ANGLO-CHINESE JUNIOR COLLEGE

2022 JC2 PRELIMINARY EXAMINATIONS

ECONOMICS	**9757/01**
Higher 2	23 August 2022
Paper 1	2 hours 15 minutes

Additional materials: Writing papers
and
2 cover sheets

READ THESE INSTRUCTIONS FIRST

Write your exam index number and name on all the answers you hand in.
Write in dark blue or black ink pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid / tape in your answers.

Answer **all** questions.

Begin Question 2 on a **fresh** sheet of writing paper.

At the end of the examination, arrange your answers in order.
Fasten your answers for Question 1 and Question 2 **separately** using the cover sheets provided.

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

This document consists of **6** printed pages (including this page).
Please check that your question paper is complete.

Answer **all** questions.

Question 1: The Nitrogen Fertilizers Crisis

Table 1: Employment and consumption data on fertilisers

	2015	2016	2017	2018	2019
Number of workers employed in US fertilizers industry	19 133	19 580	20 058	20 837	22 179
Fertilizers consumed in US (in million tons)	22.46	23.14	23.44	21.68	22.40
Fertilizers consumed globally (in million tons)	213.27	215.13	217.42	213.77	215.37

Sources: IBISWorld *and ourworldindata.org*

Extract 1: The US fertilizer production industry

Fertilizers are critical input for crop production and represent a major variable cost for several US crops. Farmers represent the end users in the fertilizers' supply chain, and the prices they pay for fertilizers depend on several factors including local demand, product type, retailer mark-ups, and transportation costs.

The US fertilizers sector has undergone substantial changes. Between the 1980s and mid-2000s, the combination of lower fertilizers demand and higher input costs for fertilizers production caused the fertilizers sector to contract from 59 to 22 production facilities. The assumption is that highly concentrated industries are synonymous with market power, which can be detrimental to the society. Whether that will happen in reality rely on many factors, one of which is the level of government regulation in the fertilizers market.

Source: Choices and the Agricultural & Applied Economics Association*, 2020*

Extract 2: USDA announces plan to support US farmers

The US Department of Agriculture (USDA) will support American farmers by increasing the fertilizers production so as to address its rising costs. It is offering a $250 million new grant to encourage greater production of fertilizers.

Additionally, to address growing competition concerns in the agricultural supply chain, USDA will launch a public inquiry, seeking information regarding agricultural fertilizers and the impact of concentration and market power on agriculture farmers. The inquiry aims to enhance fairness and competition across America's economy.

"Concentrated market structures and potentially anti-competitive practices leave America's farmers, businesses, and consumers facing higher costs, fewer choices and less control about where to buy and sell, and reduced innovation—ultimately making it harder for those who grow our food to survive," said Agriculture Secretary of the United States.

Source: US Department of Agriculture*, 11 March 2022*

Extract 3: Fertilizer costs: what is driving the increase?

Significant increase in the cost of fertilizers over the past year has caused a lot of concern among farmers in the United States. Given that the cost of fertilizers now account for approximately 15-20% of total costs for corn production, fertilizer prices and its availability are a major concern for farmers planning for the 2022 growing season. Farmers in some areas are reporting prices more than 300% higher than last winter, and delivery times seems to be anyone's guess. The price increase was driven by strong domestic and global demand for crops, low fertilizers inventories, and very slow adjustments in production by the US fertilizers industry.

As fertilizers are global commodity, its prices can be influenced by various market factors beyond the control of US producers. Countries that import fertilisers are also exporters of the raw materials needed to produce these fertilisers. Hence, this means that fertilizers prices are more volatile as it is subjected to both the cost of factor inputs as well as the production costs of the country producing it. Another factor is that two-thirds of global fertilizers demand is driven primarily by the production of crops, of which corn, wheat, and soybeans constitute about 36% of that total demand. So, as large producers of corn, soybeans, and wheat, the US is a large consumer of fertilizers.

Trades disputes and disruptions have also played a big role in fertilizers availability and cost. The US have restricted imports of selected factor inputs such as potash from Belarus. Potash is an essential raw material used to produce fertilisers, and Belarus is a country which contributes to about 20% of the global production of potash. The uncertainty of Russian actions against Ukraine creates further volatility since Russia is also one of the top global exporters of all three fertilizers raw materials — nitrogen, phosphate, and potash.

