



2024 JC1 H2 Economics Final Examinations Revision Package

Instructions for this Revision Package

- The intent of this revision package is to provide additional practice for you in preparation for the Final Examinations. It is by no means an exhaustive coverage of the content to be tested.
- The H2 Economics syllabus has changed since 2022 (it is now 9570). Differences in the content have been marked out where applicable, but take note that there are some changes to the duration of the examinations outlined in the table below:

H2 9570 (2022 onwards)	H2 9570 (before 2022)
1 hr 15 mins for 30 marks CSQ	1 hr 7.5 mins for 30 marks CSQ
50 mins for 25 marks EQ	45 mins for 25 marks EQ

- As you are going through this package, take note of both the content and skill sets that are required of each question.
- As you check through your answers against the suggested answers provided, do check for the following:

Checklist
✓ Have you answered to the question requirements?
✓ Is your answer structured in a logical and coherent manner?
✓ Have you provided rigorous and developed economic analysis in it?
✓ Have you applied your answer to the context provided and made use of relevant examples to illustrate your understanding?

- When attempting the high-order questions, do take time to plan your responses.

Question Interpretation
Identify the command word, content required as well as the context
Schematic Plan
Structure your answer by planning the introduction, the body paragraphs (what are the 2 key requirements of the questions?) as well as the conclusion where you are required to evaluate your points raised
Evaluation
Address the question by making and substantiating your stand

Details of the Final Examinations

- Date: **7 October 2024**
- Time: **1400 - 1710**
- Duration: **Paper 1: 1 h 15 min (followed by 15 min admin break) Paper 2: 1 h 40 min**
- Format: **Paper 1: 1 x Case Study Question; Paper 2: Choose 2 out of 3 Essay Questions**

Paper 1: Case Study (30 marks) – 1 hour 15 minutes (You are to answer all questions in this section)	
Case Study Question	30 marks
Paper 2: Essay (25 marks) – 1 hour 40 minutes (You are to answer <u>2 out of 3</u> questions in this section)	
Essay Question 1	25 marks
Essay Question 2	25 marks
Essay Question 3	25 marks
Total	80 marks

Topics:

1. Central Problem of Economics
2. Resource Allocation in Competitive Markets
 - I. Demand, Supply and Price Determination
 - II. Government Intervention: Price ceiling, Price floor, Subsidy, Indirect Tax, Quota
 - III. Elasticities of Demand and Supply (PED, XED, YED, PES)
 - IV. Applications of Elasticities of Demand and Supply Concepts
3. Market Failure and Government Intervention
 - I. Sources of Market Failure (Presence of Externalities, Info Failure, Non-Provision of Public Goods)
 - II. Equity
 - III. Government Intervention in the Market
4. Firms and Decisions
 - I. Costs and revenue
 - II. Objectives of Firms
 - III. Firms' Decision and Strategies
 - IV. Market Failure Arising from Market Dominance

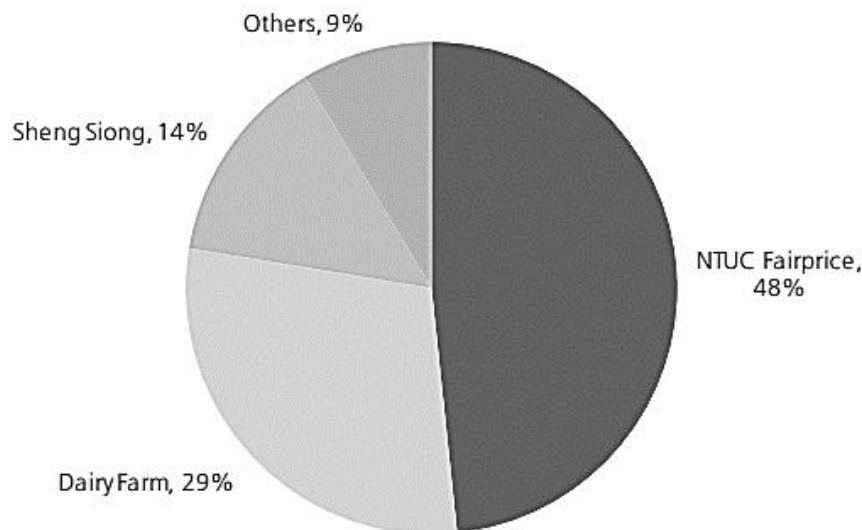
Topic that will not be covered:

- I. Government Intervention to deal with Market Dominance

Section A: Case Study Questions

Question 1: Singapore's Grocery Retail Market (Source: 2019 SAJC Final Examinations)

Figure 1: Singapore Grocery Retail Market Share



Source: Euromonitor, DBS Bank

Extract 1: NTUC FairPrice fires first salvo in supermarket war

Market leader FairPrice kicked off a price competition amongst 100 FairPrice housebrand products on 18 March. More than 50 housebrand products that are deemed “everyday essentials” saw their prices drop by as much as 30%.

Analysis showed that for essential body wash items, whilst there are cost savings of at least 8.0% if consumers switched to housebrands, the greatest cost savings comes from Dairy Farm International brands (Giant, Cold Storage) and RedMart. This is because they have housebrands for the essential body wash items which are 63.9% and 42.2% cheaper, respectively. For non-fresh items (excluding body wash items), FairPrice still yields the greatest cost savings and it is slightly cheaper (2.6%) than Sheng Siong’s basket. FairPrice has the cheapest basket, offering the most attractive value in essential items – instant noodles, liquid detergent and toilet rolls.

Meanwhile, for fresh items’ pricing competitiveness, Sheng Shiong took the lead. On a basket basis containing only fresh produce, it is around 0.3% to 10.8% cheaper than its peers.

Given the market leader has started the ball rolling on emphasising grocery affordability, it is likely that Sheng Siong and other supermarket players will price their staple baskets at a new normal, at least until end Jun 2020.

Source: Singapore Business Review, 2 April 2019

Extract 2: Innovations in the grocery retail market

In 2017, Sheng Siong launched a rebate credit card as it bids to boost labour productivity and cut queue times with tap-and-go cashless payments. Sheng Siong Group chief executive Lim Hock Chee said in a statement that the card, which comes with Visa payWave contactless payment technology, will “serve to drive more cashless transactions and make it more convenient for

customers to pay for their purchases". He hopes the latest move will spur cashless payments among the brand's heartland customer base.

In 2018, NTUC FairPrice announced its partnership with ride-hailing operator Grab to offer a new membership programme. Called Score Subscription Programme, it was first announced in January when NTUC FairPrice and Grab signed a Memorandum of Understanding.

For a flat annual membership fee, subscribers will be able to enjoy savings and rebates as well as access to grocery and transport services under the new subscription programme launched. Subscribers can get a five per cent rebate for incremental spends above S\$100 in a single receipt at NTUC FairPrice, FairPrice Finest, FairPrice Xtra, Unity stores and Warehouse Club. They can also get 50 per cent discount off all Grab rides on the third Monday of every month and attend members-only Grab events, such as private movie screenings.

