H

TEMASEK JUNIOR COLLEGE

2025 JC2 PRELIMINARY EXAMINATION

Higher 2

ECONOMICS **9570/01**

Paper 1 **26 August 2025**

2 hours 30 min

Additional Materials: **two 12-page** answer booklets

READ THESE INSTRUCTIONS FIRST

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

Answer **all** questions.

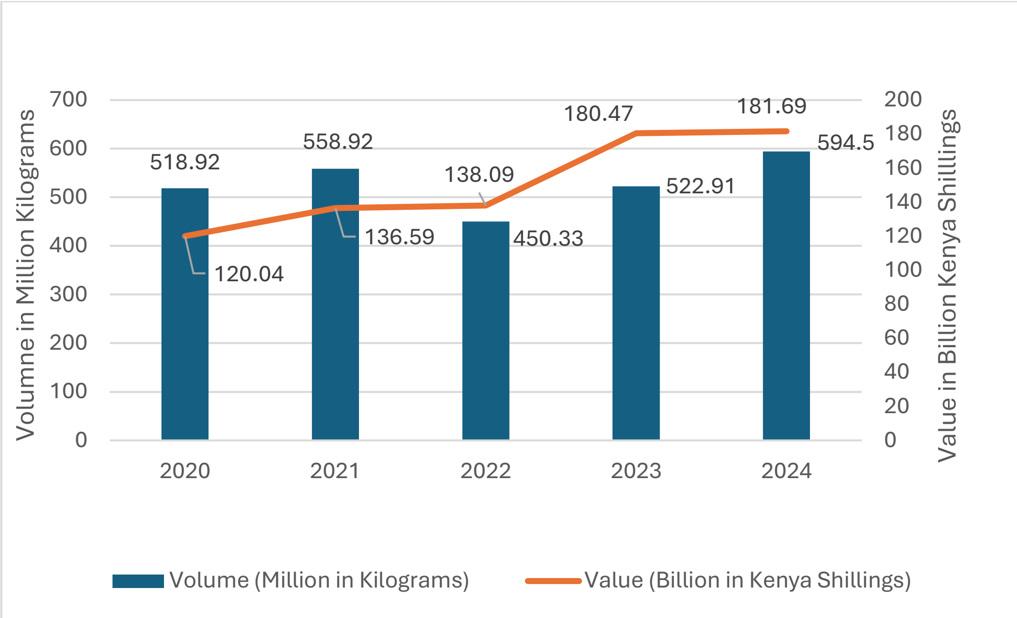
Indicate the question number clearly in your answers.

Start Question 1 and Question 2 on separate answer booklets.

