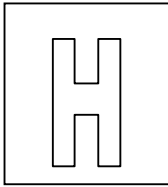


Candidate Name: _____

Class	Adm No



2023 Preliminary Exams
Pre-university 3

ECONOMICS

9757/01

Paper 1

29 August 2023
2 hours 15 minutes

Additional Materials: Answer Booklet

READ THESE INSTRUCTIONS FIRST

Write your name and class 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 staples, highlighters, glue or correction fluid.

Answer **all** questions.

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

An answer booklet will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional paper, ask the invigilator for a continuation booklet.

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

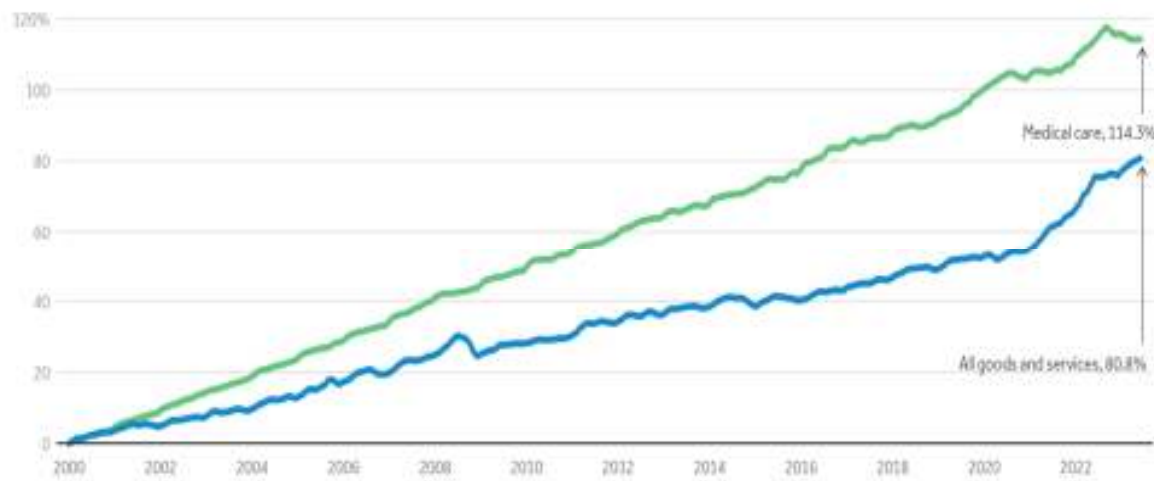
Answer **all** questions.

This question paper consists of **7** printed pages and **1** blank page.

[Turn over

Question 1: The Pharmaceutical Industry

Figure 1: Cumulative percent change in Consumer Price Index for All US Urban Consumers for medical care and for all goods and services, January 2000 - June 2023



Note: Medical care includes medical services as well as commodities such as equipment and drugs.

Source: Peterson, KFF Health System Tracker

Extract 1: Why are prescription drug prices in the US so high

Americans spend more on prescription drugs than anyone else in the world. It's true that they take a lot of pills. But what really sets the US apart from most other countries is high prices. In August, Congress passed a law aimed at cutting drug costs for elderly and disabled patients who rely on the government's Medicare health program. The pharmaceutical industry opposes the change, and Merck & Co. is suing the government over it. Higher drug prices are often the result of drug patents that pharmaceutical companies hold. Strategic drug patenting prevents companies that make generic drugs from competing. This is because their generic products could be subject to court action. While private insurers and government programs pick up the biggest share of the bill, high drug costs are ultimately passed on to members of the public through the premiums they pay to keep their insurance policies active and the taxes they pay to the government. Patients in the US directly pay about 13% of prescription medicine costs out of their own pockets. In one survey, one in five adults in the US said they failed to complete a prescribed course of medicine because of cost.

Source : Adapted from Bloomberg, 19 Jul 2022

Extract 2: Will imposing price control on prescription drugs help?

