Economics
2022

Question booklet 1

- Questions 1 and 2 (40 marks)
- Answer *all* questions
- Write your answers in this question booklet
- You may write on page 12 if you need more space
- Allow approximately 65 minutes

Examination information

Materials

- Question booklet 1
- Question booklet 2
- SACE registration number label

Instructions

- Use black or blue pen

Total time: 130 minutes
Total marks: 80

Attach your SACE registration number label here

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1. **Source A**

   At the start of the COVID-19 pandemic, there was a large increase in the demand for medical-grade face masks. The increase in demand came mainly from the healthcare sector, which needed to provide staff with protective equipment.

   Demand exceeded producers' capacity to supply medical-grade face masks. Supply was reduced because of staffing shortages in mask factories. Producers' ability to be price-responsive was also affected by a shortage of the specialised fabric used to manufacture medical-grade face masks.

   (a) (i) Explain the likely impact of these changes in demand and supply on the market equilibrium for medical-grade face masks.

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   _____ (1 mark)

   (ii) Complete the diagram below to support your answer.

   Market for medical-grade face masks
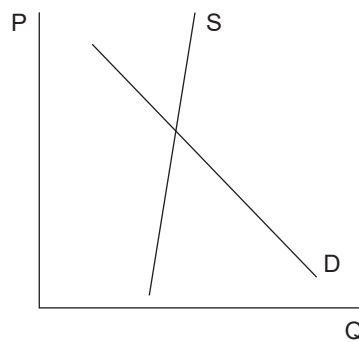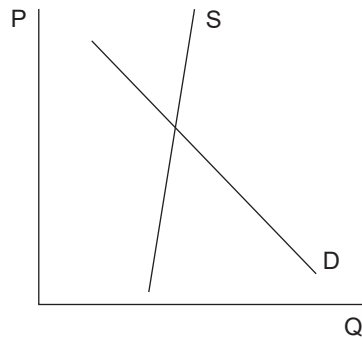

   (2 marks)

   (b) State why the price elasticity of supply for medical-grade face masks is highly inelastic in the short run.

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   _____ (1 mark)

(c) In an attempt to increase the supply of medical-grade face masks, governments offered large subsidies to encourage firms in other industries to switch to producing the specialised fabric used in these masks.

(i) Complete the diagram below to illustrate the intended effect on market equilibrium of offering large subsidies to encourage firms to switch to producing the specialised fabric used in medical-grade face masks.

Market for specialised fabric

(2 marks)

(ii) Analyse the effectiveness of government offers of subsidies to encourage firms to switch to producing the specialised fabric used in medical-grade face masks. Refer to *one intended* and *one unintended* consequence of the offer of subsidies.

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_____ (3 marks)

(d) The diagram below shows the demand curves for medical-grade face masks for four different consumer groups.

Market for medical-grade face masks
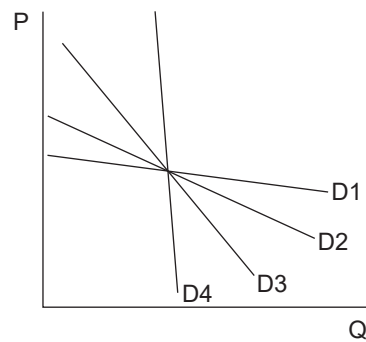
(i) Which demand curve best represents the consumer group of healthcare workers? Tick the appropriate box to indicate your answer.

☐ D1

☐ D2

☐ D3

☐ D4

(1 mark)

(ii) Justify your answer to part (d)(i).

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_____ (1 mark)

(iii) With reference to your answer to part (d)(i), explain how a decision to increase the price of medical-grade face masks is likely to affect producers' total revenue.

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_____ (2 marks)

(e) **Source B**

The specialised fabric used to manufacture medical-grade face masks is produced by two firms: Firm A and Firm B. Each firm is deciding whether to increase or to maintain spending on research and development (R&D).

The payoff matrix below shows the profit ($million) that each firm can make when it chooses between:

- increasing spending on R&D
- maintaining spending on R&D.

