

TEMASEK JUNIOR COLLEGE
Preliminary Examinations 2018
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

Paper 1 Case Study

9757/01

Friday 24 August 2018
2 hours 15 minutes

Additional Materials: Answer Paper, Cover Page

READ THESE INSTRUCTIONS FIRST

Do not turn over until you are told to do so.

Write your name and CG number on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

Begin each question on a separate sheet of answer paper.
At the end of the examination, fasten your work for each question separately.
Attach the cover page to your work for Question 1.

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

This document consists of 8 printed pages.



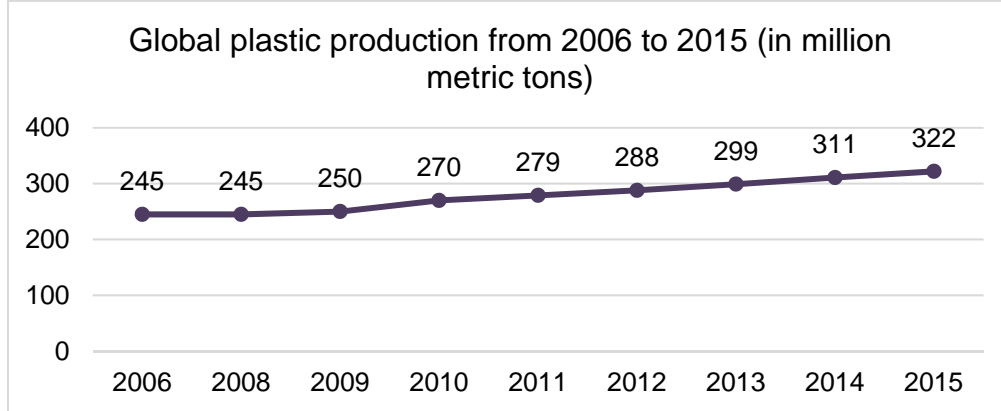
Temasek Junior College
Economics

[Turn Over

Answer **all** questions.

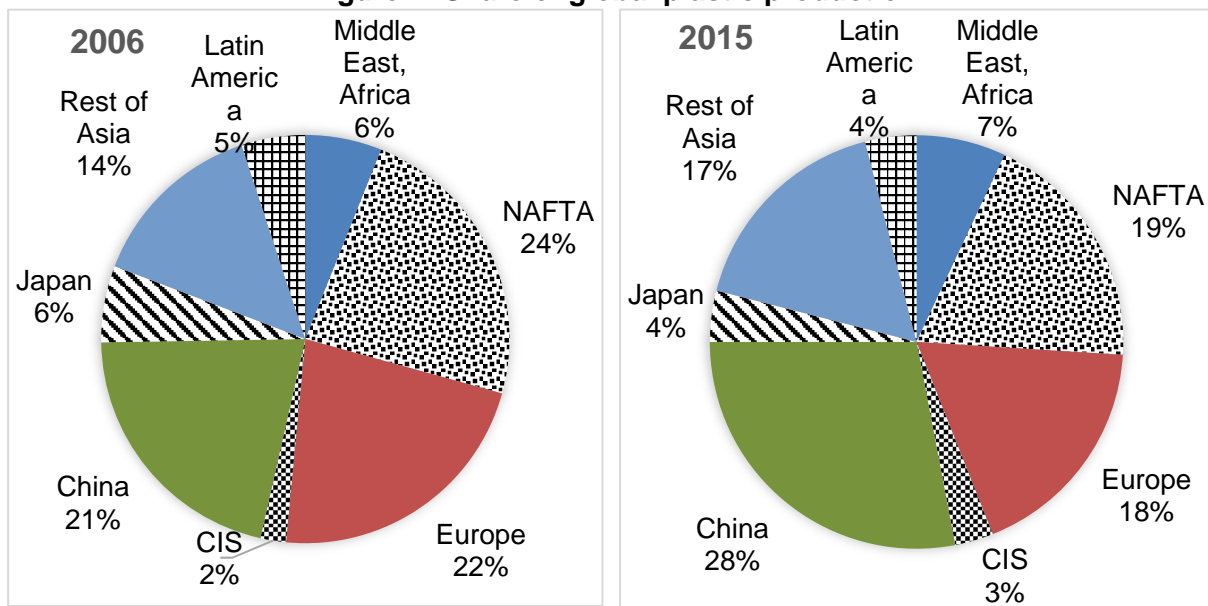
Question 1: Tiny Plastic, Big Problem?

Figure 1: Global plastic production from 2006 to 2015 (in million metric tons)



Source: *Statista and Power Plant CCS*

Figure 2: Share of global plastic production



Source: *PlasticsEurope Market Research Group (PEMRG)*

Extract 1: Global plastic production

The growth of the plastics industry goes hand-in-hand with economic development. The more an economy grows, the more plastic is used in construction, infrastructural development, electrical and electronic industries, and transport. Single-use plastic packaging – the nemesis of environmental activists – is also in strong demand in developing countries. Even in Europe, where anti-plastics campaigning has been especially vigorous, packaging accounts for 40 per cent of consumption. But the world's leading producer of plastic is China. Today it holds a whopping 29 per cent of the market share, up from 15 per cent just a decade ago. European, US and Japanese plastic manufacturers have meanwhile seen their market share shrink.

