YISHUN JUNIOR COLLEGE
JC2 PRELIMINARY EXAMINATIONS 2018

H2 ECONOMICS **9757/01**

PAPER 1 **20 AUGUST 2018**
0800 – 1015 hrs

TIME 2 hours 15 minutes

Additional materials: Answer paper
Cover page

INSTRUCTIONS TO CANDIDATES

Write your name and CTG on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.

Answer **all** questions.

Start a new question on a fresh piece of paper.

At the end of the examinations, fasten all your work securely together.
Tie a cover page to the **two** questions separately:
1. Case Study Question 1
2. Case Study Question 2

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

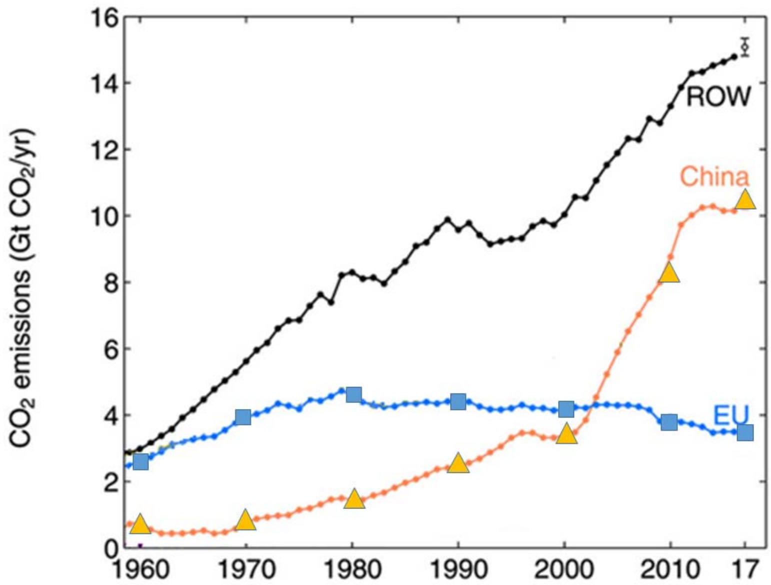
You are reminded of the need for good English and clear presentation in your answers.

This paper consists of **8** printed pages, including this cover page, and **2** blank pages.

Answer **all** questions.

Question 1: Fuel subsidies and vehicle emissions

Figure 1: Carbon dioxide (CO_2) emissions in Gigatonnes (Gt) per year



Note: ROW denotes ‘Rest of the world’; 2017 figures are projections

Source: The Global Carbon Project and the Carbon Dioxide Information Analysis Centre (CDIAC), accessed 27 March 2018

Extract 1: Fossil fuel subsidies are a staggering \$5 trillion per year

Fossil fuels have two major problems. First, they cause climate change and the continued use of fossil fuels will cause enormous worldwide economic and social consequences. Second, fossil fuels are expensive and much of their costs are hidden as subsidies.

A study published in the journal World Development quantifies the amount of subsidies directed towards fossil fuels globally rose from \$4.9 trillion in 2013 to \$5.3 trillion in 2015. Typically, people on the street think of a subsidy as a direct financial cost that result in consumers paying a price that is below the opportunity cost of the product. However, a more correct view of the true costs of the fossil fuel subsidies would include environmental costs like global warming, deaths from air pollution and taxes applied to consumer goods in general.

Source: Adapted from *The Guardian*, 7 August 2017

Extract 2: Fossil fuel subsidies – a harmful government expenditure

In 2013, oil prices dropped sharply. Some Asian governments took advantage of this new trend to cut fuel subsidies. However, many other governments still find reforms to be very difficult as fuel prices are politically important, and many people feel entitled to low fuel prices.

In fact, artificially low fuel prices mostly benefit the better-off since they consume more energy than the poor. Indeed, the most marginalised rural communities still depend on firewood and other biofuels and fuel subsidies bypass them. An IMF study documented that across 20 developing countries the poorest fifth of the population received on average just 7% of the overall subsidy benefit, whereas the richest fifth received almost 43%.

Removing subsidies on fossil fuels will also allow the development of an energy mix that reflects the true relative costs of each type of energy. It will also release fiscal resources that could be put to better uses, such as social protection, expanding access to affordable energy services or promoting investment in renewable energy.

