

Paper No: 9757/01

10th September 2018
Monday

Time : 1400 – 1615 hrs
Duration : 2 hours 15 mins

READ THESE INSTRUCTIONS FIRST

Do not flip the pages of this paper until you are told to do so.

Write your name, class and name of your economics tutor in the space provided on the writing paper.

Answer **all** questions. The number of marks is given in the brackets at the end of each question. Write your answers on the writing paper provided. If you use more than one sheet of paper, fasten the sheets together.

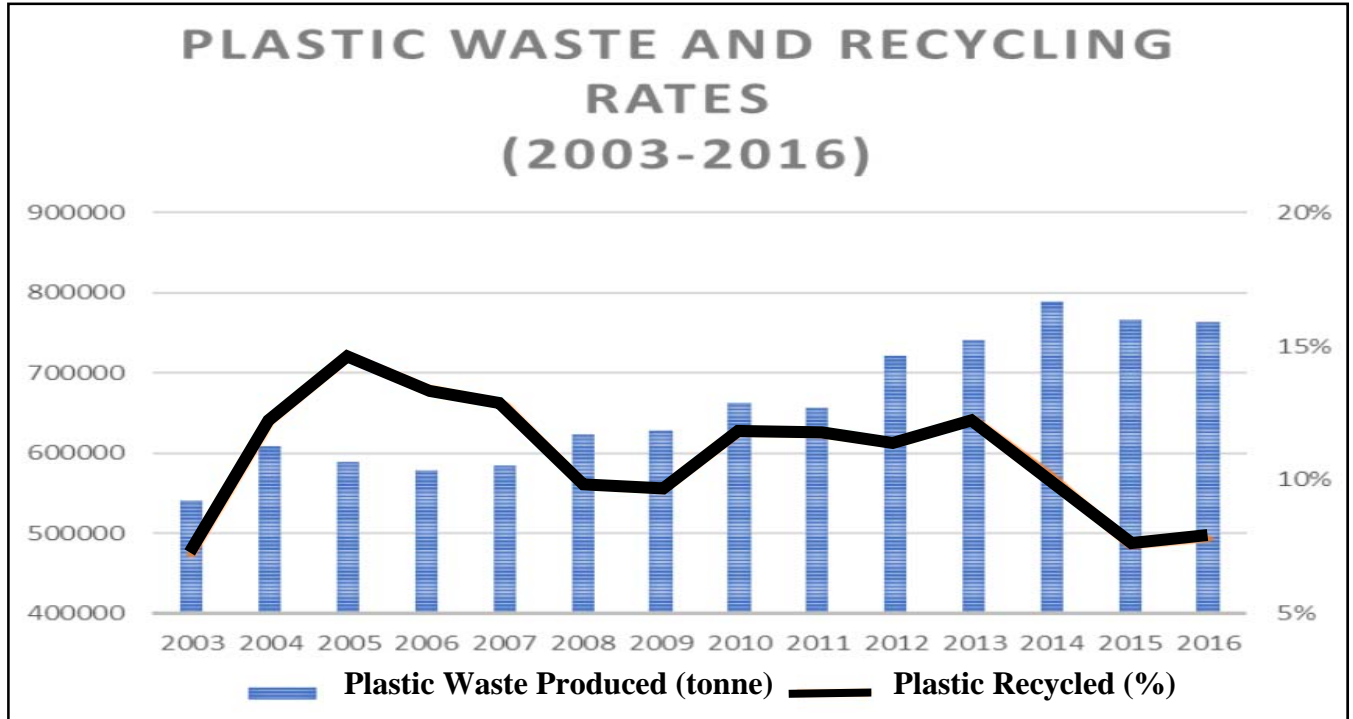
You are advised to spend several minutes reading through the data and questions before you begin writing your answers.