The programme was developed after a survey was conducted with more than 1,000 customers between the ages of 20 to 40 years. The survey showed that there is a "potential in the market for such a service", said NTUC FairPrice and Grab in a joint media statement.

Source: Various sources

Extract 3: Online grocery shopping

More and more Singaporeans, especially digital natives and busy PMEBs¹ prefer the convenience of shopping online instead of having to navigate the crowds and queues in a typical supermarket, not to mention having to carry the purchases back, especially the heavier ones. Free delivery is also an attractive option.

While online sales still account for less than 15 per cent of overall supermarket sales, the percentage will only grow as the digital lifestyle of Singaporeans becomes more pervasive. Traditional supermarkets like Cold Storage and FairPrice are also joining the ranks of Redmart and Amazon by aggressively promoting their online stores and promising same day delivery.

The million-dollar question for traditional supermarkets then is how they can make their stores more enticing for customers to visit instead of them going to shop online. Sensing the winds of change, the refurbished FairPrice Xtra at Ang Mo Kio Hub has reopened and includes an integrated health and wellness concept that has everything you need to live, feel, look and eat well.

Source: Today Online, 24 December 2018

Extract 4: Could more be done to reduce plastic packaging waste in Singapore's supermarkets?

Shoppers in Singapore take 820 million plastic bags from supermarkets each year – and only a small portion are ever recycled. The majority of plastic bags end up incinerated.

To be fair, the use of a plastic bag does not cause too much harm. The bigger problem arises when people do not dispose of their bags properly, and the plastic ends up fluttering around in the wild, clogging up waterways, therefore resulting in issues such as litter, threat to wildlife and floods. New research combining the results of more than 50 studies globally has also found that on average, people could be ingesting about 5g of micro plastic every week - in the air they breathe, the food they eat and, especially, the water they drink. Build-up of micro plastics could lead to potential health risks.

¹ **PMEB** stands for Professionals, Managers, Executives and Businessmen

Banning plastic bags completely in supermarkets is not practical and could cause problems elsewhere. Paper for wrapping can tear easily and hygiene could be compromised.

NTUC FairPrice has been encouraging customers to bring their own bags and enjoy a 10-cent discount on a minimum purchase of S\$10 since 2007. However, bringing their own bags can also result in contamination, especially when people do not wash their bags often, which is also at the expense of water resources. MP for Nee Soon GRC Louis Ng told CNA that he agrees that hygiene levels may fall when eliminating plastic packaging or plastic bags for fresh produce.

Mr Ng, who called for a tax on all single-use bags, except those used for fresh produce, thinks Singapore cannot go completely plastic bag-free, especially for those who stay in HDB estates and need to use plastic bags to dispose of their waste.

Overall, experts believe that a focus on education and awareness would be more beneficial.

Source: Various sources

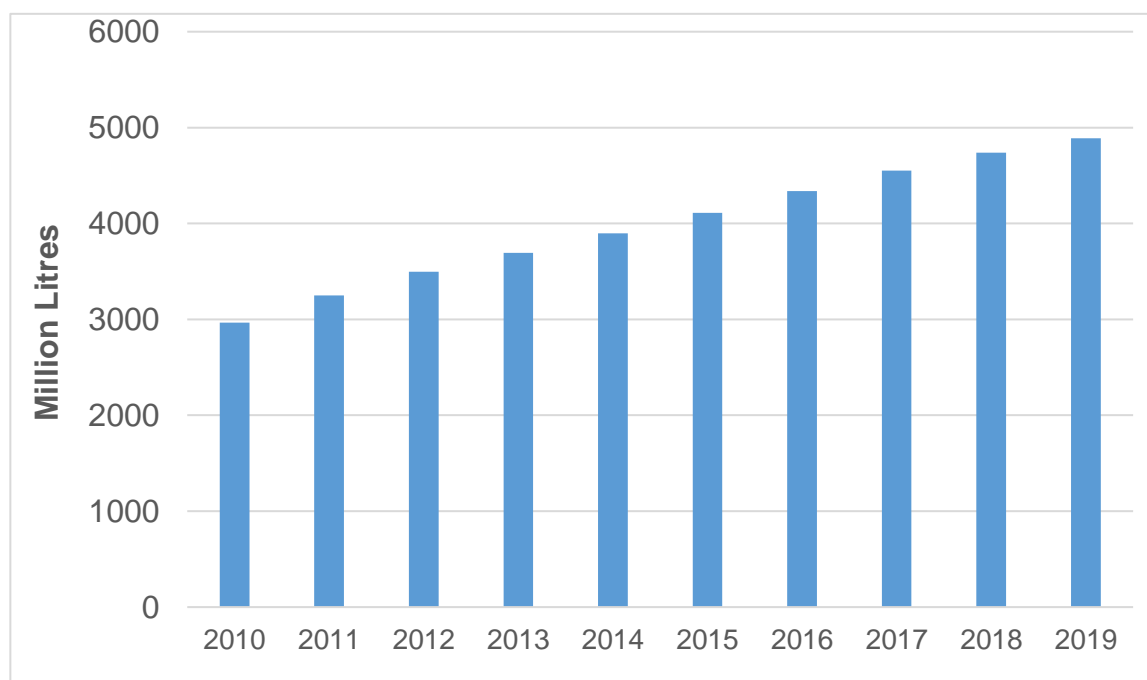
Questions

- (a) (i) With reference to Figure 1, identify and explain the type of market structure operating in the Singapore grocery retail market. [2]
- (ii) Identify and explain **one** possible barrier to entry that may exist in the grocery retail market in Singapore. [2]
- (iii) Using Extracts 1 and 2, explain how the grocery retail firms in this market structure might compete with each other. [4]
- (b) To what extent has the entry of e-commerce grocery retail firms like Redmart and Amazon affected the ability of an existing firm such as NTUC FairPrice to make large profits? [8]
- (c) With reference to Extract 4:
- (i) Explain briefly, **two** reasons to justify government intervention to reduce the use of plastic bags in Singapore. [4]
- (ii) Discuss whether imposing a tax is the best way to reduce the use of plastic bags in Singapore. [10]

[Total: 30]

Question 2: The Alcoholic Beverage Industry in Vietnam
(Source: 2020 SAJC Final Examinations)

Figure 1: Alcohol Consumption in Vietnam (2010-2019)



Source: Statista

Extract 1: Impact of Alcohol Consumption

When alcoholic beverages are consumed, alcohol gets absorbed into the stomach and small intestine. Through blood circulation, this is then distributed to every organ in the body. The alcohol gets absorbed by the liver at a rapid pace and excreted through the kidneys, which accounts for 95% to 98% of the alcohol consumed. In a study done by Gururaj *et al.*, it was concluded that, because of the increase in the alcohol consumption occurring all over the country, the hospital admission rates because of alcohol consumption were also increasing, with 20% to 30% of admissions because of direct or indirect problems due to alcohol consumption. People are unaware of the health risks of consuming too much alcohol.