Price of fertilizers in the US can also be influenced by internal factors such as increased domestic transport costs due to labour shortages in the freight industry which the fertilizers industry relies on for transportation. Domestic weather conditions like hurricanes, ice storms, as well as infrastructure breakdowns, have caused several production and distribution disruptions.

Source: Institute of Agriculture and Natural Resources*, 8 February 2022*

Questions

(a) With reference to Table 1, identify the difference in the trend of number of workers employed in the US fertilizers industry and the consumption of fertilizers in the US from 2016 to 2019. State one possible reason for the difference. [2]

(b) **(i)** With reference to Extract 1, explain how the lower demand for fertilizers and higher input costs could cause firms to exit the US fertilizers industry. [4]

(ii) Explain how market dominance could lead to an inefficient allocation of resources in the US fertilizers market. [6]

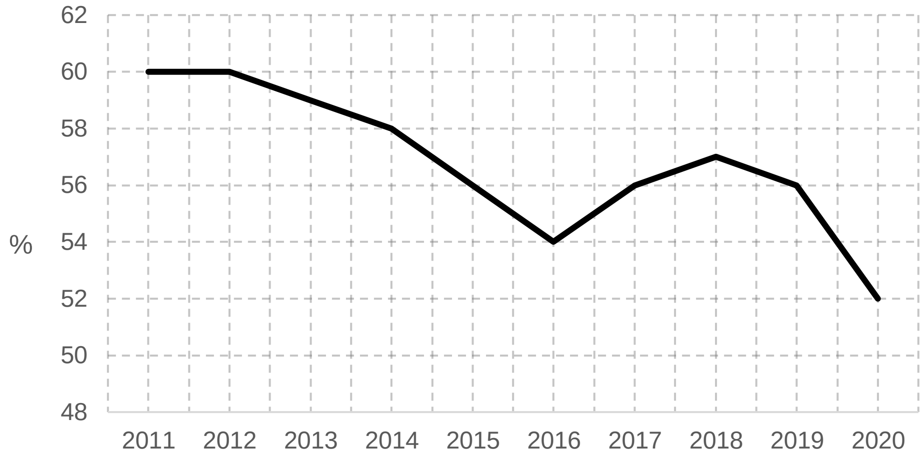
(c) Discuss how improving the level of competition in the US market for fertilizers can affect dynamic efficiency. [8]

(d) Discuss whether demand or supply factors have a greater impact on the price of fertilizers in the US. [10]

[Total: 30]

Question 2: The Impact of a Global Pandemic on Globalisation

Figure 1: Global Trade Volume as a Percentage of GDP, 2011 - 2020



Source: World Bank

Extract 4: MAS eases monetary policy as economy reels from impact of COVID-19

Singapore's central bank eased monetary policy as the economy reels from the impact of a novel coronavirus pandemic. In its statement, it said the COVID-19 pandemic has led to a severe contraction in economic activities in Singapore and globally, due to the combination of supply chain disruptions, travel restrictions imposed in many countries and a sudden decline in demand.

In its half-yearly monetary policy statement, the Monetary Authority of Singapore (MAS) said the Singapore dollar nominal effective exchange rate policy band has "depreciated to a level slightly below the mid-point of the policy band". It added that MAS will adopt a zero per cent per annum rate of appreciation of the policy band.

Research firm Capital Economics described the central bank's latest decision as a "complement" to fiscal policy, which will remain the key form of support for the economy.

They added that there could be a limit in terms of what more the MAS could do further down the road. With global growth collapsing, a much weaker currency probably wouldn't make much difference to export prospects.

Several other economists have also said that further monetary easing is unlikely. A note from Fitch Solutions Country Risk and Industry Research explained that this is because further easing will risk amplifying any spikes in import prices of essentials including food and medical supplies.

Source: Channel News Asia*, 30 March 2020*

Extract 5: Hoarding won't help: export restrictions will backfire on Asian countries

Asian countries that have implemented export restrictions to protect local supplies amid the COVID-19 pandemic will harm their commodity prices and damage their trade reputations, according to an expert from the Food and Agricultural Organisation of the United Nations (FAO). Countries such as Vietnam and Cambodia have elected to implement such protectionist measures and ban exports of goods such as rice and other essential raw materials to ensure ample domestic supply and to keep costs low.

Although export restrictions may be a knee-jerk reaction to a crisis, in the long run, this sort of policy is highly likely to hurt the countries implementing these instead, particularly local producers and traders.