Source: *Business Times*, 9 July 2018

Extract 2: Global plastic crisis

The impacts of global plastic use have reached an alarming level. Based on the latest data, 9 billion metric tons of plastics have been produced since the 1950s, creating 7 billion tons of waste. Plastic waste not only damages the environment and threatens animal life but also harms human populations. One of the most dangerous elements of plastic waste is tiny pieces of debris known as microplastics, which are damaging the environment. These tiny particles can end up in people's stomachs via drinking water or eating seafood, which could present health risks.

Various attempts to minimise plastic use have been introduced. One involves developing plastic materials, known as biodegradable plastics or bioplastics, that decompose naturally in the environment. The materials commonly used to produce bioplastics are corn, sugarcane, vegetable oil and starch. However, using these ingredients for plastics has raised some concerns. First, the production of bioplastics requires a huge investment in the land, fertilisers and chemicals. Second, the use of these plants for plastics will trigger a competition between plants for food versus plants for plastics, which will likely lead to food price hikes and a food crisis.

Source: *The Jakarta Post*, 6 May 2018

Extract 3: The Future of Food

The urban population is exploding around the globe, and furthermore, issues like wasted food, poor working conditions, polluted ecosystems, mistreated animals, and greenhouse gases are just some of the concerns that people have about our current supply chains.

Fortunately, food systems are evolving – and the future of food depends on technologies that enable us to get more food out of fewer resources. One such example is the development of automated vertical farms. By stacking farms on top of another and using automation, vertical farms can produce 100x more effectively per acre than conventional agricultural techniques.

However, the problem for vertical farms is still cost – and it is not clear when they will be viable on a commercial basis.

Source: *Visual Capitalist*, 6 September 2017

Extract 4: Firms' response to the plastic crisis

Coca-Cola Co. Chief Executive Officer James Quincey is kicking off a recycling spree, as part of its efforts to woo customers by improving its image as a socially responsible organisation. The soft-drink company, which operates in more than 200 countries, is setting the goal of recycling one bottle or can for each one it sells by 2030. If successful, the plan could lead to cost savings because Coke could provide a growing amount of its own packaging material.

Source: *The Straits Times*, 20 January 2018

Extract 5: Plastic Industry in India

The Indian plastics industry made a promising beginning in 1957 with the production of polystyrene. Thereafter, significant progress has been made, and the industry has grown and diversified rapidly. The industry is dominated by conventional plastics production and hosts more than 2,000 exporters. It employs about 4 million people and comprises more than 30,000 processing units, 85-90 percent of which are small and medium-sized enterprises. The Indian plastics industry is supported by a large number of polymer producers, and plastic process machinery and mould manufacturers in the country. Among the industry's major strengths is the availability of raw materials in the country. These raw materials, including polypropylene, high-density polyethylene, and PVC, are manufactured domestically.

Source: *India Brand Equity Foundation*, July 2018

Extract 6: Bio-plastic industry in UK

Presently in the UK, supportive regulation and legislation has encouraged more environmentally sustainable business practices and consumer behaviour. For example, the government's drive towards achieving a 'zero waste' economy, through reducing waste and increasing recycling, has fostered an increased consciousness of resource efficiency. This awareness has indirectly promoted the use of bio-plastic products.

Due to their biodegradability in the right applications, bio-plastics can help divert organic waste from disposal so avoiding the additional costs of Landfill Tax. This can act as an incentive to businesses and municipalities to use bio-plastics, instead of conventional plastics. In addition, initiatives to reduce food and packaging waste have fostered research and innovation into more carbon neutral forms of plastics. Already, advances in the technical properties and functionality of bio-plastics have increased their attractiveness and the extent to which they can substitute for conventional plastics.

Based on the current annual domestic demand for bio-plastic products of 4,000 tonnes, it is estimated that in 2014 the gross output impact of the bio-plastics sector amounted to £103.4 million. This supports roughly 1,000 jobs and contributed £43.4 million of direct output to the UK economy.