Alcohol consumption also leads to road traffic accidents which occur due to people driving vehicles under the influence of alcoholic beverages. Both developing and developed countries report high rates of road traffic accidents because of alcohol consumption.

Adapted from Journal of Family Medicine and Primary Care, 2020, Volume 9, Issue 1

Extract 2: Vietnam's Beer Industry

Vietnam's beer industry is a promising land for both foreign and local brewers. According to the country's beer industry development plan until 2020, Vietnam's beer production output will reach 4.1 billion litres by 2020, with this number rising to 4.6 billion in 2025 and to 5.5 billion in 2035. This consumption growth, plus the nation's developing population of nearly 100 million combined with beer's 95% share of alcohol consumption makes it an alluring market for brewers.

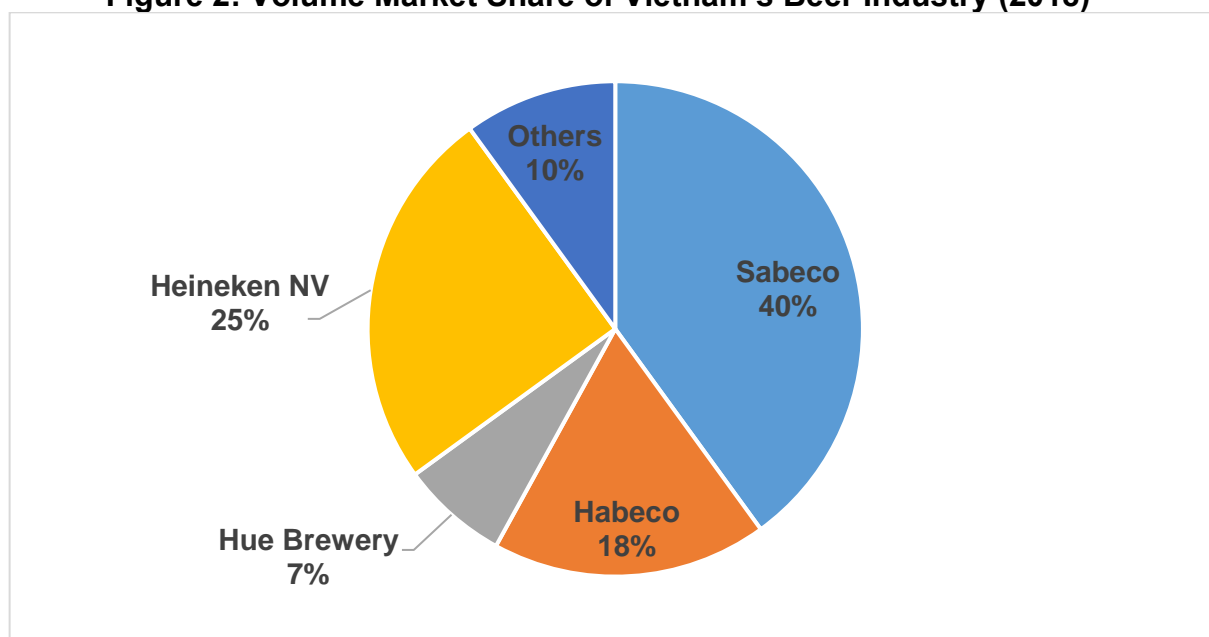
Even though Vietnam's beer market currently has a huge potential to exploit, experts have warned that it is a strict playground and competition is brutal with not all brewers making money. Production licences can be considered a major obstacle for new businesses. To open a beer factory in Vietnam, businesses must be licensed by the Ministry of Industry and Trade. The licensing would depend on

the beer and beverage planning of the ministry, which may have been registered many years in advance. Established brands dominate the market, with the largest player, Saigon Beer Alcohol Beverage Corporation (Sabeco) taking up 40% of the market share. Chairman of Vietnam Beer Association, Nguyen Van Viet, has said that only the very efficient survive, pointing out that numerous brewers have shut down soon after they emerged into the market.

Recently, the Vietnamese government has toughened up their laws to curb alcohol consumption. The recent introduction of the Alcohol Law in January 2020 was aimed to prevent and control the harmful effects of alcohol through public education and reducing the availability and ease of access to alcohol. Taxes on alcohol have also been increased in recent years.

Adapted from 2019 Report on Vietnam's Drinks Industry prepared by the Business Centre of The British Business Group Vietnam and The Phnom Penh Post, 2nd June 2020

Figure 2: Volume Market Share of Vietnam's Beer Industry (2018)



Source: Vietnam Investment Review, 2018

Extract 3: Latest Beer Trends in Southeast Asia

The Asia Pacific region excluding Australasia saw 69 billion litres of beer sold globally in 2018 —by far the largest region for beer in the world. The Southeast Asian region has emerged as the main growth driver for beer moving forward.

Trends shaping the growing Southeast Asian beer market include increased taste sophistication among millennials, the premiumisation of beer in the form of craft beer and opportunities for beer in the home delivery channel.

There are a substantial 155 million millennials in Southeast Asia as of 2018. Millennial beverage consumers in Southeast Asia have shown a greater willingness to experiment with new and more sophisticated flavours. This is reflected in the high emphasis beer players in the region place on product innovation. We have seen more unique fruit flavours such as lychee and strawberry being incorporated into beer in recent times.

The need to cater to consumers who desire unique tastes, coupled with rising disposable incomes in Southeast Asia, has contributed to the premiumisation of beer in the form of craft beer. In Vietnam,

craft brewers in cities such as Hanoi and Ho Chi Minh utilise craft brewing techniques learnt from European countries and incorporate local ingredients to create beer that appeals to local tastes.

The consumer need for convenience has provided opportunities for beer in an unlikely channel – home delivery. According to Euromonitor International’s 2019 Top 10 Global Consumer Trends, “I want it now!” has become a key consumer desire. Amidst increasingly hectic lifestyles, consumers place a greater emphasis not only on convenience, but also on getting their wants instantly.

Geographical size and legislations could prove to be the main stumbling blocks in other markets. Food delivery services such as Go-Food, Grab-Food and LINE Man may be growing fast across the region, although the larger sizes of other countries apart from Singapore would provide a stronger logistical challenge in delivering beer. Moreover, firms could be subject to government regulations that restrict the advertising and delivery of beer. Nevertheless, the very idea of marrying beer delivery with food delivery provides a fresh means for beer players to reach out to their consumers.