A lot of people, including President Joe Biden, blame "corporate greed" for high prescription costs. In his State of the Union address this month, Biden said that expanding price controls to cover all Americans, and not just Medicare recipients, is the solution to lower pharmaceutical prices. One of the big reasons why drug prices are so high now is because the federal government protects the pharmaceutical industry from competition abroad. Just as tariffs make US products more expensive, the Food and Drug Administration (FDA) makes prescriptions more expensive by prohibiting Americans from buying cheaper medication from other countries. The FDA's slow and complex approval process for generic drugs also makes drug prices higher than necessary. The approval process for a generic drug can take years. That's one reason why more than 500 brand drugs don't have any competition.

Price controls have many unintended consequences. Prices are signals in the market that balance supply and demand. When the government chooses a price below what the free market would set, supply decreases and demand increases. In other words, producers lose their profit motive so production is discouraged, and consumers are encouraged to buy more. That results in shortages, rationing, inferior product quality and illegal markets.

Source: USA Today, 21 Feb 2023

Extract 3: The “innovation gap” haunts big pharmaceutical firms

The innovation gap, also called the innovation deficit, is happening as companies watch some of their bestselling products of the last decade approach the end of patent protection, revenues are bound to erode. Research and development pipelines aren't likely to make up the difference in time without some major overhaul, experts say. Patent expirations are expected to put \$226 billion in global prescription sales at risk through 2026, according to a report from Evaluate Pharma.

Pfizer Inc is investing more than \$2.5 billion at its drug making plants in Belgium and Ireland, gearing up to launch new products it hopes can replace lost revenue as patents expire and COVID-19 vaccine sales decline. The drugmaker said on Friday it plans to spend more than 1.2 billion euros (\$1.26 billion) to expand its Puurs, Belgium, manufacturing site.

Source: Pharma Voice, 28 Apr 2022, Reuters, 3 Dec 2022

Extract 4: US sues to block Amgen's \$27.8 Billion takeover of Horizon Therapeutics

The Federal Trade Commission (FTC) on Tuesday sued to block the drug maker Amgen's \$27.8 billion acquisition of the pharmaceutical company Horizon Therapeutics, saying it would thwart competition in the drug industry. The FTC said the deal would allow Amgen to exploit a maneuver known as bundling, in which pharmaceutical companies take advantage of their large portfolios of drugs to offer discounts to insurers and others in exchange for favoring their products. The agency pointed to two expensive Horizon medications that lack competition, saying that bundling would entrench those monopolies.

Holly Vedova, a senior commission official, said the agency's lawsuit “sends a clear signal to the market: The FTC won't hesitate to challenge mergers that enable pharmaceutical conglomerates to entrench their monopolies at the expense of consumers and fair competition.” The FTC's concern about bundling in the Amgen-Horizon merger is linked to concerns about high drug prices.

Source: The New York Times, 16 May 2023

Extract 5: Merger and acquisition crackdown a ‘disaster’ for pharma sector

A senior Pfizer executive has warned that a crackdown on mergers and acquisitions (M&A) by antitrust regulators would be a “disaster” for the system of innovation that underpins the pharmaceutical industry. William Pao, Pfizer's chief development officer, said M&A is an important part of the funding ecosystem that supports the development of innovative therapies by scientists. “I think it will be a disaster for the system,” he said on Wednesday when asked what impact a tightening of the antitrust regime would have on the sector.

“If you can't get those M&A and then get those molecules distributed across the globe, it stifles innovation for sure,” said Pao, who heads the Pfizer arm responsible for clinical development of drugs and ensuring a pipeline of new therapies. His comments came after the US Federal

MI/9757/01/PU3/EOY2022

[Turn over

Trade Commission on Tuesday sued to block Amgen's \$28bn takeover of Horizon Therapeutics. It marked the first time in more than a decade that the US competition regulator has sought to halt a deal in the pharmaceutical sector.