There are 8 printed pages including this cover page

Answer all questions

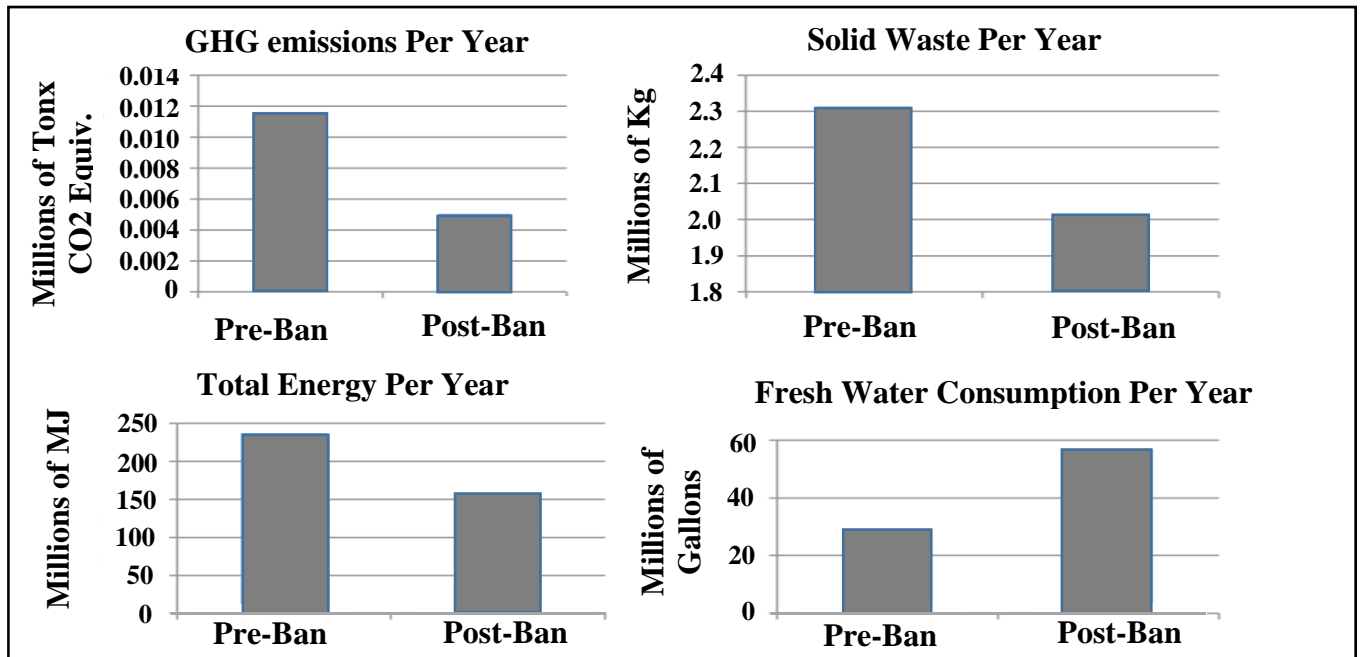
Question 1 Solutions to Tackle Plastic Bag Waste

Figure 1: Plastic Waste and Recycling Rates in Singapore



Source: National Environmental Agency (n.d.). *Waste Statistics and Overall Recycling*

Figure 2: Change in Environmental Impacts of Pre- and Post-Ban Bag-Use in San Diego



Footnote: GHG – Greenhouse gas; MJ – Megajoule; Fresh Water consumption due to paper bag production and washing of reusable bags

Source: Center for Sustainable Energy, *Plastic Bag Bans: Analysis of Economic and Environmental impacts*, 23 October, 2013

Extract 1: A War the World Must Win

Kathmandu alone uses around 4,700,000 to 4,800,000 plastic bags daily. In Nepal, 16 per cent of urban waste is comprised of plastic, which is 2.7 tons of daily plastic garbage production.

Besides the sheer quantity of plastic waste being produced, one of the major problems with plastic is its resistance to degradation. A conservative estimate puts the average time for one single plastic bag to completely biodegrade at 500 years. This means that not only most of the plastic we use during our lives will outlive us, but that our plastic footprint also will affect the generations to come.