Adapted from EuroMonitor report, 25th September 2019

Questions

- (a) (i) Describe the trend of alcohol consumption in Vietnam from 2010 to 2019. [1]
 - (ii) Explain one possible reason for the trend observed in ai). [2]
- (b) (i) With reference to Extract 1, explain one reason why there is a need for government intervention in the market for alcoholic beverages. [4]
 - (ii) Explain how a tax on alcohol would help to “control the harmful effects of alcohol” (Extract 2). [3]
- (c) Identify the type of market structure in the alcoholic beverage industry in Vietnam. Justify your answer. [2]
- (d) Suppose a firm decides to enter the alcoholic beverage market in Vietnam. Assess whether this decision is a rational one. [8]
- (e) Assess the effectiveness of various strategies a firm selling alcoholic beverages could use to increase its profits. [10]

[Total: 30 marks]

Question 3: The Pharmaceutical Industry (Source: 2021 SAJC Final Examinations)

Figure 1: Pharmaceutical Companies Global Market Share

Firm	Market Share (%)
Johnson & Johnson	9.8%
Hoffmann-La Roche	7.6%
Pfizer	6.2%
Bayer	5.7%
Novartis	5.7%
Merck & Co	5.6%
GlaxoSmithKline	5.2%
Sanofi	4.7%
8 Firm Concentration Ratio	50.5%

Source: <https://blog.bizvibe.com>

Extract 1: US drug prices to rise in 2021 as pandemic put revenues at risk

Drugmakers including Pfizer Inc, Sanofi SA, and GlaxoSmithKline Plc plan to raise US prices on more than 300 drugs in the United States on Jan 1, according to drugmakers and data analysed by healthcare research firm 3 Axis Advisors.

The hikes come as pharmaceutical companies are reeling from effects of the Covid-19 pandemic, which has reduced doctor visits and demand for some drugs.

Nearly all the drug companies raised prices, but kept their price increases at 10 per cent or below. "This modest increase is necessary to support investments that allow us to continue to discover new medicines and deliver those breakthroughs to the patients who need them," Pfizer's spokesman Amy Rose said in a statement, pointing in particular to the Covid-19 vaccine the company developed with Germany's BioNTech SE.

Source: *The Straits Times*, Jan 1, 2021

Extract 2: Balancing lower US prescription drug prices and innovation

While it is generally agreed that current U.S. drug pricing practices tend to encourage incremental rather than transformational innovation, a larger question remains about what amount of innovation is actually best for society.

Lowering high original drug prices will make investing in drug development less attractive for firms, leading to fewer new medicines coming to market. Balancing the tension between lowering original drug prices while sustaining robust R&D investment poses a complex challenge for policymakers and raises the fundamental question of how can the US minimize the adverse effects of lower drug prices on innovation?

The average cost of developing a new original drug is \$1.3 billion. This estimate includes the costs of development efforts that did not succeed in producing a marketable drug.

Original drugs are often insulated from competition by government-granted monopolies based on patents. Market exclusivity severely limits competition that results in higher prices for many such drugs. Generic pharmaceuticals are produced using the same active ingredients as the original drug, after the patent on the original drug has expired.

Developing a new original drug costs a minimum of tens of billions of dollars, mainly for large-scale clinical trials, but generics, which have the same quality and effects, can be developed for much less because they use ingredients whose safety and effectiveness have already been confirmed. In addition, the FDA found that increased competition directly affects generic drug prices. After an initial generic drug entry, the drug prices decline as competition increases, according to the report.

Source: *The Brookings Institution* <https://www.brookings.edu/> November 24, 2020

Extract 3: Which Companies Received the Most Covid-19 Vaccine R&D Funding?

The emergence of more dangerous Covid-19 variants in infection hotspots could compromise existing vaccines and prolong the pandemic, adding extra urgency to discussions about a waiver, or to temporarily remove Covid-19 vaccine patents. Proponents have been keen to point out that most Covid-19 vaccine producers would not have been able to develop their jabs as quickly without substantial injections of public research and development funding from the government. Indeed, hundreds of millions of dollars have flowed into the companies that have produced the successful shots according to data compiled by the Knowledge Portal on Innovation and Access to Medicines. The United States and Germany's governments have been the largest investors in Covid-19 vaccine R&D, pouring approximately \$2 billion and \$1.5 billion into the effort, respectively. Notably, out of \$5.9 billion in investment tracked up to March 2021, 98.12% was public funding. The money primarily went to private companies with both Moderna and Janssen receiving more than \$900 million.

Source: *Forbes*, 6 May 2021

Extract 4: Merger between drug firms

Pfizer, a pharmaceutical company, has agreed to merge its Upjohn's unit with generic drug maker, Mylan. Pfizer's Upjohn is a global, and generic medicines business, which includes legacy brands like Lipitor that are no longer protected by patents. The combined company, which will get a new name, Viatriis, is expected to have a revenue of \$19 billion to \$20 billion in 2020. The pharmaceutical industry has been under intensifying pressure from lawmakers, to keep prices down for US consumers. Last year, Mylan said it would review its business as it grapples with lower prices of generic drugs and declining sales.

The new merged company will transform and accelerate each business's ability to serve patients' needs and to expand their capabilities across more than 165 markets by bringing together two highly complementary businesses. Mylan brings a diverse portfolio of generic drugs across many geographies and key therapeutic areas, as well as high-quality manufacturing and supply chain excellence. Pfizer has brand loyalty from existing customers and proven commercialization capabilities, including leadership positions in China and other emerging markets.

Pfizer CEO, Dr. Albert Bourla, said that if the deal closes, the combined organization will have a presence across nearly every continent and major market, establishing a new leadership position in Asia. He is quoted as saying "We are creating a new champion for global health—one poised to bring world-class medicines to patients across a wide range of therapeutic areas. I believe that Mylan's unique profile and strategy has made it the obvious partner of choice in creating this powerful combination. By bringing Mylan's products to Pfizer's established markets, we will create a financially strong company with true global reach. I'm also excited about the management team, which combines strong executive talent from both companies, whose commitment to improving global health for patients and to delivering returns to shareholders are great assets for the new company."

The combined company will have a portfolio of more than 1,400 drugs that it will sell in more than 165 countries and territories. When the deal was announced last year, the companies were expecting annual revenue for Viatriis would be in the \$19 billion to \$20 billion range with cash flow expected to exceed \$4 billion.

Source: *Reuters*, July 29, 2019

Extract 5: Pfizer-Mylan combo Viatriis to slash up to 9,000 jobs, shutter manufacturing plants in global cost-cutting drive

A little less than a month after the successful merger between Pfizer's Upjohn unit and Mylan to create generics business Viatriis, the company is already looking at ways to slash costs. Viatriis laid out detailed plans for a global manufacturing initiative that could put thousands of jobs on the line. By 2024 at the latest, the company aims to reduce at least \$1 billion in costs, and it's planning to close, downsize or sell up to 15 facilities to meet that goal. Up to 20% of the generics business's 45,000-strong workforce—some 9,000 staffers—could be impacted by the time the restructuring effort completes.

The Federal Trade Commission (FTC) in early November cleared the companies to move forward on the condition that the pair sells seven products identified as anti-competition. To appease the

FTC, Mylan and Pfizer agreed to sell off various medicines for high blood pressure and high cholesterol, seizures, hypertension and more to authorized generics firm Prasco.

