



ANDERSON JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATION 2018

Higher 1

ECONOMICS

8823/01

Paper 1

29 August 2018

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name, PDG and index number in the spaces provided on all the work 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.

Answer **all** questions.

Begin your answer to **each question** on a **fresh sheet** of writing paper.

At the end of the examination, **fasten your answers to each question separately**. Fasten **this cover page** in front of your answers to **Question 1**.

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

Name: _____ ()

PDG: _____

Question Number	Marks Awarded
1	/45
2	/45
Total Marks	

This document consists of **8** printed pages and 1 blank page.

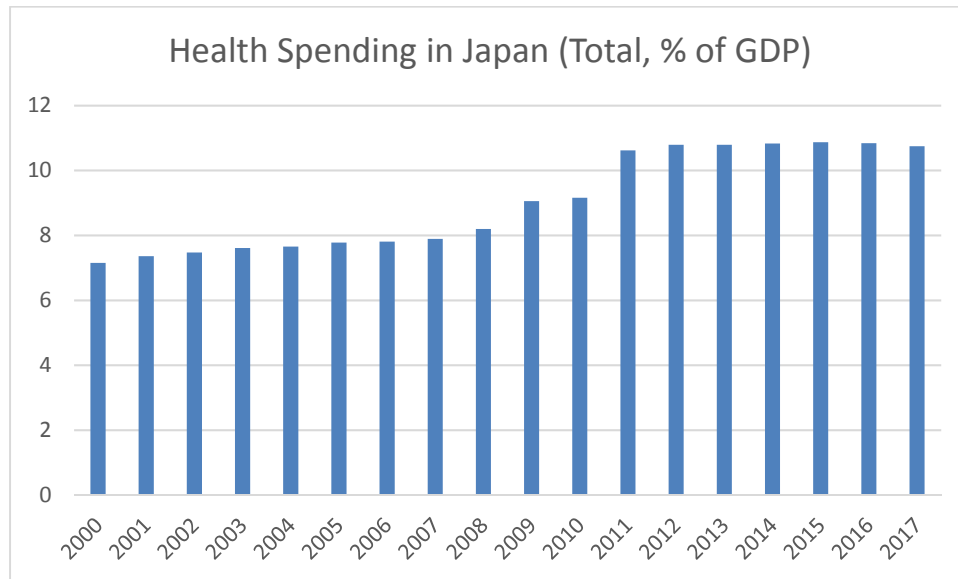
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Answer **all** questions.

Question 1: Aging population: Burden or opportunity?

Figure 1: Health Spending in Japan



Source: *OECD*

Extract 1: Japan's demographic time bomb is getting more dire, and it's a bad omen for the country

An aging population like Japan's poses numerous problems. The government will have to spend more on healthcare, and that, coupled with a shrinking workforce and tax base, is a recipe for economic stagnation. It also means, among other things, that there will not be enough young people to care for the elderly.

"An aging population will mean higher costs for the government, a shortage of pension and social-security-type funds, a shortage of people to care for the very aged, slow economic growth, and a shortage of young workers," Mary Brinton, a Harvard sociologist, told Business Insider last year.

Source: *Business Insider*, 6 June 2018

Extract 2: Nursing care workers hard to find but in demand in aging Japan

As the nation's population rapidly greys, ensuring there are enough nursing care workers to meet growing demand has become a pressing issue. There has actually been a rise in nursing care workers. However, this has failed to keep pace with the rapidly growing demand, resulting in a nursing care industry with a chronic shortage of manpower. Considering Japan's declining workforce, the labour shortage in the industry is expected to worsen over time.

The government seeks to add 250,000 more nursing care workers to the system from 2017 by improving their working conditions and increasing their average monthly pay by 10,000 yen. But the state has not made clear how it will finance this.

The government also plans to create new nursing care facilities to accommodate 500,000 more users by the beginning of 2020. This, however, has been questioned by industry experts who argue that in densely populated urban areas, the lack of workers is more acute than the shortage of facilities.

The increasing difficulty in finding enough workers has led more facilities to rely on temporary staff dispatched from agencies, and some have reduced services. To lessen the burden on staff, some nursing care facilities are starting to use robotics, including wearable units for elderly people and care workers.

Source: *Japan Times*, 27 June 2016

Extract 3: Japan's shrinking population not burden but incentive

Prime Minister Shinzo Abe said Japan's aging, shrinking population was not a burden, but an incentive to boost productivity through innovations. Abe's comments on Wednesday came days after official data showed that Japan has 34.6 million people aged 65 and older, or 27.3% of the population - the highest proportion among advanced nations.

"I have absolutely no worries about Japan's demography," Abe said at a Reuters Newsmaker event, noting that nominal gross domestic product had grown despite losing 3 million working-age people over the last three years. "Japan may be aging. Japan may be losing its population. But these are incentives for us," he said. "Why? Because we will continue to be motivated to grow our productivity," Abe added, citing robots, wireless sensors, and artificial intelligence as among the tools to do so. "So, Japan's demography, paradoxically, is not an onus, but a bonus."