		Firm B	
		Maintain spending on R&D	Increase spending on R&D
Firm A	Maintain spending on R&D	20 / 20	24 / 14
	Increase spending on R&D	14 / 24	16 / 16

(i) Using data from the payoff matrix, explain why the Nash equilibrium is reached when both firms increase spending on R&D.

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_____ (3 marks)

(ii) Explain how both firms in this market could simultaneously maximise their profits. Use data from the payoff matrix to support your answer.

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_____ (2 marks)

(f) **Source C**

Governments have highlighted the considerable social and private benefits of individuals wearing medical-grade face masks. These benefits include:

- better public-health outcomes
- a reduced risk to healthy individuals of being infected with the virus.

Effectiveness of medical-grade face masks

This diagram has been
removed for copyright reasons.

Source: adapted from Gannawarra Shire Council 2020, 'Wear a mask and help stop
the spread of COVID-19', media release, viewed 7 June 2022, www.gannawarra.vic.gov.au

(i) Explain why the wearing of medical-grade face masks is associated with positive consumption externalities.

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_____ (2 marks)

(ii) Explain how the market for medical-grade face masks is inefficient due to the existence of positive consumption externalities.

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_____ (1 mark)

(iii) Complete the diagram below to indicate the deadweight loss.

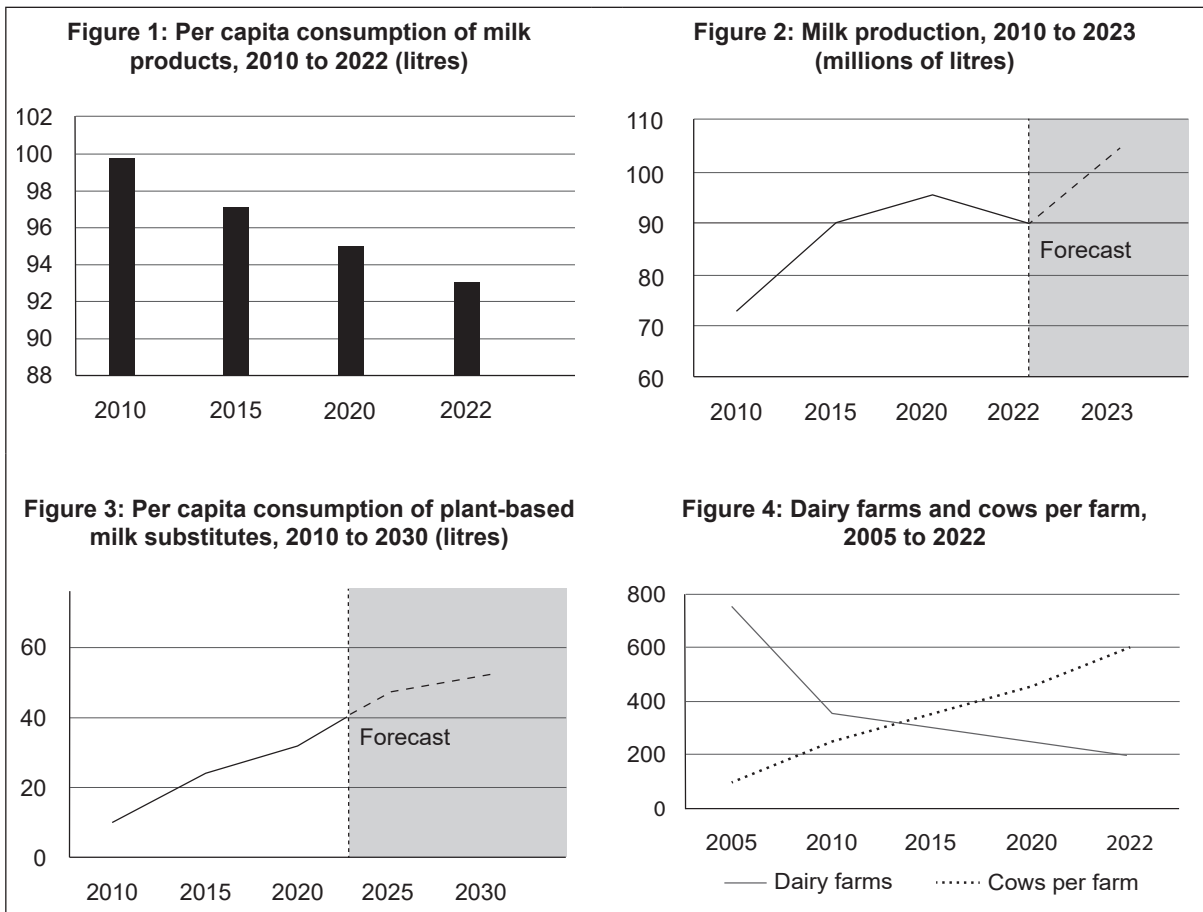**Market for medical-grade face masks**

(2 marks)