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

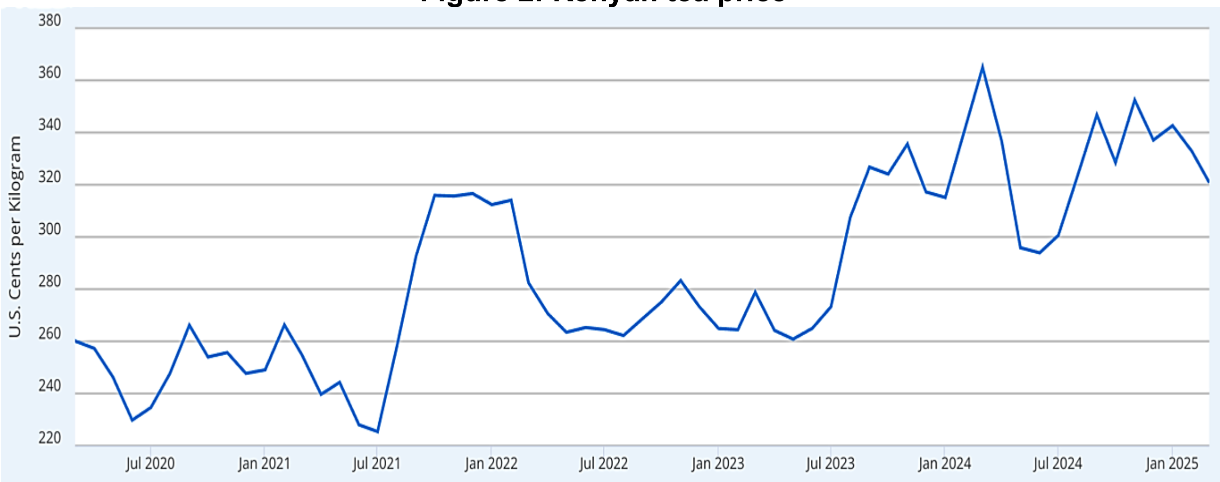
Question 1: The economics of tea

Figure 1: The volume and value of Kenyan tea exports from 2020 – 2024



Source: Tea Board of Kenya, 2024

Figure 2: Kenyan tea price



Source: *International Monetary Fund, accessed May 2025*

Extract 1: Kenyan tea to China

Tea is Kenya's top export crop, bringing in over $1 billion yearly. The country is also the world's biggest exporter of black tea. Tea has deep roots in Chinese culture, used for centuries in ceremonies, daily life and medicine. So China might seem like a perfect destination for Kenyan tea. But there's a twist: China is the birthplace of tea, the largest producer, and one of the top exporters globally. Why would it need to import tea at all?

And yet, it does. And increasingly, it's importing tea from Kenya. Between 2022 to 2024, there has been a more than fourfold increase in just two years and ranking China the 10th export destination of Kenyan tea. China's interest in Kenyan tea is clearly growing, driven especially by health-conscious consumers seeking orthodox, or traditionally produced, tea.

Source: Africacheck.org, 23 April 2025

Extract 2: What is the true price of a cup of tea?

The true price of tea reflects the visible as well as the hidden costs of its production. The calculated true price of conventional green tea leaf is €1.05/kg green tea leaf. This is the sum of the farm gate price (€0.35/kg green leaf) and the external costs of cultivation (€0.70/kg green leaf). The latter is also called the true price gap.

Cultivation of tea in Kenya requires extensive use of fertilisers. This leads to high concentrations of nutrients, particularly nitrogen and phosphorus, entering water bodies through leaching and surface runoff, which causes eutrophication. Eutrophication is a process in which water bodies become excessively enriched with nutrients, leading to rapid algal growth that blocks sunlight, reduces oxygen levels through decomposition, and ultimately disrupts aquatic ecosystems by causing the death of marine life, which in turn affects fish populations and the livelihoods of fishermen as well as the seafood trade.

The underpayment of hired labour and poor working conditions also contribute to hidden effects associated with tea cultivation in Kenya. Studies, for example, indicate that a lack of personal protective equipment and exposure to pesticides on farms is widespread, posing health concerns for workers, many of whom are women. Small-scale farmers who cultivate tea are often directly affected themselves and, due to low yields, are unable to adequately compensate hired labour.

Experts say changes on the production side can help the tea industry reduce its environmental footprint. That involves moving away from farming practices that degrade and pollute soils with chemical fertilisers. The hope is that the use of organic fertilisers will enable farmers to increase productivity and incomes while creating more sustainable tea, thereby regenerating depleted soils and benefiting biodiversity.

Source: IDH and True Price, March 2016

Extract 3: Competition authority okays Lipton teas' takeover

The competition regulator in Kenya has permitted Browns Investments' acquisition of Lipton Teas and Infusion, setting the stage for one of the most watched deals in the East African region this year. Other formidable competitors are the Kenya Tea Development Agencies (KTDA), Eastern Produce Kenya Ltd. and Williamson Tea.

The merger aims to elevate Kenya's tea industry through a 1 billion Kenyan shillings investment in community projects and initiatives like Lipton's Tea Academy and a new fertiliser plant. This academy will train farmers on global best practices, enabling them to maximise the value of their crops. Additionally, a state-of-the-art tea-specific fertiliser plant will be established to support tea cultivation in Kenya further. This partnership, alongside government reforms, seeks to increase value-added tea exports from 5% to 50% by 2027, boosting export value to over USD 1.85 billion and benefiting smallholder farmers.

The Authority has also assessed that the merger will not lead to any employment losses even after the acquisition. The merger positions Lipton Group to focus on brand management and improvement of value-addition. The company has pledged to re-invest its proceeds in the region to boost the local economy. The merger has been challenged by local communities, who cite concerns about potential job losses and increased mechanisation under new ownership, which could displace workers, along with allegations of human rights abuses and the displacement of locals from their land.

Source: The Kenyan Wall Street, 6 December 2024

Extract 4: Tea tourism

Traditionally a major agricultural product for export, tea has increasingly taken on a new role in recent years for Kenya. This East African country offers tantalising tea tourism, giving visitors a unique opportunity to understand what makes its brew special. Tours to the farms offer visitors an educational experience of understanding Kenyan tea, participating in tea picking, tasting the beverage as well as getting insights into local culture. They can also visit factories to learn about tea processing.