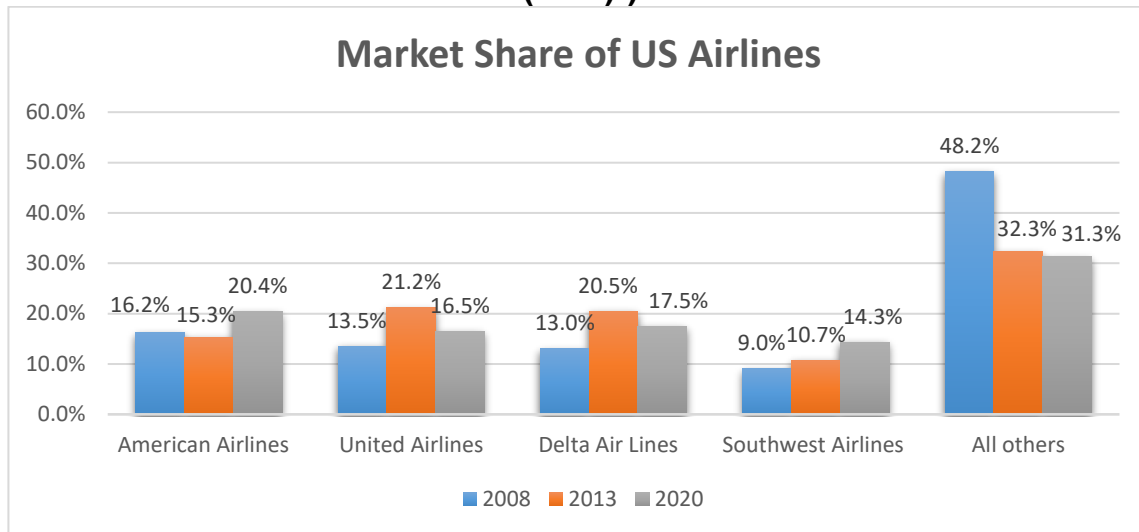
Sources: <https://pharmaphorum.com/>
<https://www.businesswire.com/>

- (a) i Explain one measure used by economists to assess the level of competition in an industry. [2]
- ii *“Nearly all the drug companies raised their prices, but kept their price increases at 10 per cent or below.”* [4]
- Using Figure 1 and Extract 1, explain why such pricing behaviour happens in the pharmaceutical industry.
- (b) (i) Explain the effect of patent expiration on the PED value of original drugs. [3]
- (ii) Given the relationship that exists between price elasticity of demand (PED) and total revenue, explain what pricing strategy the producer of an original drug should adopt to increase total revenue. [3]
- (c) Discuss whether the US government’s plan of using public funding to deal with the underproduction of R&D will be effective. [8]
- (d) Assess whether Viatrix, the merged company between Pfizer’s Upjohn unit and Mylan, will on balance, benefit consumers and producers. [10]

Total: 30 marks

Question 4: Changes in the Airline Industry
(Source: 2022 SAJC Final Examinations)

Figure 1: Market Share of US Airlines (measured by revenue passenger mile (RPM)²)



Source: Bureau of Transportation Statistics, various years

Extract 1: Dynamic Pricing

Most travelers assume that an airline will sell an economy ticket for the same price, no matter how you buy it. But airlines don't just have different ticket prices. They've started to set fares dynamically, showing different customers different fares based on what they know about them and on market demand. Joy Lu, an assistant professor of marketing at Carnegie Mellon University, says airlines are using sophisticated technology to determine how much a customer is willing to pay for a ticket.

It happened to Mr Russell Pedley, who says he booked a flight for his wife through the mobile app of United Airlines. He then used his desktop computer to log in to his United.com frequent flier account, which identified him as a silver-level frequent flier. His wife's ticket cost \$560; his cost \$670. Airlines have always had variable prices for seats. But dynamic pricing takes the process a step further. It prices the tickets according to what the airline knows about you, including your ability to pay more — or less — for the ticket.

"As technology and data capabilities continue to allow more improved and targeted offerings, the ability to splash fares to elite members of the frequent flier programs or others is going to become more prevalent and a trend we should see more of in the near future," says Chris Sabby, a director at CWT Solutions Group, a corporate travel agency. PROS, one of the companies developing dynamic pricing technology for the travel industry, says this kind of pricing enables airlines to be more competitive. It might also save you money on some flights. "It allows an airline to incorporate real-time market conditions, competitive perspectives, and customer attributes," says Aditi Mehta, solutions strategy director for PROS.

² A revenue passenger mile (RPM) is a transportation industry metric that **shows the number of miles traveled by paying passengers** and is typically an airline traffic statistic. Revenue passenger miles are calculated by multiplying the number of paying passengers by the distance traveled.

Leisure passengers usually book months in advance, so airlines tend to start the prices for these seats relatively high. It then adjusts the prices according to market response. For typical business routes, airlines will start with low prices to fill a minimum capacity, then increase prices steeply as corporate passengers tend to book last minute.

What ticket prices aren't focused on is a ticket's combined cost, including taxes and fuel. According to consultant and former airline planning executive, Robert Mann, it's technology that determines the price you see online instead. He adds, "technology has allowed some airlines to create a "basic economy fare" with limited amenities to compete with minimal service, low-cost carriers as it allows full-service carriers to appear on the first page of search engines such as Google Flights."

Adapted from: *The Seattle Times*, 31 Aug 2020

Extract 2: JetBlue and Spirit announce plan to merge

JetBlue Airways reached a deal to buy Spirit Airlines on Thursday, a merger that could reshape the airline industry by putting pressure on the nation's four dominant carriers. The deal, which values Spirit at \$3.8 billion, would create the United States of America's fifth-largest airline, with a share of more than 10 percent of the market, behind United Airlines, which has a nearly 14 percent share. Delta Air Lines and Southwest Airlines control more than 17 percent each, while American Airlines has more than 18 percent.

The merger is likely to face a thorough investigation from the Biden administration's antitrust regulators- the US Justice Department, who have taken an aggressive stand against corporate consolidation, especially in industries already dominated by a few businesses. To address regulatory scrutiny, JetBlue has said it will pre-emptively divest from certain airports where it and Spirit together have a big presence. A major concern in airline mergers is that they can make one company dominant at certain airports or on particular routes, enabling it to squelch competition and raise fares for some travelers.

"The airline industry is ridiculously concentrated and has been and legitimately continues to be an area of focus for the Justice Department," said Bill Baer, a visiting fellow at the Brookings Institution who led the department's antitrust division in the Obama administration. While companies involved in mergers with direct competitors generally argue that the combinations will increase competition and benefit consumers, Mr. Baer said, they don't typically work out that way.

The combined airline would be based in New York and it would have 458 aircraft, 34,000 employees and an estimated 77 million customers, the airlines said. JetBlue said it expected \$600 million to \$700 million in annual savings from spreading costs over a larger business. Based on 2019 figures, the annual revenue of the combined airline is projected to be about \$11.9 billion.