Abe has focused on mobilising women and the elderly to compensate for a shrinking workforce rather than tackle head-on the politically touchy topic of immigration, although some changes are being considered on that front.

Source: *Reuters*, 21 September 2016

Extract 4: Aging Japan: Robots may have role in future of elder care

Robots have the run of Tokyo's Shin-tomi nursing home, which uses 20 different models to care for its residents. The Japanese government hopes it will be a model for harnessing the country's robotics expertise to help cope with a swelling elderly population and dwindling workforce. Allowing robots to help care for the elderly - a job typically seen as requiring a human touch - may be a jarring idea in the West. But many Japanese see them positively, largely because they are depicted in popular media as friendly and helpful. Plenty of obstacles may still hinder a rapid proliferation of elder care robots: high costs, safety issues and doubts about how useful and user-friendly they will be.

The Japanese government has been funding development of elder care robots to help fill a projected shortfall of 380,000 specialised workers by 2025. Authorities and companies in Japan are also eyeing a larger prize: a potentially lucrative export industry supplying robots to places such as Germany, China and Italy, which face similar demographic challenges now or in the near future. A few products are trickling out as exports: Panasonic Corp has started shipping its robotic bed, which transforms into a wheelchair, to Taiwan.

Source: *Reuters*, 28 March 2018

Extract 5: A home from home for Japan's elderly

There are some key ways in which the nursing care sector in Japan has evolved to preserve its quality of care even as the hyper-ageing society ramps up its eldercare facilities. A quarter of its people are 65 or older now. By 2040, this group will make up more than a third of its population. Growing in tandem is the number and types of long-term senior care facilities available in Japan.

The most common is the tokuyo, a publicly funded facility that provides nursing care to seniors who have serious physical or mental disabilities. There were 566,600 beds in these facilities last year, up from around 300,000 in 2000.

Family members have traditionally cared for the elderly but nursing homes became affordable with the introduction of Japan's long-term care insurance (LTCI). Such a system is designed to shift the responsibility of supporting the elderly away from the family and into the public domain. This is key as more of the elderly requiring long-term care, and for longer periods. Yet, there was a lack of adequate caregiver support. The principles of this system include: supporting the independence of the elderly rather than just providing care, and allowing users to benefit from a range of services from institutions of their choice. This has led to a competitive market of service providers, mostly private players, springing up in the last decade.

Source: *Straits Times*, 31 July 2016

Questions

- (a) (i) Describe the trend for health spending in Japan from 2000 – 2017. [1]
- (ii) Discuss how far the concept of price elasticity of demand may account for the above trend in health spending. [9]
- (b) With reference to data, discuss the likely effects of a shrinking workforce in Japan and technological advancement on the robotics market. [8]
- (c) Explain two possible changes that may occur to the demand curve of healthcare workers given the introduction of robots. [4]
- (d) What is the main characteristic of a normative economic statement? Identify one example of such a statement from Extract 3. [2]
- (e) Is a publicly funded nursing facility an example of a public good? Provide reasons for your answer. [4]
- (f) (i) Explain why the operation of a free market may lead to the under-provision of nursing facilities and how a subsidy can help to address the problem. [7]
- (ii) Discuss the factors that the Japanese government should consider in allocating resources towards the development of elder care robots. [10]

[Total: 45]

Question 2: Addressing deflation, fostering inclusive growth

Table 1: Key economic data for Singapore

	2013	2014	2015	2016
GDP per capita (current US\$)	56,389	56,958	54,941	55,243
Economic growth rate (% change in real GDP)	5.1	3.9	2.2	2.4
Inflation rate (CPI, annual change in %)	2.4	1.0	-0.5	-0.5
Productivity growth rate (% change)	0	-0.9	-1.5	-0.5
Budget balance (% of GDP)	1.3	0.1	-1.2	-1.2
Life expectancy at birth (years)	82.4	82.6	82.9	83
Value of SGD (average rate per US\$)	1.251	1.267	1.375	1.382
Gini coefficient before accounting for government transfers & taxes	0.463	0.464	0.463	0.458
Gini coefficient after accounting for government transfers & taxes	0.409	0.411	0.409	0.401

Source: Singstat.gov.sg, accessed 17 Aug 2018

Extract 6: Guarding against deflation in Singapore

The Monetary Authority of Singapore (MAS) should be ready to adjust its monetary policy further if deflation takes root in the city state, the International Monetary Fund (IMF) said. Consumer prices in Singapore have declined every month since November 2014, the longest slump on record.

Deflation has become a grave concern for economies around the world. While deflation points to deeper structural issues for economies like Japan and Europe, economists say that Singapore has less to worry about as its economy is not suffering from a chronic lack of demand. Singapore's deflationary reading last month was driven by fluctuating COE prices and falling accommodation costs, in addition to lower oil prices. However, the prices of household durables, education, and recreation had been holding up.

Core inflation, that is derived from a consumer basket that excludes the costs of accommodation and private road transport still holds at 1% despite the city-state hitting its 21st month of declines in consumer price index (CPI).