Analysts have warned the FTC action threatens to upend a decades-long business model pursued by large pharmaceutical companies, which often rely on buying small and midsize biotech groups to replenish their drug pipelines. "The FTC filing a lawsuit to block this deal will dampen M&A enthusiasm across the biotech sector, particularly given the lack of direct portfolio overlap between Amgen and Horizon," said Matt Phipps, analyst at William Blair, an investment bank.

Source: Financial Times, 18 May 2023

Questions:

- (a) (i) Using Figure 1, compare the trend in the prices of medical care and all goods and services between 2000 and 2023. [2]
- (ii) How will the rise in price of prescription drugs affect consumer's expenditure on healthcare? [2]
- (b) With reference to Extract 2, explain how price controls can make prescription drugs more affordable and how it will impact consumer surplus. [4]
- (c) With reference to Extract 3, explain two types of barriers to entry that pharmaceutical firms possess. [4]
- (d) Discuss whether product innovation is the most effective strategy for enhancing the profits of a pharmaceutical company. [8]
- (e) Discuss whether government intervention is necessary in cases where a pharmaceutical company holds a dominant position in the market. [10]

[Total: 30]

Question 2: To Trade or Not to Trade**Table 1: US Trade with China: Total Trade in Goods (in billions US\$)**

	2017	2018	2019	2020	2021	2022
Exports	130	120.3	106.5	124.5	151.4	153.8
Imports	505.2	538.5	449.1	432.7	504.9	536.8
Trade Balance	-375.2	-418.2	-342.6	-308.1	-353.5	-382.9

Source: Census.gov, Feb 2022

Extract 6: US-China Trade Hits Record High Despite Rising Tensions

Trade between the US and China hit a record high last year even as their diplomatic relations deteriorated. Imports and exports between the two countries totalled \$690.6bn (£572.6bn) in 2022. The new figures show that US imports from China increased to \$536.8bn last year as American shoppers spent more on Chinese-made goods, including toys and mobile phones. In the same period, US exports to China increased to \$153.8bn.

The figures point to how reliant the US and China still are on each other even after years of trade conflict between them. "I think it's an important indication of the difficulties of actually decoupling," Deborah Elms, the founder of Asian Trade Centre, told the BBC. "Even if governments, firms and consumers wanted to separate, the economics make it difficult to deliver products in a decoupled world at a price that firms and consumers are willing to pay."

The world's two biggest economies have also been in a trade war since 2018. In 2018, the Trump administration started to ramp up trade measures against Beijing. After decades of rising Chinese imports, Mr Trump began imposing tariffs on a total of more than \$300bn worth of Chinese goods. China hit back by placing import levies on about \$100bn of American goods.

Source: BBC, 8 Feb 2023

Extract 7: Singapore's Future as a Global City in a 'Deglobalising' World

Singapore draws sustenance from the international economic system, to which as a global city it belongs, and that system will be the final arbiter of whether the Republic prospers or declines. Those are the words of independent Singapore's first foreign minister S. Rajaratnam. For a global city, the world is its hinterland," said Mr Rajaratnam in 1972, going on to describe Singapore's access and links to other global cities via sea, air, electronic communications and the international financial network. In the same speech, he acknowledged the "grave political and economic dangers implicit" in being an open, connected global city. "But Singapore must be prepared to undertake these risks simply because the alternative... is, for a small Singapore, certain death," he said.

His advice cuts close to home today, as Singapore - by all accounts now the paragon of a global city - confronts, along with the rest of the world, a trifecta of disease, war and economic crisis. The Covid-19 pandemic of the last two years and counting has upended the world order as we know it, with cascading effects on public health, connectivity, the economy and geopolitics. Russia's invasion of Ukraine has escalated matters, wreaking further havoc on global supply chains and food and energy security. Trade sanctions on Russia have further disrupted recovering supply chains, spiking prices of oil, gas, energy, industrial metals,

fertilisers and food. With these come the attendant risks of stagflation - a potent combination of high unemployment and high inflation. Faced with these challenges, much of the world is turning inwards and prioritising domestic concerns - further accelerating what some identify as a trend of "deglobalisation".