After years of bankruptcies and consolidation, the airline industry had mostly stabilized by the early 2010s, with the four large carriers controlling most of the market. The Spirit acquisition would help JetBlue to expand its presence in cities like Fort Lauderdale and Orlando in Florida, San Juan in Puerto Rico, and Los Angeles. The airline also said it expected to grow at the hub airports of the larger carriers, such as Las Vegas, Dallas, Houston, Chicago, Detroit, Atlanta and Miami — a strategy devised in part to win over antitrust regulators who are eager to see more competition at airports where one or two airlines control most gates and flights.

Adapted from: *The New York Times*, 28 July 2022

Extract 3: Why airline tickets prices are sky-high right now

For more than two years, the main topic of conversation pretty much everywhere has been about the impact of Covid-19. Now that the worst of the pandemic seems to be over and people are

travelling more freely again, another hot topic is on the tips of everyone's tongues: expensive plane tickets. People are looking for flights - sometimes their first in years - in a rush of what's been termed "revenge travel". "The demand is off the charts," Delta Air Lines chief executive Ed Bastian said at an industry conference last week, noting that fares this summer may be 30 per cent higher than pre-pandemic levels. Searches for a return economy-class ticket between Hong Kong and London on Cathay Pacific Airways in late June turn up prices as high as \$7,400, which is more than five times the typical cost before the pandemic. Direct flights between New York and London around the same time cost more than \$2,760 in economy.

There are several reasons for the higher fares, not all of which are within the control of airlines. Carriers are cautious about bringing back all their idled jets, even though most countries have eased cross-border restrictions. That's particularly true for giant aircraft like Airbus' A380 superjumbos and Boeing's older 747-8s, as airlines turn to more fuel-efficient models like A350s and 787 Dreamliners. The pinch is most acute in Asia, which was the slowest to ease restrictions, and as China, the biggest market in the region, remains essentially closed. Carriers also scaled down their networks during Covid-19, none more so than Cathay, which has been hemmed in by Hong Kong's onerous travel and quarantine rules. With fewer planes in the skies, there are fewer seats to meet the recovery in demand, which in turn has pushed up fares.

Russia's invasion of Ukraine has exacerbated a steady rise in crude oil prices over the past 18 months. Jet fuel now represents as much as 38 per cent of an average airline's costs, up from 27 per cent in the years leading to 2019. For some budget airlines, it can be as high as 50 per cent. Many US carriers have been able to cover the increased fuel costs so far - but only by passing them on to travellers in the form of higher rates. Some investors believe airlines may seek to boost fuel surcharges as a way to cope, analysts at Citigroup said in March. Most of Asia's airlines do not hedge jet fuel, which means they are more vulnerable to price increases.

Higher ticket costs do not seem to be dissuading people from making trips now that many travel restrictions have eased. Some consumers are tapping dormant holiday budgets and upgrading to more expensive aircraft cabins for leisure trips, International Air Transport Association director-general Willie Walsh said last month. With travel picking up, the industry now finds itself unable to hire fast enough to allow for seamless operations at its pre-pandemic levels. Singapore's Changi Airport - regularly voted the world's best - is looking to recruit more than 6,600 people. Many workers who were let go have found other less volatile careers and are not willing to come back to a cyclical industry. In the US, smaller regional airlines cannot fly at full capacity because bigger carriers have hired away too many pilots. Hundreds of flights have been cancelled in Britain, scuppering holiday plans and leading to long delays and scenes of passengers sleeping at airports. In Europe, major airports have faced delays and cancellations after failing to hire adequate staff. That has disrupted airline schedules and added to costs.

Adapted from: *The Straits Times*, 7 June 2022

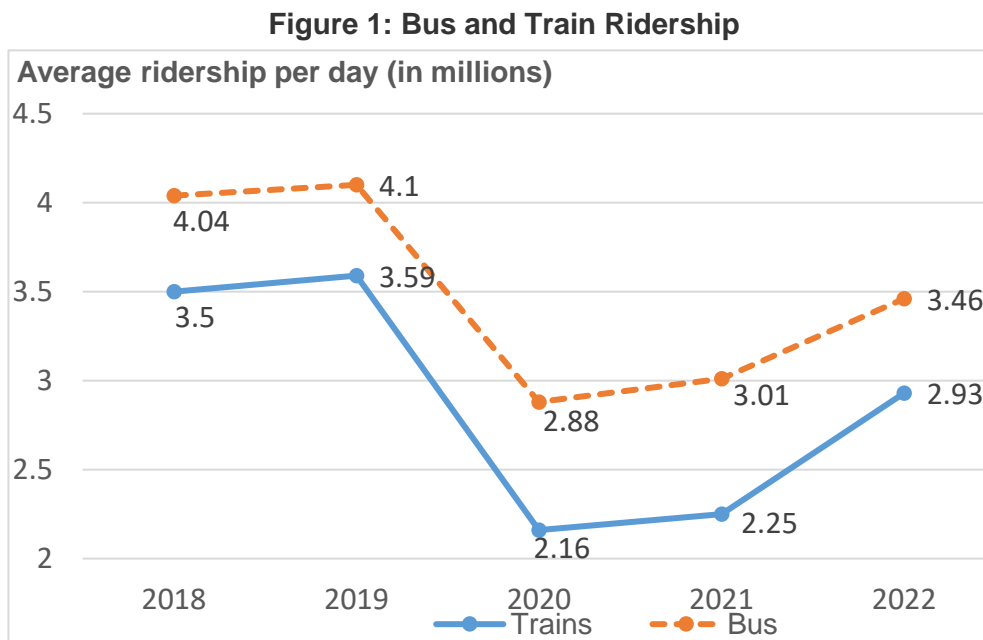
Questions

- (a) (i) Identify and explain one measure used by economists to assess the level of competition in an industry. [2]
- (ii) With reference to Figure 1, describe how the measure identified in (i) changed between 2008 and 2020 and explain what this suggests about the level of competition in the US air travel market. [2]
- (b) Explain whether the dynamic pricing strategy practiced by airlines is likely an example of price discrimination. [6]
- (c) With reference to Extract 3, assess whether supply factors, rather than demand factors, are the key cause of “sky-high” airline ticket prices. [8]
- (d) (i) Identify and explain the type of integration described in Extract 2. [2]
- (ii) Discuss the factors the US Justice Department should consider when deciding whether to approve the integration of JetBlue and Spirit. [10]

[30 marks]

Question 5: Public Transport in Singapore

(Source: 2023 SAJC Final Examinations)



Source: Land Transport Authority, 2023

Extract 1: Bus, train usage continues to recover in Singapore

The COVID-19 pandemic that swept the world rendered a large proportion of the workforce unable to commute to work to mitigate the spread of the virus has now entered its endemic phase. Employers have come to recognise that people can be trusted to work from home. This has set the stage for a new era of hybrid work, where people toggle between home and office, depending on their work requirements.

