices are high we'll pay you to recycle. When prices are low we have to charge you." [2]
- (c) Use the concept of opportunity cost to explain **two** reasons why many countries have turned to recycling instead of disposing their waste in landfills mentioned in Extract 2. [4]
- (d) Explain why waste collection paid through a flat fee results in residents who "recycle and prevent waste subsidise their neighbours' wastefulness". [2]
- (e) Assess the extent to which the promotion of recycling can help to achieve sustained and sustainable growth in the US. [8]
- (f) Discuss whether it would be more effective for the government to subsidise recycling or implement PAYT to address waste pollution. [10]

[Total: 30]

Question 2: China's Slowdown on Tourism, Infrastructure and Trading Partners

Table 1: Selected Economics Indicators for China, 2013 to 2016

	2013	2014	2015	2016
Real GDP growth (%)	7.8	7.3	6.9	6.7
Unemployment (%)	4.1	4.1	4.1	4.0
Inflation (CPI, %)	2.5	1.5	1.6	2.1
Exchange Rate (Renminbi per USD)	6.15	6.16	6.28	6.64
Current Account Balance (US\$billion)	148	236	304	202
Fiscal balance (change in %)	-1.9	-1.8	-3.4	-3.8

Source: *Focus Economics*

Extract 5: Chinese travellers set a new record for global tourism spending in 2016

The expenditure on tourism for Chinese travellers venturing abroad was US\$261 billion in 2016. Approximately 135 million Chinese travelled outside China last year, a 6 percent increase.

Chinese travellers were the second largest market, after the United States, for their contribution to global tourism in 2016. The World Travel & Tourism Council projects that China will be one of the 10 fastest growing markets for leisure travel spending through 2026.

Japan, Korea and Thailand benefited the most from outbound Chinese tourist spending and the U.S. and Europe also saw more spending from China. There has been an increased Chinese spending in Europe as more Chinese travellers reconsider the continent for trips in place of the usual Asian countries.

Source: United Nations World Tourism Organisation

Extract 6: Should we charge tourists a higher price than we do for locals

Tourism has long been regarded as a vehicle of economic prosperity and source of increased revenue. It is one of the world's largest industries, with a global economic contribution of over US\$7.6 trillion. The United Nations World Tourism Organisation forecasts that by 2030, the number of international tourist arrivals will reach 1.8 billion. With one in ten jobs on the planet reliant on tourism (that's 292 million people) and an equivalent worth of 10 per cent of global GDP, there is little wonder that host communities want to make the most of the opportunities it brings.

Recently, it was reported that some cafes in Belgium's Bruges are charging tourists 10 per cent more than locals for chips, and food and goods are also considerably higher for tourists in cities like Rome. Asian travellers especially from China could face even higher prices due to their perceived wealth. One of the most famous places for hiking prices up for visitors is Venice in which foreign tickets can cost 6 to 10 times more than local price. The city's "two-tier payment system" became so extreme that a complaint reached the European Commission in 2015 which claimed discriminatory practices against tourists. In the long run, such pricing

policy can hurt economies because tourists are less motivated to visit those countries again in the future.

[Turn over

Indeed a two-tier tourism payment system may be deemed unfair. But if locals had to start paying the same prices as tourists, it's likely that many of them would be prevented from enjoying heritage sites in their own communities. Furthermore, it may be one sustainable tourism practice to protect valuable resources as more money collected from the tourists could be used to maintain heritage sights. Thus expecting tourists to pay a little more to protect and maintain the sites they enjoy is morally defensible – whether this be Bruges, Venice or Rome.

Source: *Channel News Asia*, 6 July 2017

Extract 7: The investment addiction in China persists and only the rich are spending more

Generally, emerging economies rely on investment and exports, before shifting to consumption-driven models as they mature. Chinese President Xi Jinping has emphasized this transition as a key to achieving "high-quality development." And global companies have been swooping in, determined to cash in on a Chinese consumption boom.

Even if overall consumption is contributing more to GDP now, China is still heavily dependent on investments and government infrastructure projects and continues to grapple with the side effects of its addiction.