PLEASE TURN OVER
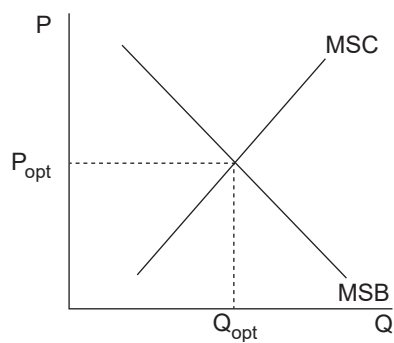
2. **Source D**

Multiple market structures exist in the dairy-milk industry in Country X. The dairy-milk industry includes the following three sectors:

- hundreds of dairy-milk farms that sell raw milk to processing companies
- four dairy-milk processing companies that sell processed milk to retailers
- two supermarket chains that control 75% of the retail market for dairy milk.

Additional data — the dairy-milk industry in Country X

Figure 1: Per capita consumption of milk products, 2010 to 2022 (litres)

Figure 2: Milk production, 2010 to 2023 (millions of litres)

Figure 3: Per capita consumption of plant-based milk substitutes, 2010 to 2030 (litres)

Figure 4: Dairy farms and cows per farm, 2005 to 2022

(a) Explain why multiple market structures exist in the dairy-milk industry, referring to *one* feature that is used to classify market structures.

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_____ (2 marks)

(b) With reference to price, explain the likely impact on dairy-milk farmers of the structure of the dairy-milk industry in Country X.

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_____ (2 marks)

(c) Dairy-milk farmers first asked the government to set a price floor for raw milk in 2010, after a sudden fall in the market price for raw milk sold to processing companies. The farmers suggested a price floor of P_f, which was above the market price at the time.

The farmers argued that the setting of a price floor for raw milk would provide them with a safety net against sudden, large falls in market price. The farmers expected demand to significantly increase in future years, resulting in a market price above the price floor.

(i) Explain the effect on the market for raw milk of setting a price floor above market price.

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_____ (1 mark)

(ii) Complete the diagram below to support your answer. *Include the deadweight loss due to the requested government intervention.*
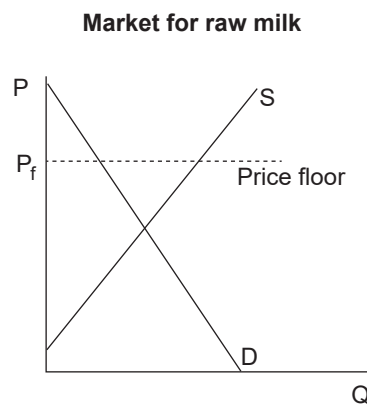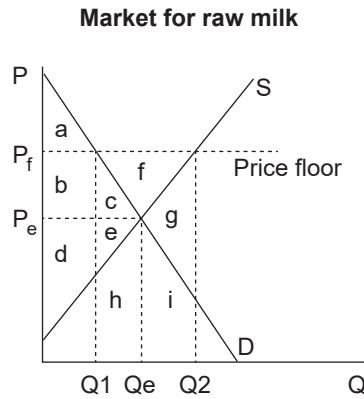
Market for raw milk

(2 marks)

(iii) Explain the effect on the market for raw milk if the expected increase in demand results in a market price above the price floor.

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_____ (2 marks)

(d) In 2011, the government eventually agreed to intervene in the market for raw milk. The final intervention included:

- the setting of a price floor (P_f) to be paid by processing companies
- a government guarantee to purchase any surplus of raw milk at that price floor.

Refer to the diagram below, which shows the market for raw milk after the government intervention.