Public transport ridership continued to recover in 2022 as more people returned to work and leisure activities after two years of COVID-19-related restrictions. Observers reckoned this could be because of new MRT lines that have opened, such as stages 2 and 3 of the Thomson-East Coast Line. This trend is likely to continue as more rail lines are built and opened.

Tenders for the rail operating rights to the upcoming Jurong Region Line (JRL) and Cross Island Line (CRL) are now open, and both SMRT and SBS Transit will compete for them. The operating model for both lines will be similar to Singapore's bus contracting model, where successful bidders will be paid fixed fees to run and maintain the MRT lines, and the government will collect fare revenue. The first rail line to go under this model is the Thomson-East Coast Line, operated by SMRT.

The Public Transport Council (PTC) regulates transport fares for both buses and trains, keeping prices and standards from monopolistic manipulation. Regulating public transport fares is a crucial and politically important public issue, since public transport ridership accounted for 59% of all daily transport trips during the morning peak period.

Adapted from The Straits Times, 2023

Extract 2: Towards a Sustainable Public Transport

To further reduce emissions, the Ministry of Transport (MOT) is taking further steps to green Singapore's public transport operations.

MOT hopes to raise the mass public transport usage during peak hour to 75 per cent by 2030. Since 2020, all new public bus purchases are cleaner energy buses, including electric or hybrid buses. As part of the Land Transport Master Plan 2040, MOT aims to gradually replace all existing diesel buses with cleaner energy buses by 2040.

Electric vehicles (EVs) generate half the carbon emissions of internal combustion engine vehicles. They also generate less ambient noise. To pave the way for greener vehicles, MOT will cease new diesel car and taxi registrations from 2025 and require all new car and taxi registrations to be of cleaner-energy models from 2030. This includes hybrids, battery electric cars, and hydrogen fuel cell cars. Automotive experts are almost unanimous in their expectations that EV prices will decline and reach price parity with gas-powered cars in the next few years.

In addition, taxi and private-hire vehicle companies have pledged to make their fleets run on cleaner energy by 2040. Some have gone even further; for example, SMRT's Strides Taxi, with about 1,800 hybrid cars, has pledged to have a full electric car fleet by 2026.

Adapted from Ministry of Transport, 2023

Extract 3: Grab to buy Singapore's third-largest taxi company Trans-Cab

Ride-hailing giant Grab is acquiring Trans-Cab, Singapore's third-largest taxi operator. The purchase includes some 2,200 taxis and more than 300 private-hire vehicles which Trans-Cab owns. It also includes Trans-Cab's vehicle workshop and fuel pump operations. Trans-Cab entered the taxi market 20 years ago when the Government liberalised the industry to increase competition.

Grab said it plans to launch an app which will be integrated with the mobile display units in Trans-Cab taxis. The app will enable cabbies "to manage their earnings and receive bookings from the Grab platform as well as Trans-Cab's existing call centre". Grab added that it is exploring placing a large display in the vehicles so that "drivers can manage all jobs, including street-hail, through one interface, with additional features like navigation".

Observers said Trans-Cab's exit marks another blow to the taxi industry, which has been buckling since private-hire operators were allowed to enter the point-to-point passenger transport service sector in 2013. Trans-Cab cabby Francis Goh said that since the arrival of ride-hailing apps, drivers "pick and choose which offers the higher fare – the metered fare or the one with surge pricing".

Private-hire operators resort to surge pricing to meet demand, which results in higher fares for passengers, especially during peak hours. Grab's move to shorten its grace period waiting time and cancellation period from five to three minutes also received near immediate backlash from passengers. On the shortened grace period waiting time, Mr Yee Wee Tang, managing director of Grab Singapore, said passengers will "ultimately" benefit as the shorter grace period is expected to increase productivity and efficiency in Grab's network, and lead to more drivers on the road.

Adapted from The Straits Times, 2023

Questions

- (a) Using Figure 1, compare the average ridership per day between the different modes of transport between 2018 and 2022. [2]
- (b) With reference to Extract 1, explain the likely impact of Covid-19-related restrictions on SMRT's total revenue. [2]
- (c) Explain the condition under which a firm would shut down in the short run. [2]
- (d) Explain why public transport in Singapore is **not** a public good. [4]
- (e) (i) Taking transportation as an example, explain what is meant by a 'negative externality'. [2]
- (ii) With reference to Extract 2, "MOT hopes to raise the mass public transport usage during peak hour to 75 per cent by 2030".
- With reference to the data, discuss the view that encouraging greater use of mass public transport is the best policy to eliminate the deadweight loss from the negative externalities arising from the consumption of transportation. [8]
- (f) With reference to Extract 3 and using your own knowledge, assess the consumer welfare impacts on point-to-point passengers following Grab's acquisition of Trans-Cab. [10]

[Total: 30]

Section B: Essay Questions

Essay Question 1

(Source: 2019 SAJC JC1 H2 FE)

Even as renewable energy sources are developing, crude oil remains an important factor of production for manufacturing industries such as plastics and services industries such as air travel. Rising crude oil prices have affected crude oil producers, producers of renewable energy sources and other producers that rely heavily on crude oil.

- (a) Explain the factors that determine the price elasticity of demand for crude oil, the cross elasticity of demand for crude oil and price elasticity of supply for crude oil. **[10]**
- (b) Assess the likely effects of the rise in price of crude oil on the revenue earned by crude oil producers, producers of renewable energy sources and other producers that rely heavily on crude oil. **[15]**

Essay Question 2

(Source: 2019 SAJC JC1 H2 FE)

The main focus of the Government's expenditure is on the delivery of essential goods and services to Singaporeans to assure the nation of a secure future. Therefore, key areas of expenditure are on education, public housing, health care and national defence security. "The Government subsidises over 90 per cent of the total cost of educating our children. More has been done to support those from disadvantaged backgrounds by allowing more students to benefit from financial assistance," Finance Minister Heng Swee Keat said.

Source: Various Sources

- (a) Explain why markets might fail in the case of education and that of national defence. **[10]**
- (b) Discuss whether the provision of subsidies by the Singapore government is the most appropriate policy in addressing the market failure in the market for education. **[15]**

Essay Question 3

(Source: 2019 SAJC JC1 H2 FE)

To increase profits, firms may adopt strategies like price discrimination.

- (a) With the use of examples, explain what price discrimination is and the conditions necessary for it to be successful. **[10]**
- (b) Discuss whether a firm's strategies to increase profits come at the expense of consumers' welfare. **[15]**

Essay Question 4

(Source: 2020 SAJC JC1 H2 FE)

- 1 Global rice prices are expected to increase sharply by 2050 due to factors ranging from a rise in world consumption, greater use of rice feed for animal feeding, to falling crop yield levels caused by bad weather conditions in major rice-producing countries. Price ceiling is frequently used as a measure by governments to ensure affordability of essential food staples such as rice.
- (a) Explain why global rice prices are expected to increase sharply. [10]
- (b) Discuss whether the use of a price ceiling is the best measure that can be adopted by a government to keep rice prices affordable. [15]

Essay Question 5

(Source: 2020 SAJC JC1 H2 FE)

- 2 Annual spending by the Singapore government on the preschool education sector is set to double to more than \$2 billion per year within the next few years. Parents will pay less for preschool as subsidy amounts increase across all eligible income tiers. Through education, the Singapore government believes that it can help its citizens to gain skills, learn knowledge and become productive.