Source: Adapted from eco-business.com, 5 January 2018

Extract 3: Norway's electric vehicle revolution

Norway is the country with the highest number of electric vehicles per capita in the world. One out of every five new vehicles sold is electric. A calculation shows that an electric vehicle allows a driver to enjoy cost savings of 75% compared to its diesel equivalent. This makes it attractive for Norwegian consumers to replace their gasoline- and diesel-powered cars with electric ones.

In fact, the demand for electric vehicles in Norway is currently growing so rapidly that electric vehicle producers cannot keep up with it. Thousands of Norwegians have been waiting for months for their new electric vehicles and sellers have repeatedly extended delivery dates. This is due to the difficulties of mining essential raw materials such as lithium and cobalt.

This level of consumer enthusiasm is enabled by a generous array of incentives. There is no road tax (or registration fee) for electric vehicles, no sales tax, no value-added tax, and the corporate-vehicle tax is lower. There is free public parking and exemption from tolls as well.

Source: Adapted from www.climatechangenews.com, March 2018

Extract 4: Electric cars are not the solution

Comparing carbon pollution between gasoline- and diesel-powered cars to those of electric vehicles can be tricky, because it depends on the source of the electricity generation. For example, Poland uses high volumes of coal in generating electricity. Therefore, electric cars merely move pollution from cities to distant power plants.

Carbon emissions from electric vehicles would only decline if clean energy continues to expand with falling costs and widespread adoption. In addition, the streets will still not be pollution free because we will still have diesel lorries and buses and electric cars still release particle pollution into the air from wearing off tyres, brakes and road surfaces. In fact, one study found that the extra weight of the batteries in electric cars means more particle pollution compared with the petrol or diesel vehicles.

Source: Adapted from *The Guardian*, 13 August 2017 & 22 January 2018

Extract 5: The long and winding road of electric vehicle adoption

Electric vehicles are forging the way to the future: vehicle makers want to get their hands on the technology, as many governments look to cut down their carbon emissions. However, the data show that there's a long way to go, with more traditional models still holding the biggest slice of the vehicle market.

Electric vehicles are currently heavily subsidised in many countries. Not to be outdone, the UK government is committing £900m to support the growth of its electric vehicle industry.

For wider adoption (not to increase private car ownership but to change the mix) of electric vehicles in Singapore, we need to decide on the right number of charging stations per electric vehicle and a network of strategically located and accessible charging stations. For electric-vehicle drivers, the fear of having their car batteries run flat on them if they travel too far is of considerable concern. Therefore, the strategic deployment and distribution of fast chargers will go a long way to encouraging people to switch electric cars even though they are intrinsically cheaper than gasoline- and diesel-powered cars.

Source: Adapted from *The Telegraph,* July 2017 and *The Straits Times* 11 Dec 2017

Questions

(a)	With reference to Figure 1, compare the trend in carbon dioxide emissions for the European Union (EU) and China between 1990 to 2010.	[2]
(b)	Explain what is meant by ‘true costs’ (mentioned in Extract 1).	[2]
(c)	With reference to Extracts 1 and 2, discuss the impact of fossil fuel subsidies on the economic goal of inclusive and sustainable economic growth.	[8]
(d)	With reference to the material and the use of a diagram, explain the market failure in motor vehicles usage.	[5]
(e)	With reference to Extract 3, explain the likely value of the price elasticity of supply for electric cars.	[3]
(f)	Discuss the effectiveness of promoting the use of electric vehicles in tackling the problem of global greenhouse emissions.	[10]

[Total: 30]

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Question 2: Brexit and its impact

Extract 6: Why Brexit is grim news

The reaction to Britain's vote to leave the European Union (EU) was less euphoric as a recession in Britain seems likely. In unsettled times, businesses defer whatever spending they can as investors hate uncertainty and the result of the referendum gives rise to a glut of it. In addition, the US economy has been sluggish of late and there are grave worries about China's ability to escape the shadow of its mountainous debts.

The same is true for consumers. As the bleak consequences for the economy become clearer, spending on big-ticket items is likely to slump. Some jobs will go, and wage growth will fall.

The Bank of England said this morning: "We are well prepared for this." It may cut its main interest rate from its present level, of 0.5%. It may even revive its quantitative-easing programme, buying bonds with freshly minted electronic money.

Sources: Adapted from *The Economist, 2*4 June 2016

Extract 7: The real price of Brexit begins to emerge

Brexit has already reduced UK's growth by slightly less than 1 per cent. With the pound falling about 10 per cent following the June 2016 result, inflation has risen more in UK than in other advanced economies. The prices increase started with petrol prices and spread to food and other goods, pushing overall inflation up to 3.1 per cent last month, with wage inflation stuck at just over 2 per cent. After adjusting for inflation, pay including bonuses for the average worker in October 2017 was £490 a week. Official figures show that in May 2016 before the EU referendum it was £491, so real pay levels have been flat.