Market for raw milk

(i) Complete the table below to show the areas that represent consumer surplus and producer surplus in the market for raw milk after the government intervention.

	Free market	Market after government intervention
Consumer surplus	a + b + c	
Producer surplus	d + e	

(2 marks)

(ii) Describe the effect of the government intervention on the distribution of surpluses.

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_____ (2 marks)

(e) Contrary to expectations, the price floor has remained above the market price of raw milk since its introduction in 2011. The government has been purchasing surplus raw milk, but it is now facing increased pressure to stop its intervention in the market for raw milk. Critics argue that the government intervention has resulted in inefficiency and unnecessary waste, and that it has not helped farmers.

With reference to the information and data in Source D, assess the claim that the government intervention in the market for raw milk has resulted in inefficiency and unnecessary waste, and has not helped farmers.

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_____ (4 marks)

You may write on this page if you need more space to finish your answers to any of the questions in this question booklet. Make sure to label each answer carefully (e.g. 2(c)(iii) continued).

Economics
2022

Question booklet 2

- Question 3 (40 marks)
- Answer *all* questions
- Write your answers in this question booklet
- You may write on page 8 if you need more space
- Allow approximately 65 minutes

2

Copy the information from your SACE label here

| SEQ	FIGURES	CHECK LETTER	BIN

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of South Australia

3. Country K is a large net exporter. Recent external shocks have significantly decreased the demand for exports and the dollar value of these exports. These decreases have had an impact on the value of Country K's floating exchange rate (K$).

(a) With reference to the circular-flow model and the expenditure multiplier, explain the likely impact of the decrease in dollar value of exports on the level of economic activity in Country K.

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_____ (4 marks)

(b) On the aggregate demand – aggregate supply model below, illustrate the likely effect of the decrease in the dollar value of exports on the average price level in Country K.
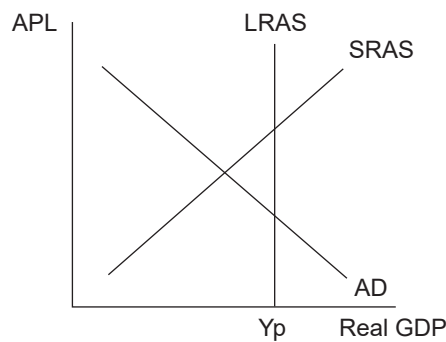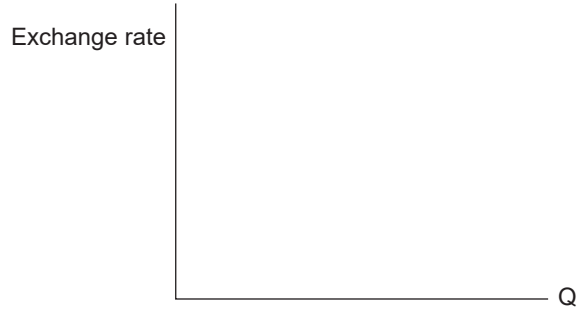

(2 marks)

(c) (i) State how the exchange rate is determined under a floating exchange-rate system.

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_____ (1 mark)

(ii) Explain the likely impact of the decrease in the dollar value of exports on Country K's exchange rate.

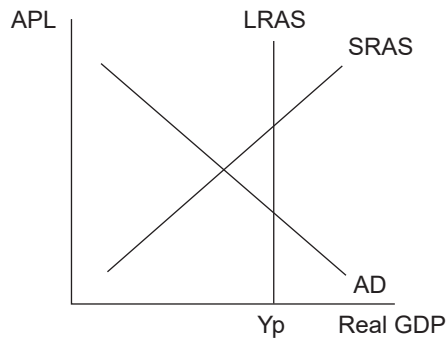Complete the diagram below to support your answer.

Market for Country K's dollar (K$)

Exchange rate

Q

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_____ (3 marks)

(iii) Explain the possible impact of the change in Country K's exchange rate shown in part (c)(ii) on the average price level (inflation).

Complete the aggregate demand – aggregate supply model below to support your answer.

