CATHOLIC JUNIOR COLLEGE
JC2 Preliminary Examinations
Higher 1

ECONOMICS 8823/01

Paper 1 **20 Aug 2018**

Additional Materials: Writing Paper **3 hours**

READ THESE INSTRUCTIONS FIRST

Write your name, class and question number 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 any diagrams, graphs or rough working.
Do not use highlighters, glue or correction fluid.
Begin each case study question on a new sheet of paper.

Answer **ALL** questions.

At the end of the examination, fasten your work securely together.
Submit each case study question **separately**.
The number of marks is given in brackets [ ] at the end of each question or part question.

Answer **all** questions

Question 1

Sugar – The Sweet Factor

Extract 1: Global sugar production goes into deficit for first time in five years

Sugar is one of the few bright sparks on the global commodity stage at the moment as demand outstrips supply for the first time in five years. Globally, the crop is forecast to fall into deficit, down by 5.2 million tonnes of sugar on last season to 177.5 million tonnes, a deficit of 4.1 million tonnes. It is expected to deliver more sustainable profits to growers. Analysts are predicting a deficit over the next two seasons which will boost values, just months after the raw sugar price fell to about 10 cents a pound for the first time in almost a decade, a value below the cost of production.

Tom McNeill from Green Pool Commodities said weather conditions and poor investment in major growing regions were bringing down the global crop. "We saw far too much rain in Brazil and that slowed the harvest and also reduced the sugar content." Brazil is the world's largest sugar producer and exporter. Now, the global deficit was expected to push sugar prices to sustainable levels for farmers and millers. Analysts are also predicting a jump in sugar consumption, predominantly from the rising middle class in emerging economies, but Mr. McNeil assured the sugar shortfall would not lead to a shortage for shoppers.

Source: Adapted from *Australian Broadcasting Corporation*, 1 February 2016

Table 1: Sugar Historical Quarterly Price Index (Base year = Jan 2015)

Mar-15	85.29	Mar-16	100.00
Jun-15	79.41	Jun-16	126.47
Sep-15	76.47	Sep-16	138.24
Dec-15	94.12	Dec-16	120.59

Source: *International Sugar Agreement (ISA),* accessed 10 July 2018

Extract 2: Global sugar deficit to squeeze Brazil ethanol output

Brazil's ethanol production should fall in the next three years if projections for growing global sugar deficits are confirmed, said analysts. Analysts estimate ethanol production will fall to as low as 23.1 billion litres in the 2019/20 crop year, while sugar output would climb to 43.5 million tonnes, as more farmers switch their production from ethanol to sugar.

"The difference in earnings for mills between ethanol and sugar is big and in favour of sugar, and it seems that it will only get bigger," said Willian Hernandes, head of analysis. Mr Hernandes estimates that sugar offers mills more than 30 percent bigger returns compared with ethanol. This is fueled by the global sugar supply deficits which vary greatly among analysts' estimates, but most see shortages between 4 million and 8 million tonnes for the next two years at least, depending on the reaction from producing countries going forward.

Source: Adapted from *Reuters*, 29 June 2016

Extract 3: Price ceiling on sugar

To keep food prices and the inflation rate under control, the Thai government has been maintaining a price ceiling for sugar, with the retail price fixed at 23.50 baht per kilogram. The price ceiling results in sugar shortages as profiteers normally smuggle domestic sugar to sell in neighbouring countries, especially when global sugar prices rise above the fixed domestic retail price.

It is also important to never forget the basic concepts of economics that tell us why price controls often do not work as an economic policy. The basic economics of supply and demand predicts "excess demand" which is another way of saying "shortage" when the price is set artificially below the "market clearing price" where supply equals demand.

Source: *Bangkok Post*, 19 September 2016

Extract 4: Can eating too much sugar cause type 2 diabetes?

New research by scientists suggests that consuming too much dietary sugar could set off a process in the body that leads to prediabetes and type 2 diabetes. Study author Dr. Mark Herman said that the study, conducted in mice and human liver samples, revealed a specific mechanism that shows that consuming large amounts of sugar, especially fructose, appears to be a trigger. Fructose is commonly used as a sweetener but it also occurs naturally in fruits, vegetables and honey.

Diabetes is a chronic condition that affects the way the body metabolizes sugar (glucose), a key source of fuel for the body. In type 2 diabetes, the body resists the effects of insulin – a hormone that regulates the movement of sugar into cells – and it doesn't make enough insulin, causing glucose levels to go awry. This ill-effect often leads to a fall in work productivity in diabetic patients, and even disability and death in serious cases.

