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Economics
Higher level
Paper 3

Thursday 28 October 2021 (morning)

Candidate session number

1 hour

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Instructions to candidates

- Write your session number in the boxes above.
- You are permitted access to a calculator for this paper.
- Do not open this examination paper until instructed to do so.
- Answer two questions.
- Answers must be written within the answer boxes provided.
- Unless otherwise stated in the question, all numerical answers must be given exactly or correct to two decimal places.
- You must show all your working.
- The maximum mark for this examination paper is **[50 marks]**.



Answer **two** questions. Each question is worth [25 marks]. Answers must be written within the answer boxes provided.

- 1. Firm A is producing at a level of output Q_1 , which is equal to 1500 units per month, and its costs and revenues are shown in **Table 1**.

Table 1

Average total cost (ATC)	\$32
Marginal cost (MC)	\$32
Average revenue (AR)	\$30
Marginal revenue (MR)	\$30
Price (P)	\$30
Average variable cost (AVC)	\$28

- (a) Using the data in **Table 1**, state the reason why Firm A is operating in a perfectly competitive market.

[1]

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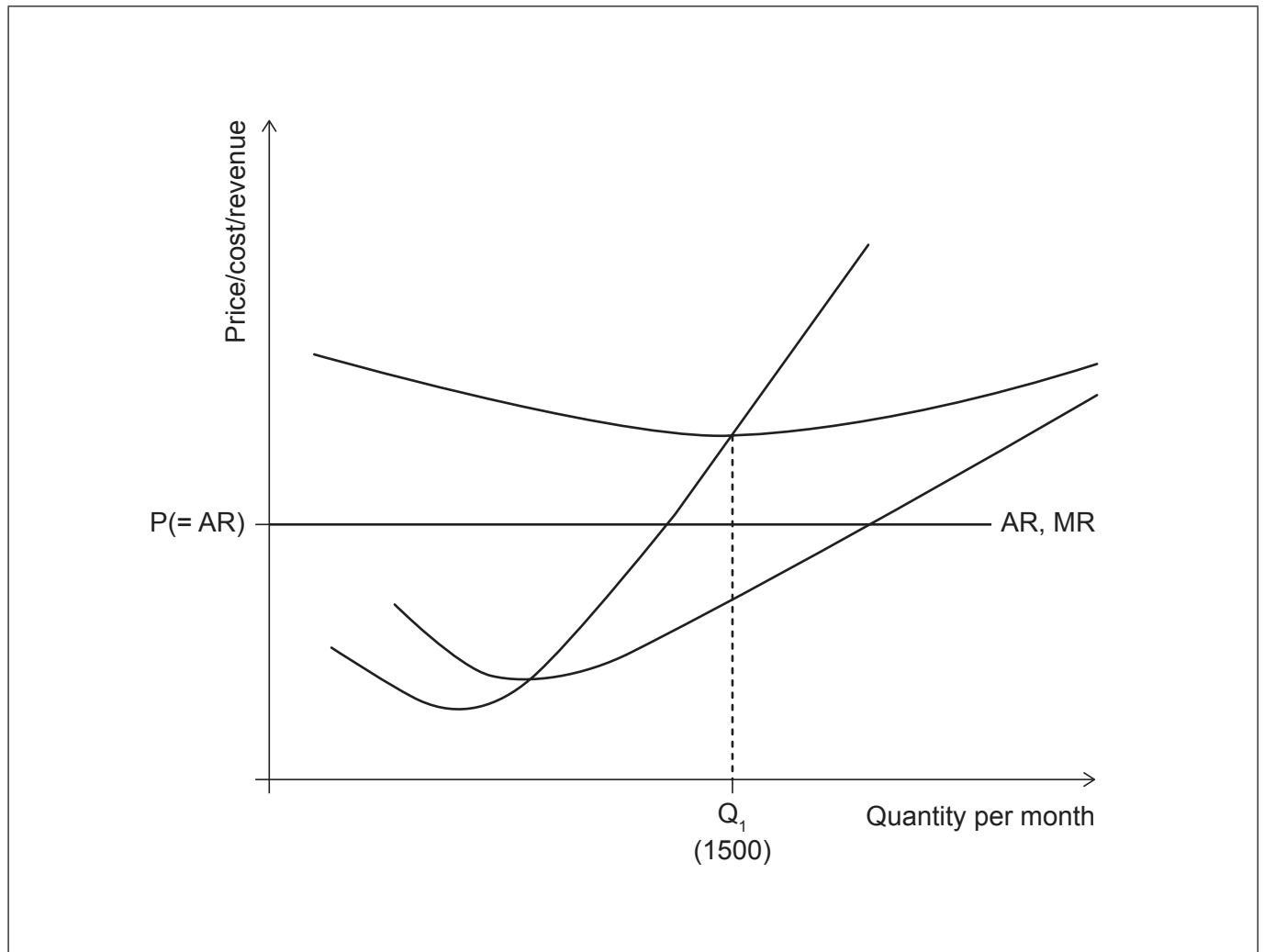
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(Question 1 continued)

- (b) On the following diagram, label Firm A's cost curves. The use of figures provided in Table 1 is **not** required.