However, closing up and joining in the backlash against globalisation is not an option for Singapore. In contrast to global city competitors like Hong Kong, Tokyo or London, Singapore is not part of a larger nation and thus lacks its own hinterland. It cannot sustain itself by its small domestic market alone. Being open and welcoming of talent paved the way for the Republic to surmount this handicap and develop into a competitive, successful economy.

Nevertheless, the recent events have stressed the importance of Singapore being self-sufficient and self-reliant where food and energy security are concerned. Professor Heng Yee Kuang of the University of Tokyo's Graduate School of Public Policy says Singapore is in a position today to channel more resources into building resilience to supply chain disruptions and climate change fallout, which has called to question that enormous carbon footprint associated with trade.

For Singapore economist, Mr Manu Bhaskaran, the real question is the extent - the "optimal point" - of openness that Singapore is willing to adopt. "Do we pursue policies that allow such a massive inflow of foreign entrants or external capital that there are adverse impacts on citizens' livelihoods, asset prices; or that citizens feel alienated?" he asks.

Source: The Straits Times, 25 April 2022

Extract 8: Biden Kept Trump's Tariffs on Chinese Imports. This is Who Pays the Price.

Dan Digre's family has been making loudspeakers in America for decades, growing from a small storefront in Minneapolis to a state-of-the-art factory with nearly 100 employees and customers ranging from airlines to transit to drive-thru restaurants.

However, in the past few years, Digre has begun making more speakers directly in China. This is to avoid paying tariffs on the tiny components he would need to import from China for his factory in the US.

Analysts say the tariffs have had a mixed track record. There are fewer imports from China of the items on the long tariff list, but it's not clear American manufacturers have gained all the benefits. Imports from Vietnam have more than doubled since the tariffs went into effect. And earlier this year, an independent nonpartisan agency, the US International Trade Commission, released a report that found American importers, not the Chinese, have borne most of the costs.

Nevertheless, in 2017, the Commerce Department found that China was dumping plywood into the United States at unfairly low prices. Massive duties were put on Chinese plywood. The industry cheered the Trump tariffs as a sign that the US government was trying to help. "If we're going to have manufacturing in the United States and have it continue to compete, it has to be done fairly," he said. "And that's what these tariffs help us to do, is have a fair playing field."

Digre moved into a new factory facility in 2019, just as the trade war was getting underway. He had plans to expand, but instead, he says he's spent about \$2 million on tariffs. "If we had that money you would see some very, very high-tech assembly lines set up here," he said, pointing to a large swath of his factory floor sitting empty. He can pass a portion of his additional costs on to customers, but not all, he says, because he's competing against foreign

companies that don't have to pay these tariffs. So instead, the money has largely come out of his company's profits, which means less growth, less innovation, and no new American jobs.

Source: National Public Radio, 27 June 2023

Questions:

- (a) (i) Describe the trend of US trade balance with China. [2]
- (ii) Using a diagram, explain the likely implication of your answer in (ai) on the external value of the USD against the Chinese Yuan. [4]
- (b) "Even if governments, firms and consumers wanted to separate, the economics make it difficult to deliver products in a decoupled world at a price that firms and consumers are willing to pay." (Extract 6) [2]
- Explain how the theory of comparative advantage is reflected in the above statement.
- (c) "With that come the attendant risks of stagflation - a potent combination of high unemployment and high inflation." [4]
- Using a diagram and with reference to Extract 7, explain how stagflation might result.
- (d) With reference to Extract 7, discuss the costs and benefits that a small open economy should consider when deciding on the 'optimal point of openness.' [8]
- (e) Using Extract 8 and your own knowledge, analyse the impact on American producers, workers and consumers, when US tariffs are placed on Chinese imports, and evaluate if protectionism can ever be deemed appropriate. [10]

[Total: 30]

[BLANK PAGE]