APL   LRAS   SRAS

AD

Yp   Real GDP

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_____ (5 marks)

(iv) Assuming no change in nominal wages, discuss the possible effect of the change to the average price level shown in part (c)(iii) on the level of real wages in Country K.

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_____ (2 marks)

(d) **Source E**

The following table shows selected macroeconomic data for Country K over the past 2 years and forecast data for the year ahead.

	Year 1	Year 2	Year 3 (forecast)
Unemployment rate (%)	4.8	5.1	4.8
Inflation rate (%)	2.0	2.3	2.8
GDP growth (%)	2.5	2.0	2.4
Building approvals (% change)	1.0	1.5	1.8
Consumer confidence (% change)	1.0	1.8	2.5
Retail sales (% change)	2.8	2.5	3.0
Official cash rate (%)	1.5	1.0	1.0
Budget balance (% nominal GDP)	–3.8	–5.0	

Recognised government macroeconomic targets include:
• unemployment rate of 4%
• inflation rate of 2–3%
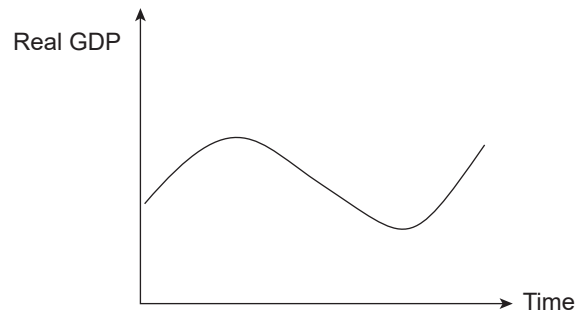• GDP growth rate of 3%.

(i) Identify *one* coincident indicator in the table above.

_____ (1 mark)

(ii) Assess whether the change in the indicator identified in part (d)(i) could be used to justify the change in the cash rate from year 1 to year 2.

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_____ (3 marks)

(e) On the diagram below, indicate the likely phase of the business cycle of Country K in year 2. Justify your answer.

Real GDP

Time

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_____ (3 marks)

(f) (i) Suggest the most appropriate fiscal policy response for Country K in year 3. Justify your answer.

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_____ (5 marks)

(ii) Identify and explain *one* limitation of using fiscal policy as a macroeconomic management tool.

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_____ (2 marks)

The government of Country K has increased spending on infrastructure in year 1 and year 2. Projects have included improved road and rail links between major cities and expanded airport facilities. The intended outcome of this spending on infrastructure has been to improve productivity levels in Country K.

(g) (i) On the aggregate demand – aggregate supply and production possibility models below, illustrate the impact of improved productivity levels in Country K.
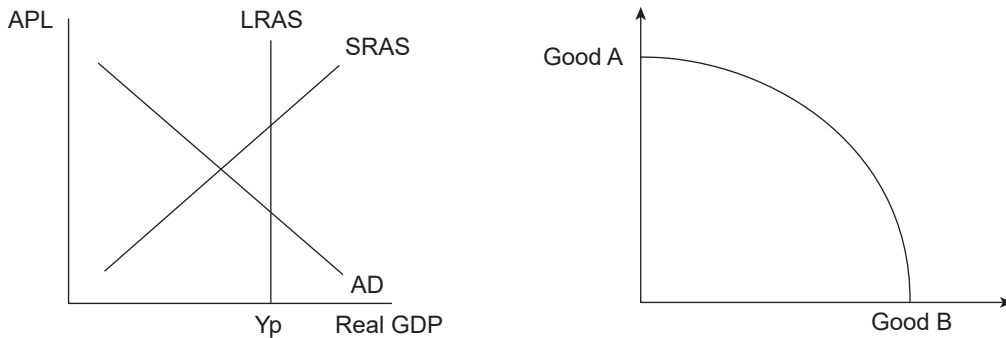
(3 marks)

(ii) Explain why increased spending on infrastructure might provide better outcomes for economic growth and employment than adopting other supply-side policies, such as competition policy and privatisation.

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_____ (4 marks)

(h) Explain why firms in a market are unlikely to provide public goods such as infrastructure.

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_____ (2 marks)

You may write on this page if you need more space to finish your answers to any of the questions in this question booklet. Make sure to label each answer carefully (e.g. 3(f)(i) continued).