Source: Adapted from *CBS News*, 29 September 2016

Extract 5: Sugar tax would cut childhood obesity

"Sugary drinks tax will benefit children most," BBC News reports. A new study, where researchers tried to estimate the impact of a sugar tax on soft drinks, found that it would help combat child obesity as well as tooth decay. A proposed UK sugar tax on soft drinks is expected to be introduced in 2018. By modelling three scenarios, the researchers found that the maximum health benefits would be seen if products were changed to contain less sugar. This option was estimated to help reduce obesity cases in the UK by around 150,000 per year, as well as reducing cases of tooth decay by 250,000.

However, these are estimates only, not certain effects. And changing the sugar content of sweetened drinks could only have such an effect on those who continue to consume high amounts of sugar through other dietary sources. Mr. Gavin Partington of the British Soft Drinks Association said, "The problem with this modelling is that it is based on the flawed concept that obesity can simply be attributed to calorie or sugar intake per se and consumption of one product in particular, rather than overall lifestyle and diet." He went on to say: "This error is plain to see given that sugar intake from soft drinks has been declining for several years now, down 17% since 2012. There is no evidence worldwide that a tax on soft drinks has had an impact on levels of obesity."

Source: *National Health Service*, 16 December 2016

Questions

(a)	**(i)**	With reference to Table 1, describe the trend in the price of sugar between January 2015 and December 2016.	**[2]**
	(ii)	With reference to Extract 1 and using a demand and supply diagram, explain the changes in the price of sugar in 2016.	**[5]**
(b)		To what extent is the global deficit in sugar likely to lead to an improvement in standard of living of sugar growers in Brazil?	**[7]**
(c)	**(i)**	With reference to Extract 2, explain the relationship between sugar and ethanol.	**[2]**
	(ii)	Using the marginalist principle, explain why a grower may decide to switch from ethanol to sugar production.	**[4]**
(d)		Using Extract 3, discuss if the benefits of implementing the price ceiling on sugar outweigh the costs.	**[8]**
(e)	**(i)**	With reference to Extract 4 and using a diagram, explain the economic case for the imposition of a sugar tax to curb obesity.	**[5]**
	(ii)	Using evidence from the case study and/or your own knowledge, discuss the factors that a government should consider in implementing a sugar tax to tackle obesity.	**[12]**

[Total: 45]

Question 2

Economic Performances Around the World

Table 2: Growth in real gross domestic product (GDP): % change per annum

	2010	2011	2012	2013	2014	2015
China	10.4	9.3	7.7	7.7	7.4	6.9
United Kingdom	1.7	1.1	0.3	1.7	3.2	2.2
Singapore	15.2	6.4	4.1	5.1	3.9	1.9

Source: *International Monetary Fund:* World Economic Outlook Database

Extract 6: UK inflation is negative again, but what does this mean for consumers?

For the second month running, the UK's headline figure for inflation – the rate of increase in prices for goods and services – is negative. In October, prices were 0.1% lower than a year ago – the first time ever that the consumer prices index (CPI) has fallen in two consecutive months.

Opinion is split among economists as to the causes of this deflation and its implications for the economy. Paul Hollingsworth, a UK economist, takes the view that the mild deflation seen in recent months is essentially good, driven by lower energy prices, rather than symptomatic of weakness in the domestic economy. “It is good because it boosts households' purchasing power and lowers firms' day-to-day running costs,” he says.

In contrast, economist Professor Steve Keen from Kingston University believes even mild deflation is bad news. “Deflation is only benign — or even beneficial — in a world in which no one has any debt.”

Keen is convinced deflation will be here for decades, just like in Japan. And he predicts that we are headed for full-blown deflation if the government follows the path of austerity. “On current policy settings, I'd say it's guaranteed, but it won't be a runaway process,” he says. “Instead, it will taper to a level in the zero to -2% range. This again has been Japan's experience. Some mild inflation has resulted whenever the government has run a fiscal stimulus, only to peter out back into deflation when the stimulus was removed.”

Both agree that a prolonged period of deflation would be bad news for the economy. Hollingsworth says it could alter households' inflation expectations as well as firms' investment decisions.

Keen also stresses that with UK firms and households carrying a lot of debt (175% of gross domestic product), “households and firms will be reluctant to finance any new spending with new credit, so investment in particular will slow down as will economic growth.”