The Hindu Kush Himalaya covering the connected mountains of eight countries — Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan — are the source of ten great rivers that provide drinking water, irrigation, hydropower and life, and eventually reach the oceans. The flow of water from the Himalayas to the oceans also carries plastics and solid waste, posing a threat to both ecosystems and people in the mountains, plains and seas. In Nepal, plastic waste is well known for clogging the rivers and streams in the mountains and hills, resulting in flash floods.

Source: A War the World Must Win, The Statesman, 3 July 2018

Extract 2: England's plastic bag usage drops 85% since 5p charge introduced

The number of single-use plastic bags used by shoppers in England has plummeted by more than 85% after the introduction of a 5p charge last October, early figures suggest.

More than 7bn bags were handed out by seven main supermarkets in the year before the charge, but this figure plummeted to slightly more than 500m in the first six months after the charge was introduced, the Department for Environment, Food and Rural Affairs (Defra) said. This shows that plastic bag consumption can be price-sensitive to UK consumers.

Retailers with 250 or more full-time equivalent employees have to charge a minimum of 5p for the bags they provide for shopping in stores and for deliveries, but smaller shops and paper bags are not included. There are also exemptions for some goods, such as raw meat and fish, prescription medicines, seeds and flowers and live fish.

Source: Adapted from England's plastic bag usage drops 85% since 5p charge introduced, The Guardian, 30 July, 2016

Extract 3: Designing a Solution to Plastic Bag Waste that Fits

Plastic bags are given out freely with purchases at supermarkets. Approximately 3 billion plastic bags were used in Singapore in 2011, resulting in an average of 1.6 plastic bags used per person on a daily basis. This high annual usage of plastic bags has been cause of much concern from environmentalists and concerned members of the public alike.

Several countries and cities around the world have already introduced legal measures such as plastic bag levies and taxes, to put an end to the practice of shoppers receiving an unlimited amount of plastic bags at no charge. These financial disincentives take two main forms – taxes that are enforced on plastic bag manufacturers or importers for the plastic bags sold by them and levies that are imposed on consumers at the point of sale. On a worldwide scale, more than 75 countries have taken steps to reduce the consumption of single-use plastic bags. About one-

third of these have instituted bans, approximately one-third have instituted fees. A tax on plastic bags would be the most direct and effective way of correcting this market failure.

On the other hand, environmental advocates, while encouraging the recycling of plastic bags, propose several alternatives to traditional plastic bags, including biodegradable or compostable bags for single-use purposes, paper bags for single-use purposes, reusable bags made from low density polyethylene (LDPE) or non-woven polypropylene, and cotton tote bags. However, in the real world, recycling carries costs that are often overlooked. For example, recycling paper could cause more severe water pollution or soil contamination as the removal of ink from paper requires harsh chemical treatment, with the resultant sludge needing to be disposed of somehow. The process of recycling could also be more energy intensive than the extraction of raw materials.

Source: Multiple sources

Questions

- (a) Describe the trend of plastic waste production and plastic recycled from 2010 to 2016. [2]
- (b) Explain the probable price elasticity of demand for plastic bags in the UK. [3]
- (c) (i) Explain the source of market failure for the plastic bag market mentioned in Extract 1. [2]
(ii) With the use of a diagram, illustrate how free provision of plastic bags worsens the issue of market failure identified above. [5]
- (d) With reference to Extract 3 and any other data, comment on the effectiveness of the solutions proposed by the environmental advocates to reduce consumption of plastic bags in Singapore. [8]
- (e) Assess the factors the Singapore government should consider when deciding between imposing a ban and a tax on plastic bags. [10]

[Total : 30]

Question 2 UK and EU - A Tale of Two Economies

Extract 4: The Evolution of the Eurozone

The common currency was an outgrowth of efforts that began in the mid-20th century, as Europe reeled from the carnage and disruption of two world wars. In 1957, this vision came closer to being a reality with the signing of the Rome treaty, which established the European Economic Community (EEC), comprising of Belgium, France, Italy, Luxembourg, the Netherlands and West Germany. Step by step, restrictions were eased on work, travel and trade between the expanding list of EEC countries.