Firstly, this will bring down the domestic prices of the commodity, rice in this case, and hurt local farmers. Secondly, it will benefit competitors on international markets by giving others a chance to steal market share. Thirdly, this would hurt the exporter's reputation as all countries that normally buy from it would think twice about that trade. If the exporter is always going to react this way in a crisis, buyers will feel they need to be self-sufficient instead and move away from trade.

To build resilience and minimise the impacts of such crises on food supply chains in the future, the FAO calls for governments to focus on science, technology and the right policies moving forward.

Source: foodnavigator-asia.com, 21 July 2020

Extract 6: The COVID-19 economy: does it mean the end of globalisation?

After decades of growth for world trade, global tourism and international cooperation, globalisation hit a couple of roadblocks in recent years, as the re-emergence of nationalism and protectionism have undone some of the progress made in the past. After global trade growth slowed significantly in 2019, due in large part to trade tensions between the US and China, the COVID-19 pandemic is expected to cause an unprecedented fall in world trade.

Having reminded many companies of the vulnerabilities of global supply chains, both the pandemic and the trade war between the US and China could lead companies towards a more domestic approach to production and sourcing, which might result in a sustained reduction of global trade.

New York-based Delta Children, which makes cribs in China for retailers such as Walmart, briefly studied moving production back to the US as supply shortages caused by the COVID-19 pandemic added to its hefty bill from US import tariffs. Analysts predicted that the pandemic would help accelerate this type of re-shoring[1] of jobs to the US, while some policymakers even spoke of a wider retreat of globalisation as companies dealt with severed supply chains.

The Delta chief executive finally ruled out the move due to higher labour costs and a lack of suppliers. The company still plans to diversify its supply chain - but by moving some production to South East Asia. Reshoring would only work if the products are of the same quality and competitively priced, which is not the case at the moment.

Consultants at McKinsey & Co say supply chain issues have grabbed the attention of chief executives and board rooms with COVID delivering the biggest and broadest value chain shock in memory, albeit only the latest in a series of disruptions. Instead of focusing solely on procurement costs, companies are starting to consider stability and resilience.

Sources: World Economic Forum*, 29 May 2020 and* Reuters*, 7 October 2020*

[1] the practice of transferring a business operation that was moved overseas back to the country from which it was originally located

Extract 7: Globalisation the cause and the cure for COVID-19

Social scientists around the world are taking stock, as the impact of COVID-19 has brought international travel to a standstill, obstructed global supply chains, created tsunamis of unemployment, brought key industries to a grinding halt, and isolated individuals and communities in the midst of a rapidly rising death toll.

And while some would say the pandemic will catalyse the end of globalisation, some argue that COVID-19 has in fact highlighted the power and potential of our increasingly globalized world.

Amid today's terrifying human devastation, we have also witnessed a surge of digital information which has turbocharged virtual networks and the flow of ideas in everything from healthcare to business. Even more fundamentally, widespread digital interdependence has accelerated innovative responses to the pandemic - whether among individuals, institutions or nations – and such reactions have relied on our global connectivity.

When we look at the two key dimensions the situation is impacting, both how we work and how we live, the virus has acted to accelerate both the digital revolution and our virtual connectivity. Working from home is now unlikely to be considered a 'second-best' option, as home-based virtual workstations are supporting thousands of workers around the world to work efficiently, away from their physical offices. Even the hardest hit sectors, such as hospitality and restaurants have been quick to start planning for a different future – one where digital ordering and contactless payment are the norm and where social distancing becomes a rule of thumb for good restaurant design.

While we cannot rush to predict the post COVID-19 future, it is clear globalisation in its fullest sense is not a casualty.

Source: University of South Australia*, 7 May 2020*

Questions:

(a) Describe the trend in global trade as a percentage of GDP from 2011 to 2020. [2]

(b) With reference to Extract 4,

(i) Using AD/AS analysis, explain how Singapore's monetary policy can increase national output. [4]

(ii) Explain one possible unintended consequence of "further monetary easing". [2]

(c) **(i)** Using the concept of price elasticity of demand, explain the impact of imposing rice export restrictions on a domestic rice producer's revenue. [4]

(ii) Discuss the impact on the economy in countries such as Vietnam and Cambodia of imposing export restrictions. [8]

(d) Discuss whether the COVID-19 pandemic will slow down or accelerate the rate of globalisation. [10]

[Total: 30]

End of paper