Gatura Greens is a family run purple tea farm that offers an authentic experience, including tasting over 10 different types of tea. While many businesses were forced to close shop during the COVID-19 pandemic, Gatura Greens saw an opportunity to venture into tea tourism and indeed, business thrived. It takes a maximum of 30-40 people and a minimum of four depending on the season and the day. There is more growth potential for tea tourism in Kenya, and small scale tea farmers across the country are urged to try and offer unique experiences in their farms. Tour operators are called to include agri-tourism in their packages.

Tourism represents an alternative for diversification of the economy, particularly considering the country's environmental attraction suitable for nature tourism together with an abundance of labour. Notably tourism will contribute to the country through employment of local workers and the multiplier effects that their earnings generate in their communities; foreign exchange earnings to support the national balance of payments and social cohesion.

The Kenyan government is constantly working to attract more international visitors. It has asserted its commitment to improving security in the country and strengthening tourist experience by packaging tourism sector incentives. While tea tourism has provided windows of opportunity for Kenya, government policies that focus on growth as opposed to development may do little to aid Kenya's developmental initiatives. A surge in tourism can lead to the degradation of tea gardens and their surrounding natural environments. The rise in human activity and infrastructure development often disrupts the delicate ecosystems found in tea-producing regions. Additionally, tourism can place significant strain on local resources such as water and energy.

Sources: Adapted from China Daily, May 2025 and
Economic Development of Kenya, Tourism Industry Impact, J. Hassan, 2018

Questions

(a) Compare the volume and value of Kenyan tea exports from 2020 to 2024. [2]

(b) Using the concept of price elasticity of demand, explain how Figures 1 and 2 can explain the rise in Kenyan tea export revenue from 2022 to 2023. [5]

(c) Explain a possible value of the cross price elasticity of demand between Kenyan tea and Chinese tea. [2]

(d) On a production possibilities diagram, explain how ‘eutrophication’ (Extract 2) would affect the amount of tea and seafood produced. [3]

(e) Discuss whether greater efficiency would be achieved with the merger of Lipton and Browns. [8]

(f) Discuss the factors that the Kenyan government considers when deciding whether to promote tea tourism. [10]

[Total: 30]

Question 2: Inflation and sustainable growth

Table 1: Selected macroeconomic data of United States

	2019	2020	2021	2022	2023
GDP growth rates (%)	2.58	-2.16	6.06	2.51	2.89
Inflation, consumer prices (annual %)	1.81	1.23	4.7	8.0	4.12
Nominal interest rate (%)	5.28	3.54	3.25	7.5	8.5
Real effective exchange rate index (2010=100)	116.45	118.01	115.63	126.77	127.55
Exports of goods & services (constant 2015 US$, in billions)	2456.08	2133.65	2271.84	2442.52	2510.04
Imports of goods & services (constant 2015 US$, in billions)	3125.47	2844.82	3262.18	3542.50	3500.97

Sources: World Bank & International Monetary Fund

Extract 5: US rises interest rates to curb with inflation

It has been a difficult year for the US economy. While consumer spending remains strong, inflation is at its highest in decades. The Federal Reserve (Fed) hopes its rate hikes will temper demand for consumer goods and services by making it more expensive to borrow money. The Fed envisions bringing inflation down to about 2% from its current rate of 8%.

A host of factors are making the Fed's fight against inflation particularly difficult. "Job gains have been robust in recent months, and the unemployment rate has remained low. Inflation remains elevated, reflecting supply and demand imbalances related to the pandemic, higher food and energy prices, and broader price pressures," the central bank said. It also pointed to Russia's war against Ukraine and related events which "are creating additional upward pressure on inflation and are weighing on global economic activity."

Still, the Fed views raising interest rates as the best method when it comes to fighting inflation. Rising interest rates can have several effects on market conditions and the economy, some of which are positive, and other potential negative consequences. Interest rate hikes create tighter financial conditions during which share prices and stocks drop in value, and the strength of the U.S. dollar increases. Such financial conditions can hurt the economies of other countries. It can also put a strain on retirement savings. With higher mortgage rates, some may find it more difficult to buy a house even with the easing up in the housing market.