The European Union (EU) was established in 1993 and created much of its economic structure and institutions – including setting in motion the process of adopting a common currency, the Euro.

Advocates of the Eurozone rightly argue that it was not just an economic project that sought to improve standards of living by increasing the efficiency of resource allocation, pursuing the principles of comparative advantage, enhancing competition, taking advantage of economies of scale and strengthening economic stability. More importantly, it was a political project; it was supposed to enhance the political integration of Europe, bringing the people and countries closer together and ensuring peaceful coexistence.

Source: *The Problem with Europe is the Euro*, *The Guardian*, August 2016

Extract 5: Brexit

Countries band together to promote trade, defend human rights, protect the environment and repel threats. They sign treaties and join international groups, and each time they do, they give up a bit of independence. That happened in a big way with the creation of the European Union (EU), a free-trade zone and global political force forged from different European countries.

Freedom of movement for labour is one of the key principles of the EU. However, this ease of movement has been attacked in the UK, which had an unexpectedly high level of migration from several old Soviet bloc states after they joined the EU. Findings from the British Social Attitudes (BSA) survey revealed that Brexit was the result of widespread concern over the numbers of people coming to the UK that strained public services– millions of whom have done so under the EU's freedom of movement rules in recent years.

As a result, the people of the UK, in a June 2016 referendum, shocked the world by voting to leave the bloc they'd joined in 1973. The way many Britons saw it, the EU was expensive, out of touch and a source of uncontrolled immigration. They chose what's become known as Brexit.

Adapted from: *Bloomberg*, December 2017

Extract 6: The Pros and Cons of Leaving the EU

The Eurozone economy is growing twice as fast as the UK's. The Eurozone economy's gross domestic product grew 0.6 percent in real terms in the second quarter of the year – versus 0.3 percent for the UK contrary to appearances, this is good news for Britain. But it also illustrates what the British economy stands to lose from Brexit.

Some see the contrasting performances of the economies on either side of the Channel — highlighted by the Bank of England cutting its UK growth forecast— as a sign that worries about Brexit are beginning to weigh on British consumers and businesses.

The impact of Brexit is manifold. The pound slumped to the lowest level in 30 years on Friday, tumbling as much as 13 percent, as investors took flight at Britain's shock decision to leave the EU. The weakness of the pound is fuelling domestic inflation, constraining household spending and hurting European exports to the country.

Furthermore, uncertainty about the terms of a Brexit deal between London and the EU is putting a brake on investment, as “businesses are delaying crucial decisions,” said Bert Colijn, senior economist at ING Bank in Amsterdam.

Outside the EU, the UK would lose trade with its neighbours (17 percent of EU exports go to the UK, whereas the EU absorbs 44 percent of UK exports) and reduce its negotiating power with the rest of the world.

It seems the UK can't look anywhere else for hope. The Bank of England cut its growth forecast for this year from 1.9 percent to 1.7 percent, after a similar move by the International Monetary Fund last week. And there are few other available means to boost growth in the short term.