Source: *Business Times*, 10 May 2016

The CPI is calculated using a weighted average of prices for a typical bundle of goods and services purchased by households.

Extract 7: Why deflation is bad

Prices in the eurozone are falling. Figures released on January 7th showed that consumer prices in the year to December fell by 0.2%, marking the return of deflation for the first time since 2009. Weak demand, driven by austerity, debt and a lack of economic growth is dragging down prices. Concerns about deflation traps and downward spirals abound. One common

explanation is that in anticipation of falling prices, consumers delay purchases, causing them to fall still further.

Source: *The Economist*, 7 Jan 2015

Extract 8: Singapore's monetary policy

Most countries, including the United States and China, adopt an interest rate policy where central banks raise or cut interest rates. Singapore is the only major economy in the world to use the exchange rate, guiding the Singapore dollar higher or lower.

The MAS says the exchange rate is the best tool for a small, open economy like Singapore. It is a more effective way to manage inflation, as much of the country's consumer goods are imported. The MAS has effectively given up control of domestic interest rates. Instead, borrowing costs are largely determined by US interest rates and investors' expectations of the future movement of the Singapore dollar.

Source: *Straits Times*, 13 Oct 2015

Extract 9: Tapping on the Inclusive Growth Programme

As part of the Ministry of Manpower's Lean Enterprise Development Scheme, the Inclusive Growth Programme (IGP) helps businesses develop more efficient processes through automation and re-designing work processes to enhance productivity. Administered by NTUC's Employment and Employability Institute (e2i), the IGP also benefits workers through gains-sharing by companies. Since its launch in 2010, e2i has partnered industry associations and small medium enterprises (SMEs), with a commitment to impact some 105,000 workers with an average wage increase of 18%.

In line with SkillsFuture, the Ministry of Manpower, together with Workforce Singapore, the Ministry of Education and other economic agencies in government, are developing an integrated system of education and training to provide all Singaporeans with the enhanced opportunities to acquire greater skills proficiency, knowledge and expertise. By enabling a highly-skilled and competitive workforce, it has allowed Singaporeans to secure better jobs, higher incomes and enjoy higher standards of living. With the fast pace of technological advancements and stronger global competition for jobs, skills upgrading and deepening are essential for Singaporeans to maintain a competitive edge.

Source: www.mom.gov.sg website, accessed 3 August 2018

Extract 10: Five priorities in achieving inclusive growth

There are ways to implement a fair and progressive fiscal policy to encourage enterprise and innovation without shifting the burden of taxes to the poor or the middle class, said Deputy Prime Minister Tharman Shanmugaratnam. He outlined five priorities in achieving both innovation-driven and inclusive growth.

Tax credits and subsidies for upskilling are another example of a policy that supports equity as well as innovation and growth. It helps workers who face dislocation in the market; it leads to skills accumulation across society; everyone benefits.

A second priority in tax policy concerns property taxes. It is the most efficient tax; that is, the least damaging to income growth. There is in fact more scope in many of our economies to increase taxes on immovable property: land as well as developed real estate.

A third priority is in ensuring fair subsidies for public services, targeted at those who need it most. Healthcare financing is especially the challenge in more mature societies, and those which are getting older. Fair and targeted subsidies are at the heart of ensuring both social equity and sustainable budgets — and if we don't address this well, we will see taxes go up even more as our societies age.

A fourth priority is to mitigate the regressive feature of consumption taxes (Goods and Services Tax or Value Added Tax). They are efficient taxes, but on their own they hurt the poor more. That's why in most countries we try to offset their impact on the poor.

Fifth, in the same vein of achieving progressivity in our tax systems, a dollar cap on total personal income tax deductions is a useful reform. We have recently instituted this in Singapore. As the OECD (Organisation for Economic Cooperation and Development) points out, those who get the most benefit from some tax allowances are the rich, and in many countries we need a way to cap total tax deductions so as to preserve the progressivity of income tax.

Source: *Today*, 25 July 2016

Questions

- (a) (i) Compare Singapore's budget balance for 2015-2016 with 2013-2014. [2]
- (ii) To what extent can it be concluded from Table 1 that the standard of living in Singapore in 2016 is better than in 2013? [5]
- (b) (i) With the help of a diagram, explain why Singapore experienced falling consumer prices in 2015 and 2016. [3]
- (ii) Explain whether the data suggests that the "slump" in consumer prices (Extract 6) is likely to continue. [4]
- (c) With reference to Extract 6, suggest how it is possible that overall consumer prices fell despite prices of household durables, education, and recreation holding up. [3]
- (d) (i) How does the value of the Singapore dollar in 2016 compare to its value in 2013? [1]
- (ii) Suppose that deflation takes root in Singapore. Discuss the merits of managing the problem by depreciation, rather than using interest rates. [8]
- (e) Discuss the reasons why the Singapore government seeks to achieve innovation-driven and inclusive growth. [7]
- (f) Using the extract and/or your own knowledge, discuss the effectiveness of achieving inclusive growth in Singapore through the use of fiscal policy and supply side policies. [12]

[Total: 45]

End of paper