[3]



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20EP03

Turn over

(Question 1 continued)

(c) Using the figures in **Table 1** or the diagram in part (b),

(i) determine whether Firm A is productively efficient. You must give a reason for your choice. [2]

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(ii) determine whether Firm A is allocatively efficient. You must give a reason for your choice. [2]

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(iii) determine whether Firm A is producing at the profit-maximizing (loss-minimizing) level of output. You must give a reason for your choice. [2]

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(Question 1 continued)

- (d) Using **Table 1**, calculate the monthly profit or loss Firm A is making at the current level of output, Q_1 . [2]

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- (e) Using **Table 1**, calculate the total fixed costs incurred by Firm A at the current level of output, Q_1 . [2]

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- (f) Using your answer to part (e), calculate the average fixed costs if Firm A produces 2000 units of output per month instead of Q_1 units. [1]

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- (g) List **two** assumptions of the perfect competition model. [2]

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20EP06

(Question 1 continued)

- (h) Explain why a loss-making perfectly competitive firm will shut down in the long run but may not shut down in the short run.

[4]

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- (i) Explain why in the long run economic losses cannot persist in a perfectly competitive market.

[4]

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2. The data in **Table 2** refer to Kanyaland, a small, open, developing economy in 2019. All data are in billions of Kanyaland dollars (K\$).

Table 2

Gross domestic product (GDP)	1098
Gross national income (GNI)	982
Factor income from abroad	68

- (a) Using the data in **Table 2**, calculate factor income sent (paid) abroad in 2019. [2]

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Assume that the level of GDP in Kanyaland in 2009 was K\$455 billion and government expenditures were K\$205 billion. For each additional Kanyaland dollar earned as income, it had been estimated that K\$0.60 was spent on domestic goods and services, K\$0.10 was saved, K\$0.21 was paid in taxes and K\$0.09 was spent on imported goods and services.

- (b) If the government increased expenditures by K\$21 billion, calculate the new level of GDP achieved. [3]

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(Question 2 continued)

(c) Explain **two** possible positive consequences of economic growth in Kanyaland. [4]

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(d) In many developing countries GNI figures are lower than GDP figures. Outline how this may be due to the high levels of foreign direct investment (FDI) in developing countries. [2]

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(e) Kanyaland specializes in and exports a narrow range of agricultural products. Outline **one** negative consequence of this strategy in achieving economic growth. [2]

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20EP09

Turn over

(Question 2 continued)

- (f) Explain how unemployment benefits and progressive taxation may help decrease economic fluctuations in Kanyaland.

[4]

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20EP10

(Question 2 continued)

Table 3 shows the values of the consumer price index (CPI) between 2016 and 2020 in Kanyaland.

Table 3

	CPI
2016	176.3
2017	174.2
2018	172.9
2019	174.4
2020	180.2

(g) Using **Table 3**, calculate the rate of inflation in 2017 **and** in 2018. [2]

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(h) With reference to the CPI data in **Table 3**, describe the most likely monetary policy response adopted at the end of 2018 by the central bank of Kanyaland. [1]

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20EP12

(Question 2 continued)

Table 4 shows the income tax rates in Kanyaland.

Table 4

Annual income (K\$)	Income tax rate (%)
0-20 000	22 %
20 001-30 000	26 %
30 001-38 000	30 %
38 001 +	34 %

Rufus and Sammy are citizens of Kanyaland. Rufus earns K\$23 000 annually whereas Sammy earns K\$46 000 annually.

- (i) Using Table 4, identify the marginal tax rate for Rufus. [1]

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- (j) Using Table 4, calculate the average tax rate for Sammy. [2]

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- (k) The Gini coefficient in Kanyaland changed from 0.35 in 2010 to 0.52 in 2020. Outline what this change indicates for the economy. [2]

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3. **Table 5** shows selected items of the balance of payments for Laylaland in 2020. Figures are in millions of US dollars (US\$).