Since 2008, when Beijing countered the global financial crisis with a stimulus package worth 4 trillion yuan (\$610 billion at the current rate), investment has continued to account for more than 40% of GDP. This is an unusually high percentage for a large economy. The comparable figures for developed countries are around 20%.

No country has built so many roads, bridges and airports as quickly as China. Anne Stevenson-Yang, research director at J Capital Research, an economic research firm in Beijing, says the government has simply built too much. For example, in the city of Luliang in the inland province of Shanxi, a \$160 million airport, which opened in 2014, gets at most five flights a day and as few as three. Another symbol of the investment addiction can also be found in "China's Manhattan." Tianjin's Conch Bay, a 110-hectare district with a cluster of 40 high-rise buildings, was supposed to be the country's new financial capital as outlays surged over the past several years. But there were few signs of life. A number of buildings were still under construction; the streets were empty; and even completed buildings had no occupants. There are numerous examples of such projects throughout China that are underutilised.

On the other hand, consumption in China appears to be gathering steam, as exemplified by strong online shopping sales on the Nov. 11 Singles Day. But total retail sales of consumer goods increased just 8.8% in real terms in November 2017, which was much slower than the 12% growth in 2012.

Consumption patterns suggest that the masses are reluctant to spend, while the upper and middle classes are doing most of the buying. Sales of instant noodles, a staple for households with lower incomes, have declined for three years in a row. The Chinese beer market also has seen a three-year decline, yet demand for premium beer is robust. Therefore, although it may

look like consumption is becoming a stronger driver of the economy, the wealthy are playing a disproportionate role.

Source: *Nikkei Asian Review*, 26 December 2017 and *National Public Radio*, 15 October 2015

Extract 8: China slowdown is biting Singapore economy amid demographic crunch

The economy of tiny Singapore is taking a big hit from the slowdown in China, an impact coming just as the city-state is struggling with a homegrown demographic squeeze.

Buying and selling goods is a crucial driver of growth for Singapore's economy: companies based on the island supply components that go into smartphones made in China and the shipping industry helps transport raw materials across the world. This makes Singapore particularly susceptible to the weakness in China's economy.

It's a slowdown immediately apparent in data released earlier this week. Singapore's non-oil domestic exports (NODX) contracted 7.2 percent on-year in December, accelerating the decline from November's 3.4 percent fall. Exports to China fell nearly 19 percent on-year in December.

The picture is complicated by the city-state's looming demographic crunch. By 2030, the number of people over the age of 65 in the city-state is expected to double, making up around 20 percent of the population. At the same time, fewer babies are being born. Singapore's fertility rate was only 1.2 births per woman in 2013, according to World Bank data. That's not just below the replacement rate of 2.1, it's below even famously aging Japan's rate of 1.4 and puts the city-state only fourth from last globally.

Singapore had hoped to resolve this problem of falling birth rates and aging by opening up its borders and allowing immigrants to come in. That surge outpaced the addition of new infrastructure and housing, leading to overcrowded public transportation systems and fast-rising housing prices. However, migrant numbers had slowed down in recent years due to local discontent.

Singaporeans are a practical and pragmatic people. As the population ages, many expect the immigration faucet to turn back on eventually to address economic and social needs such as caregiving.

Source: *CNBC*, 20 January 2016

[Turn over

Questions

- (a) Using the information in Table 1 and Extract 5,
- (i) calculate and interpret the likely value of income elasticity of demand for Chinese outbound tourism in 2016. [2]
 - (ii) explain how the rise in Chinese outbound tourism might contribute to the value of the Renminbi against the USD from 2013 to 2016. [2]
- (b) Explain how an increasing preference for outbound tourism might change China's multiplier value. [2]
- (c) (i) Use an aggregate demand and aggregate supply diagram to explain why investments and government infrastructure projects have led to excess capacity in China described in Extract 7. [3]
- (ii) Explain why the change in the fiscal balance in Table 1 suggests China's government spending on infrastructure projects might not be optimal. [3]
- (d) Discuss whether the practice of a 'two-tier payment system' is, on balance, beneficial to the consumers, firms and recipient country. [8]
- (e) Assess whether the Singapore government should be more concerned with the impact of China's economic slowdown on the economy or the demographic challenges. [10]

[Total: 30]

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