Source: Time.com, November 2022

Extract 6: Singapore's tightening exchange rate policy

The Monetary Authority of Singapore (MAS) tightened its monetary policy on Thursday, saying the widely forecast move will slow inflation momentum as the city state ramps up its battle against soaring prices made worse by the Ukraine war and global supply snags. The policy tightening, the third in the past six months, came as separate data showed Singapore's economic momentum waning over the first quarter.

Singapore manages monetary policy through exchange rate settings, rather than interest rates as it is an interest-rate taker and because trade flows dwarf its economy, letting the Singapore dollar rise or fall against the currencies of its main trading partners within an undisclosed band. The Singapore dollar strengthened about 0.5% after the statement and hit a one-week high of S$1.3552 per dollar. The central bank maintained its forecast for Gross Domestic Product to expand 3% to 5% this year. The economy grew at the fastest rate in a decade in 2021, recovering from a pandemic-induced contraction the previous year.

The Russia-Ukraine conflict has intensified pressure on consumer prices which were already rising rapidly due to coronavirus-driven supply snags. The Singapore government has said it stands ready to respond with fiscal and monetary measures if a deepening Ukraine crisis impacts growth and inflation.

Source: Reuters.com, 14 Apr 2022

Extract 7: China's "Made in China 2025" – an overall success but at what cost?

"Made in China 2025", an initiative introduced a decade ago, called for pouring money and resources into dozens of industries. The goal was to turn China into a green and innovative "manufacturing power", one that relied less on labour and Western supply chains, and more on automation and new home-grown technologies. Aided by the government, Chinese firms have grown more automated and sophisticated. The torrent of goods coming from Chinese factories resulted in a record trade surplus of nearly $1 trillion in 2024. But China's success has had consequences, ranging from economic distortions at home to a backlash abroad.

A "Green Book" identified sectors for government generosity with hundreds of industries designated for support in the form of direct subsidies, cheap credit and inexpensive land. Producers of such things as solar panels, chips and aircraft benefited. Another prominent example is electric vehicles (EVs), where Chinese companies sold more than 10 million EVs last year, accounting for nearly two-thirds of the global total. In the last quarter of 2024 China's biggest EV-maker, BYD, surpassed Tesla, an American firm, in worldwide sales of battery-only cars. In the area of clean energy, the gains of Chinese companies are unambiguous. Whereas in 2015 they produced 65% of the world's solar panels and 47% of its batteries, today they are responsible for around 90% and 70%. The government's support means they can make these things at lower cost than firms elsewhere. In much of the world, the green transition is powered by machinery made in China.

Made in China 2025 has thus achieved most of its aims. But at what cost? The fiscal expense is impossible to calculate. Beyond the fiscal burden, China's industrial ambitions have also required a big commitment of labour and capital. China's manufacturing workforce was over 123 million people in 2023. These labourers have become more productive: output per worker has increased by roughly 6% a year on average from 2014 to 2023, falling modestly short of the government's goals. But that performance required enormous inputs of capital.

A different policy mix could have encouraged greater household spending, not capital spending, and flourishing services, not manufacturing muscle. These two shifts could have complemented each other nicely. As people grow richer, they devote a higher share of their budgets to education, health and recreation rather than manufactured clutter. Stronger consumer spending would, therefore, have been a boon to China's service firms, which account for most employment. That might have bolstered the labour market and created more of the kinds of jobs that China's millions of university graduates are equipped to fill.

As it is, Chinese buyers do not come close to purchasing all the things that Chinese factories produce, so the country is busy exporting the rest. Angry trade partners accuse it of flooding their markets with cheap goods, undercutting their companies and hollowing out their manufacturing sectors. They launched almost 200 anti-dumping cases and other trade investigations against China in 2024. For President Xi, the primary goal of Made in China 2025 is self-reliance. That task has become more urgent in the face of foreign tariffs and export controls.

Source: *The Economist*, 16 Jan 2025

Questions

(a) **(i)** Using Table 1, calculate and state the change in net export balance for US from 2019 to 2023. [2]

(ii) Using **one** economic indicator from Table 1, account for the above change. [2]

(b) Explain **one** intended and **one** unintended consequence of a rise in US's interest rates on its households. [2]

(c) Using the concept of circular flow of income, explain how the equilibrium level of national income of China will change as a result of the "record trade surplus" in Extract 7. [6]

(d) Discuss whether the "Made in China 2025" initiative could help China attain sustainable growth. [8]

(e) Discuss whether governments should adopt free trade agreements or supply-side policies to address a worsening trade balance. [10]

[Total: 30]