Table 5

Income from (earned) abroad	412
Income sent (paid) abroad	1075
Current transfers sent abroad	1397
Current transfers from abroad	539

- (a) Distinguish between credit and debit items in the balance of payments. [2]

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- (b) State **one** example of a debit item from the financial account of the balance of payments. [1]

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- (c) Using **Table 5**, calculate the value of net current transfers for Laylaland in 2020. [1]

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(Question 3 continued)

Laylaland has a current account deficit of US\$1865 million.

- (d) Using **Table 5**, calculate the net exports of goods and services for Laylaland in 2020. [2]

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- (e) Explain **two** methods that Laylaland's government could use to correct the current account deficit. [4]

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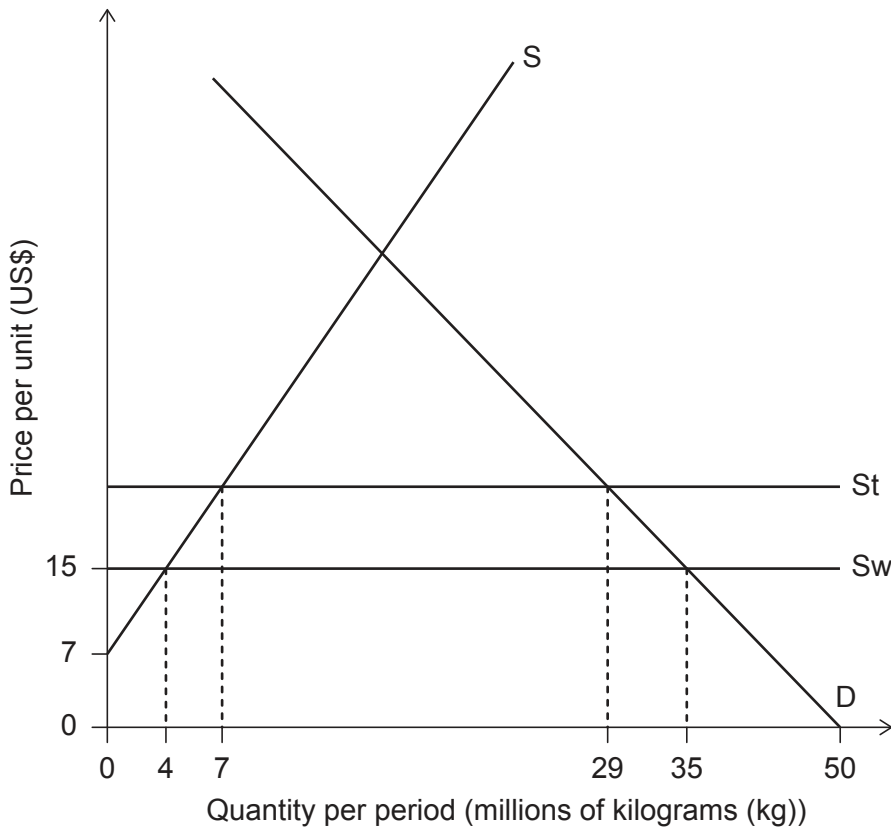


(Question 3 continued)

Chia seeds are an agricultural good produced in many countries and priced in US dollars (US\$).

Figure 1 illustrates the market for chia seeds in a small country called Nofiberland. D is the domestic demand and S is the domestic supply for chia seeds. Chia seeds can be initially imported at the current world price of US\$15.00 per kg. Sw is therefore the world supply faced in Nofiberland with free trade. To protect Nofiberland producers, the government decides to impose a US\$6.00 tariff on chia seed imports. St is therefore the world supply faced in Nofiberland after the tariff is imposed.

Figure 1



- (f) List **two** administrative barriers that Nofiberland could have used to limit imports of chia seeds.

[2]

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20EP16

(Question 3 continued)

(g) Calculate the price elasticity of demand for chia seeds in Nofiberland following the imposition of the tariff. [2]

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(h) Calculate the change in consumer expenditure on imported chia seeds in Nofiberland resulting from the imposition of the tariff. [2]

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(i) Calculate the total welfare loss resulting from the imposition of the tariff on chia seeds. [2]

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(j) Outline **one** reason why the imposition of the tariff would lead to a welfare loss. [2]

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(Question 3 continued)

Quinoa is a great source of protein and is thus considered a “super food”. As a result, the demand for quinoa in advanced economies has lately been rising very fast while global supply has not changed. A small country called Proteinland gets 80% of its export revenues from exporting quinoa to advanced economies.

- (k) Describe the impact of the rise in demand for quinoa on the terms of trade of Proteinland. [1]

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- (l) Explain how the increase in world demand for quinoa would likely affect the current account balance of Proteinland. [4]

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20EP19

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20EP20