Source: Adapted from *The Guardian*, 17 Nov 2015

Extract 7: Monetary Authority of Singapore sets zero appreciation path for Sing dollar with switch to neutral policy stance

The central bank will set the rate of Singapore dollar's appreciation to zero per cent, in a move to support economic growth against a dimmer global economic outlook since its last meeting. Singapore's growth was just 0.2 per cent in the first quarter of 2016.

The Monetary Authority of Singapore (MAS), which uses the currency rather than interest rates to guide the economy, said: "This stance removes the modest and gradual appreciation path of the S$NEER policy band that was in place." This will help to prevent export prices from rising and achieve similar effects as a depreciation.

The shift to a "neutral policy stance" is a departure from the policy of modest and gradual S$NEER appreciation that the MAS had adopted since April 2010, after the last financial crisis. The Singapore dollar nominal effective exchange rate, or S$NEER, is a trade-weighted exchange rate in which the currencies of Singapore's larger trading partners bear more weight.

The central bank adjusts the pace of appreciation or depreciation of the Singdollar by changing the slope, width or centre of the band. It does not disclose details of the basket, the band, and the pace of appreciation or depreciation.

Most key economies, except for the US, are expected to see similar or slower growth in the second half of the year as compared to the first half. Singapore's expected growth is 1 to 2 percent for this year in view of the weaker global outlook.

Source: Adapted from *The Straits Times*, 14 April 2016 & 11 August 2016

Extract 8: Five future challenges for Singapore economy

The challenge of moving the Singapore economy up the innovation ladder, from being one that is "value-adding" to a "value-creating" one, will be a key focus of the team set up to chart the Republic's economic direction.

Finance Minister Heng Swee Keat, who will chair The Future Economy committee, framed Singapore's challenges through the lens of the "five futures" - of jobs, of companies, of technology, of resources and of markets.

On jobs, Mr Heng noted that "it may not be immediate but if we look at a 10-, 15-year timeframe, the nature of jobs will change".

With 3D-printing and additive manufacturing changing how factories are being configured, Mr Heng said, "How do we build skills and redesign jobs so that workers can be at their best and that talent can be maximised?"

A second key challenge is that the "future of companies" will be marked by the rise of disruptive business models and competition from abroad. So staying competitive means exploring "cooperative platforms" for different business clusters to cooperate with one another and maximise capabilities.

Technology undeniably presents a challenge and, while Singapore has invested heavily in education, research and development, the "future of technology" hinges on how this can be translated into innovative processes.

But not all innovations are technology-related and another challenge, the "future of resources", looks at how to organise one's resources like land or staff in creative and competitive ways, Mr Heng added.

A fifth area, the "future of markets", is important because if firms expand overseas, "we transcend the Singapore market, we achieve scale".

The formation of this committee was announced by Prime Minister Lee Hsien Loong as Singapore faces a leaner workforce, tapering growth and a weaker global economy. This is compounded by the problem of Singapore's ageing population which is usually an existential angst for Singapore. As of June 2016, 13.7% of citizens were aged 65 and above, compared with 9.2% 10 years ago. There are now 4.7 working age citizens for every citizen aged 65 and older, compared with 6.9% in 2009. If birth and immigration rate remains the same, the numbers will half to 2.3 in 2030. This situation is a "demographic time bomb" with implication on costs, taxes, labour and productivity.

The team will measure success by the opportunities and jobs it creates for Singaporeans, since a shift to higher skills indirectly addresses productivity issues. "Higher skills, higher productivity, higher wages - that is the virtuous circle that we hope to achieve."

Source: Adapted from *The Straits Times*, 29 October 2015 & 29 September 2016

Questions:

(a) **(i)** Compare the growth in real GDP of China, United Kingdom and Singapore between 2010 and 2014. **[3]**

(ii) Explain **two** possible factors influencing the growth in real GDP of China as seen in Table 2. **[4]**

(b) **(i)** Explain the conflict between inflation and unemployment. **[2]**

(ii) Discuss whether continued deflation in the UK is a cause for concern to UK households and firms. **[8]**

(c) **(i)** "The MAS uses the currency rather than interest rate to guide the economy." Explain this statement. **[5]**

(ii) Explain and comment on the central bank's decision to set a zero appreciation path for the Singapore dollar. **[7]**

(d) Explain **two** possible causes of productivity issues in Singapore. **[4]**

(e) Discuss whether the proposed approach of the Future Economy Committee is the only way for Singapore to cope with the challenges of "a less favourable external environment" (Extract 7) and the need to "move up the innovation ladder" (Extract 8). **[12]**

[Total: 45]

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