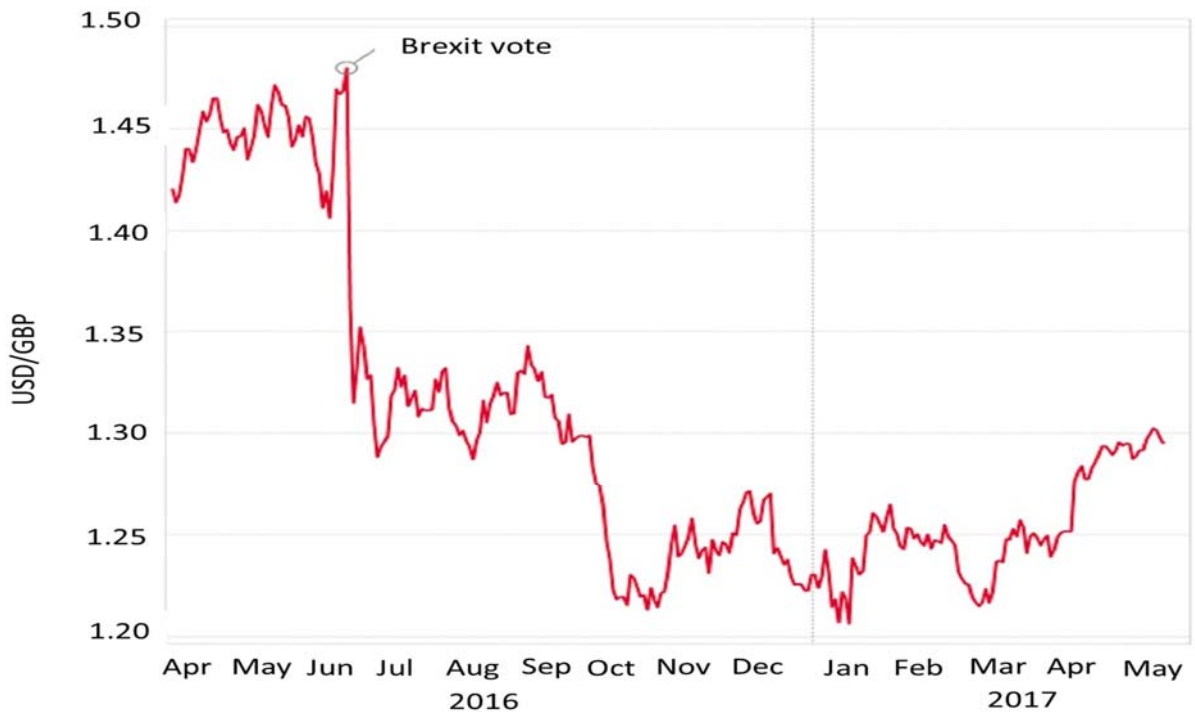
Monetary policy has run its course after a massive easing last year in the wake of the Brexit referendum. “It's easy to forget that the UK economy has relied massively on monetary stimulus in the last year, but that is coming to an end,” Moëc noted.

Nonetheless, Brexiters said UK's departure from the EU could more than compensate for those disadvantages because it would be free to establish its own trade agreements. Furthermore, the UK will no longer be bound by the Maastricht Treaty¹ and is now able to use fiscal policy tools with greater flexibility. Currently, the UK's budget deficit is forecast at 3 percent of GDP, unchanged from last year.

Adapted from: *Politico*, August 2017

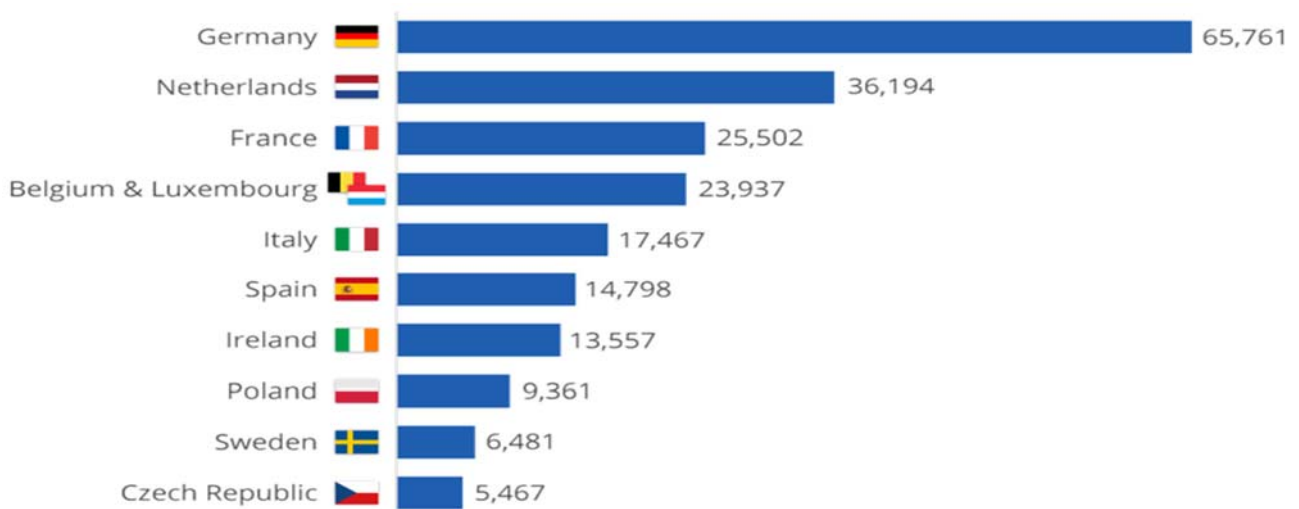
¹Article 126 of the Maastricht Treaty defines two criteria which Member States' governments should comply. These are: a deficit to Gross Domestic Product (GDP) ratio of 3% and a debt to GDP ratio of 60%.