Source: *Bio-based and Biodegradable Industries Association (BBIA)*, October 2015

Questions

- (a) (i) Explain whether the change in Europe's share of global plastic production meant that Europe's plastic production fell from 2006 to 2015. [2]
- (ii) Has the market for plastic production become more or less competitive from 2006 to 2015? Explain your answer. [2]
- (b) Using an example from Extract 2, explain the concepts of scarcity and opportunity cost to farmers. [3]
- (c) Explain how recycling PET bottles could benefit the Coca-Cola Company. [5]
- (d) Discuss whether the use of agricultural commodities, such as corn, to produce bioplastics could lead to a "food crisis" (Extract 2). [8]
- (e) Using the information provided, evaluate the view that the Indian government should develop the biodegradable plastic industry like the UK. [10]

[Total: 30]

Question 2: Donald Trump and the US economy

Table 1: US Macroeconomic Indicators

	2013	2014	2015	2016	2017
GDP (USD per capita)	52 726	54 651	56 420	57 591	59 535
Change in Consumer Price Index (%)	1.46	1.62	0.12	1.26	2.13
Unemployment (%)	7.38	6.17	5.29	4.87	4.35
GINI Coefficient	0.396	0.394	0.390	0.391	-
Current Account Balance (million USD)	- 348 801	- 365 199	- 407 765	- 432 874	- 449 141

Source: *OECD Data*

Extract 7: Donald Trump proposes law to cut immigration numbers by half in 10 years

Donald Trump announced plans for new immigration laws on Wednesday that would cut the total number of immigrants admitted to the US by half over a decade and prioritize those who can speak English or are well educated.

The proposed legislation, unveiled at the White House, would also cap the number of refugees admitted to the US every year at 50,000, and eliminate the diversity visa lottery, which currently allocates 50,000 visas a year to residents of countries that do not currently send significant numbers of migrants to the US.

An estimate provided by the office of one of the bill's sponsors, the Republican senator Tom Cotton, stated that if passed, the Reforming American Immigration for Strong Employment (Raise) Act would reduce the number of immigrants admitted to the US by 41% in its first year and by 50% over a 10-year-period.

Source: *The Guardian*, 02 Aug 2017

Extract 8: US unemployment claims slide by 14,000 to 246,000

Fewer Americans applied for unemployment benefits last week, another sign that US workers are enjoying job security.

The Labor Department said Thursday that claims for jobless aid fell by 14,000 last week to a seasonally adjusted 246,000. The less-volatile four-week average rose by 2,250 to 248,000. Overall, 2.06 million Americans are receiving unemployment benefits, down more than 8 percent from a year ago.

Jobless claims are a proxy for layoffs. The low levels suggest that employers feel they need to hang on to their workers in a tight labor market. Ian Shepherdson, chief economist at Pantheon Macroeconomics, says "companies fear that they won't be able to replace people who they let go... This isn't going to change anytime soon, so we expect claims to remain close to their current level." Weekly unemployment claims have now come in below 300,000 for 100 consecutive weeks, the longest streak since 1970.

Source: *Los Angeles Times*, 02 February 2017

Extract 9: Protectionism and trade disputes threaten world growth

A new wave of protectionism and trade tensions risks denting global growth, stoking inflation and harming living standards, the west's leading economic thinktank has warned in its first in-depth forecasts since Donald Trump won the US election on an anti-globalisation platform.

The Paris-based Organisation for Economic Co-operation and Development (OECD) said it was optimistic that expected spending measures and tax cuts under the new US administration would boost growth there and in other countries. But it said global trade growth was already "exceptionally weak" and jobs would suffer if politicians rolled back the clock on trade liberalisation.

"The global loss in GDP would be about 1.3%, but for the countries that impose the restriction, in other words, the US, China and the EU, the loss in their GDP would be closer to 2%," said Mann. "The countries that impose the restrictions damage themselves more." The report noted that more than 25% of jobs depend on foreign demand in many of the 35 countries in the OECD group.

"This economic outlook suggests that protectionism and inevitable trade retaliation would offset much of the effects of the fiscal initiatives on domestic and global growth, raise prices, harm living standards, and leave countries in a worsened fiscal position.

"Trade protectionism shelters some jobs, but worsens prospects and lowers well-being for many others," the report said.

Source: *The Guardian*, 28 Nov 2016

Extract 10: China retaliates with tariffs after US begins trade war

A long-threatened trade war between the US and China has got under way after the world's two largest economies imposed tariffs on each other. The US implemented tariffs on \$34bn in Chinese goods, to which Beijing responded with levies on a similar quantity of US imports.

Minutes after the US tariffs went into effect at 12.01am on Friday US time, a spokesperson for China's ministry of commerce said, "China promised not to fire the first shot, but in order to safeguard the country's core interests as well as that of the people, it is forced to fight back," according to Xinhua. The ministry stopped short of saying China had implemented its retaliatory duties.

Later on Friday, a spokesman for the ministry of foreign affairs said after the US tariffs kicked in, Chinese tariffs on US goods had immediately gone into effect.

Source: *The Guardian*, 06 Aug 2018

Questions

- (a) (i) Summarise the trend in the US Current Account Balance from 2013 to 2017. [2]
- (ii) Using a diagram, explain how the above trend affects the external value of the USD. [4]
- (b) Using a Production Possibilities Curve, explain how the proposed immigration law will impact the US economy. [3]
- (c) Using Extract 8, explain how automatic stabilisers work. [3]
- (d) Comment on whether the data provided is sufficient to conclude that there has been inclusive and sustainable growth in the US economy. [8]
- (e) Discuss the factors that governments should consider when enacting protectionist measures like tariffs. [10]

[Total: 30]