With national income of £2 trillion in the year ending in the third quarter of 2017, it means that UK is likely to be producing £18 billion less a year than would have been and this is directly attributable to Britain's decision to leave the EU.

Source: Adapted from *The Financial Times,* 17 Dec 2017

Table 1: Selected economic indicators for UK

	2015	**2016**	**2017**
GDP per capita in current prices (US$)	44,328.18	40,529.60	39,734.59
Real GDP growth (%)	2.35	1.94	1.79
Trade in goods and services (£ million)	-32,370	-40,677	-28,620
Gini coefficient	0.50	0.492	0.489
Unemployment rate (%)	5.4	4.9	4.4
Average annual hours worked per worker	1,673	1,670	1,681

Sources: *Office for National Statistics*, *Statista and Organisation for Economic Co-operation and Development*

Extract 8: Brexit is upending China's yuan policy

After Britain's shock vote for Brexit, officials in Beijing are contending with a slumping euro and mounting economic uncertainty in Europe, just as a surging US dollar raises the risk of capital outflows.

"With the fundamentals of the yuan pointing to depreciation, further pressure from Brexit is likely to pose challenges to the People's Bank of China (PBOC) in terms of its policy direction -- whether to let market supply and demand play their roles and lead to faster depreciation, or to prioritise stabilisation," said Li Liuyang, Shanghai-based Market Analyst at Bank of Tokyo-Mitsubishi UFJ (China) Ltd.

Economists and investors warn that continued yuan depreciation at this pace could prompt Chinese businesses and individuals to once again send money abroad where its value will hold up better. Some Chinese exporters are already starting to hoard dollars and keep their earnings overseas, a shift that could mean less foreign-currency inflows, analysts say.

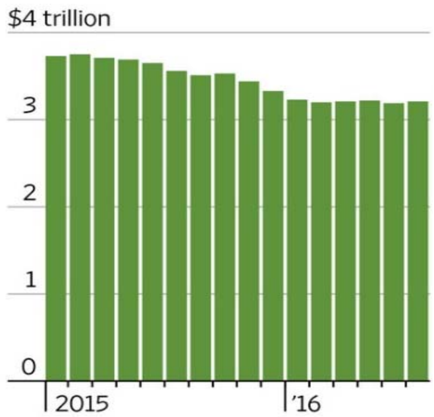
"The second round of capital outflows has started," said Kevin Lai, Hong Kong-based Chief Economist for Asia ex-Japan at Daiwa Capital Markets. Faster declines of the yuan risk reigniting a vicious cycle where expectations for further weakness quicken capital outflows. An estimated $1 trillion left China in 2015 after the yuan's unexpected devaluation in August prompted mainland investors to seek foreign assets and companies to pay down overseas debt. "Brexit affects the whole of Europe, and Europe plus the UK is quite a big market. You can't underestimate the impact," said Lai. Some 15.6 percent of China's overseas sales are destined for the EU according to Bloomberg Intelligence. Based on historical relations, a one percentage point drop in the EU's GDP growth could take 0.2 percentage points off China's GDP growth.

The PBOC will step in to slow yuan depreciation if needed, said Roy Teo, a Singapore-based Strategist at ABN Amro Bank NV. "In this increased uncertainty, it's also not in the interest of China for the yuan to fall because that will magnify capital outflows, which is the last thing they want."

Source: Adapted from *The Wall Street Journal*, 7 July 2016 *and* Bloomberg News, 28 June 2016

Figure 2
Value of yuan against a basket of currencies

Figure 3
China's foreign-exchange reserves



Sources: *Macquarie Securities and The Wall Street Journal,* 7 July 2016

Questions

(a) With reference to Extract 6, explain the consequences of Brexit on UK's internal economy. [6]

(b) Explain how the following would be affected when interest rates are cut in the UK.

(i) Consumption expenditure [2]

(ii) Investment expenditure [2]

(c) Discuss whether Table 1 is useful to assess changes in living standards in the UK from 2015 to 2017. [8]

(d) **(i)** Explain the likely reason for the change observed in the value of yuan and China's foreign exchange reserves in Figures 2 and 3. [2]

(ii) With reference to the data, assess whether PBOC should 'step in to slow yuan depreciation'. [10]

[Total: 30]

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