Figure 3: USD per unit of Great British Pound (GBP)



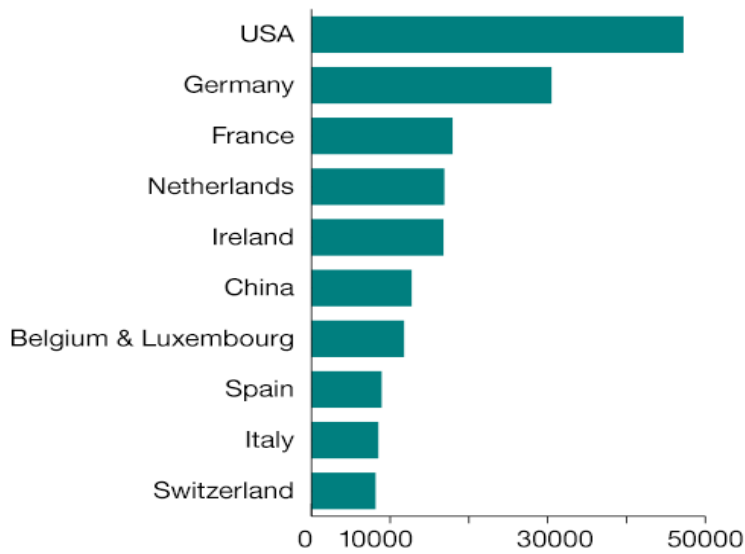
Source: *Macrobond, The Independent*

Figure 4: Import Sources of the UK in 2016, by import value (in million GBP)



Source: *Office for National Statistics*

Figure 5: Export Destinations of the UK in 2015, by export value (in million GBP)



Source: *Pink Book*, Office for National Statistics

Questions

- (a) (i) How does the value of Great British Pound (GBP) in April 2016 compare to its value in May 2017? [1]
- (ii) With the aid of a diagram, explain one possible reason for the trend above. [3]
- (b) With reference to extract 4, use PPC analysis to illustrate how the following will lead to an improvement in material standard of living:
 - (i) Pursuing the principle of comparative advantage [3]
 - (ii) Enhancing competition [3]
- (c) Explain why the weakness of Great British Pound (GBP) will hurt European exports to the UK. [2]
- (d) With reference to the data, discuss how Brexit is likely to impact the UK economy. [8]
- (e) In the light of the issues mentioned in Extract 6, discuss the policy options available to the UK government to achieve its macroeconomic goals. [10]

[Total: 30]

Copyright Acknowledgements:

- Question 1 Extract 3 © Designing a solution that fits, The Straits Times, 11 Nov 2017
- © An Analysis of the Impact of Single-Use Plastic Bags, New York State Plastic Bag Task Force Report, 13 January, 2018
- © Identifying and mitigating the wastage an inefficient use of plastic bags in Singapore, Singapore Environment Council, 2013
- © Recycling can be too much of the of a good thing, The Straits Times, 17 March, 2018