Source: The Straits Times, 18 February 2020

- (a) Explain why a free market would fail to operate efficiently in the market for education. [10]
- (b) Evaluate the policies currently used by the Singapore government to correct the market failure in the market for education. [15]

Essay Question 6

(Source: 2020 SAJC JC1 H2 FE)

- 3 The shift in consumers' habits have led to consumers switching from buying groceries from physical stores to shopping via online grocery retail platforms like Redmart. NTUC Fair Price and Dairy Farm Group Singapore (which owns Giant and Cold Storage supermarkets) still dominate the grocery retail industry but their market shares have been affected by new entrants like Hao Mart and other online retailers.
- (a) With the use of examples, distinguish the features of oligopolistic and monopolistic markets. [10]
- (b) In light of the market structure that grocery retail stores operate in, discuss the impact of greater competition on consumers and different types of economic efficiency. [15]

Essay Question 7

(Source: 2021 SAJC JC1 H2 FE)

- 1 By 2060, Singapore's total demand for water could double. Worsening climate conditions such as droughts further dwindle Singapore's limited water resources. Singaporeans might face severe water shortage. A sharp increase in the future price of water is inevitable.
- (a) Explain why Singapore may experience a severe water shortage and why the price of water may increase sharply in the future. [10]
- (b) Using the theory of demand and supply, assess the strategies that Singapore's households and government could adopt in response to severe water shortage. [15]

Essay Question 8

(Source: 2021 SAJC JC1 H2 FE)

- 2 About 900 million kg of plastic waste is discarded every year in Singapore. The government has not adopted any bans or charges on single use plastic items like plastic bags, straws and plates. Efforts are aimed at reducing plastic waste through initiatives such as increasing recycling bins and awareness campaigns. The government also offers research grants to companies to develop sustainable waste management technologies.
- (a) Explain the two possible sources of market failure in the market for plastics. [10]
- (b) Discuss the view that taxation is the best measure to address the issue of plastic waste in Singapore. [15]

Essay Question 9

(Source: 2021 SAJC JC1 H2 FE)

- 3 Singapore saw bubble tea shops proliferated, with a whopping 5,000 shops in 2002. The craze saw a resurgence in 2011 as new Taiwanese bubble tea chains entered the local market. Since then, Singapore has seen two more waves in the drink's popularity - in 2018 and 2019. Some bubble tea chains have planned to open more stores at various petrol stations.
- (a) Explain why the bubble tea industry is an example of a monopolistic competitive market and the petrol station industry is an example of an oligopolistic market. [10]
- (b) Discuss how a bubble tea shop and a petrol station might compete in their respective market structures. [15]

Essay Question 10

(Source: 2022 SAJC JC1 H2 FE)

Lab-grown meat made a historic debut in Singapore at *Restaurant '1880'*. It was introduced by a US start-up *Eat Just Inc* which has plans to build Asia's biggest lab-grown meat facility in Singapore. Meat consumption is projected to increase more than 70% by 2050 and these meat alternatives play an important role in ensuring a secure food supply.

- (a) Explain with the use of examples, what might cause price elasticity of demand and cross elasticity of demand to be different for different products. [10]
- (b) Assess the likely effects of a fall in price of lab-grown meat on the total expenditure by consumers on lab-grown meat and its related markets. [15]

Essay Question 11

(Source: 2022 SAJC JC1 H2 FE)

People in Singapore are becoming less healthy. Not only do Singaporeans undervalue the importance of exercise in preventing chronic diseases, but they are also seemingly unaware of how much physical activity is required to achieve their desired health benefits. The Singapore Physical Activity Guidelines (SPAG) was unveiled in June this year. It aims to provide Singaporeans with recommendations on physical activities to reduce sedentary behaviour as well as information on types of exercises suitable for different age groups and lifestyles.

- (a) Explain why, if left to market forces, there may be an undesirable allocation of resources for exercising. [10]
- (b) Assess if government intervention in the above market for exercising will bring about an efficient allocation of resources. [15]

Essay Question 12

(Source: 2022 SAJC JC1 H2 FE)

There are big and small cinema operators in Singapore. Golden Village is the largest cinema chain with fourteen outlets, followed by Shaw Theatres with nine and Cathay Cineplexes having eight cinemas. There are only a few smaller operators such as Filmgarde with three cinemas. The growth of online on-demand streaming services such as Netflix with their wide variety of content at a relatively cheaper monthly subscription price as well as the manpower crunch have contributed to a decline in profits of cinema operators in Singapore.

- (a) Explain how the growth of online on-demand streaming services as well as the manpower crunch has contributed to a decline in profits of a cinema operator in Singapore. [10]
- (b) Discuss whether it is always true that a cinema operator will seek to maximise profits. [15]

Essay Question 13

(Source: 2023 SAJC JC1 H2 FE)

Nickel is widely used in steel for construction and batteries for electric vehicles. Global nickel prices have fallen sharply amidst lower cost of mining and rising fears of an economic recession. A minimum price on nickel ore has been set in Indonesia in a bid to increase the revenue to its nickel miners. The Indonesian nickel miners are lobbying the government to seek new overseas markets to sell their nickel to.

- (a) Using supply and demand analysis explain why lower cost of mining and rising fears of an economic recession may have led to a sharp fall in global nickel prices. [10]
- (b) Discuss whether the use of minimum price on nickel ore is the best policy to increase the revenue of Indonesian nickel miners. [15]

Essay Question 14

(Source: 2023 SAJC JC1 H2 FE)

Open defecation instead of using proper sanitation facilities is one of the most complex social and health challenges that India faces. Despite serious health repercussions there are approximately 525 million people in India who are still defecating in the open, the majority of whom are living in rural areas. Public education forms the most common way of promoting proper sanitation use in India to combat cultural beliefs.

Adapted from Lee Kuan Yew School of Public Policy, 13 Apr 2020

- (a) Explain any two reasons for government intervention in the usage of proper sanitation facilities in India. [10]
- (b) Discuss whether public education is the best policy in addressing the sanitation issues in India. [15]

Essay Question 15

(Source: 2023 SAJC JC1 H2 FE)

Firms that are perceived to focus solely on profit maximisation risk damaging their brand image. Consumers today seek to purchase from firms that provide them with personalised shopping experiences to shop with ease and provide products that considers the social and environmental impact.

- (a) Explain why firms may choose to set price and output at the profit maximising point and one other reason why they may not. [10]
- (b) Discuss the strategies that firms can use to increase profits in the light of changing consumer mindsets. [15]