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Economics
Higher level
Paper 3

Thursday 7 November 2019 (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. (a) State **two** characteristics of a perfectly competitive market. [2]

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(b) Using a fully labelled diagram, outline the relationship between marginal product (*MP*) and average product (*AP*) of labour. [4]

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20EP02

(Question 1 continued)

The market for corn on the island of Nissos is perfectly competitive. The demand and supply for corn in Nissos are given by the functions

$$Q_d = 10 - 0.5P$$
$$Q_s = -2 + P$$

where Q_d is the quantity of corn demanded per month in millions of kilograms (kg), Q_s is the quantity of corn supplied per month in millions of kg and P is the price per kg of corn in dollars (\$).

- (c) (i) Determine the slope of the market supply function for the corn farmers in Nissos. [1]

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- (ii) Calculate the monthly equilibrium quantity of corn in Nissos. [2]

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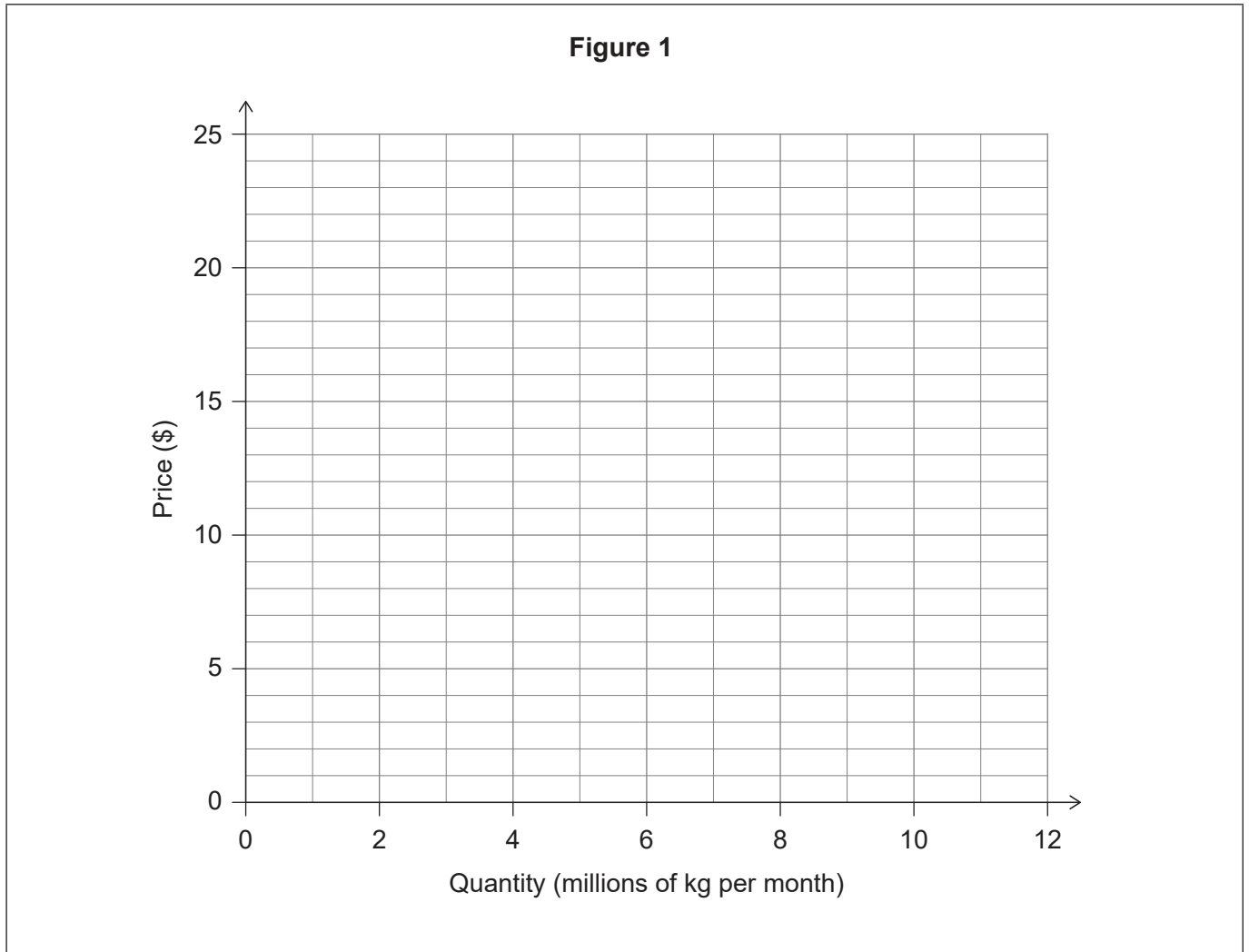
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(Question 1 continued)

- (d) (i) Plot and label on **Figure 1** the market demand curve **and** the market supply curve for corn in Nissos.

[2]



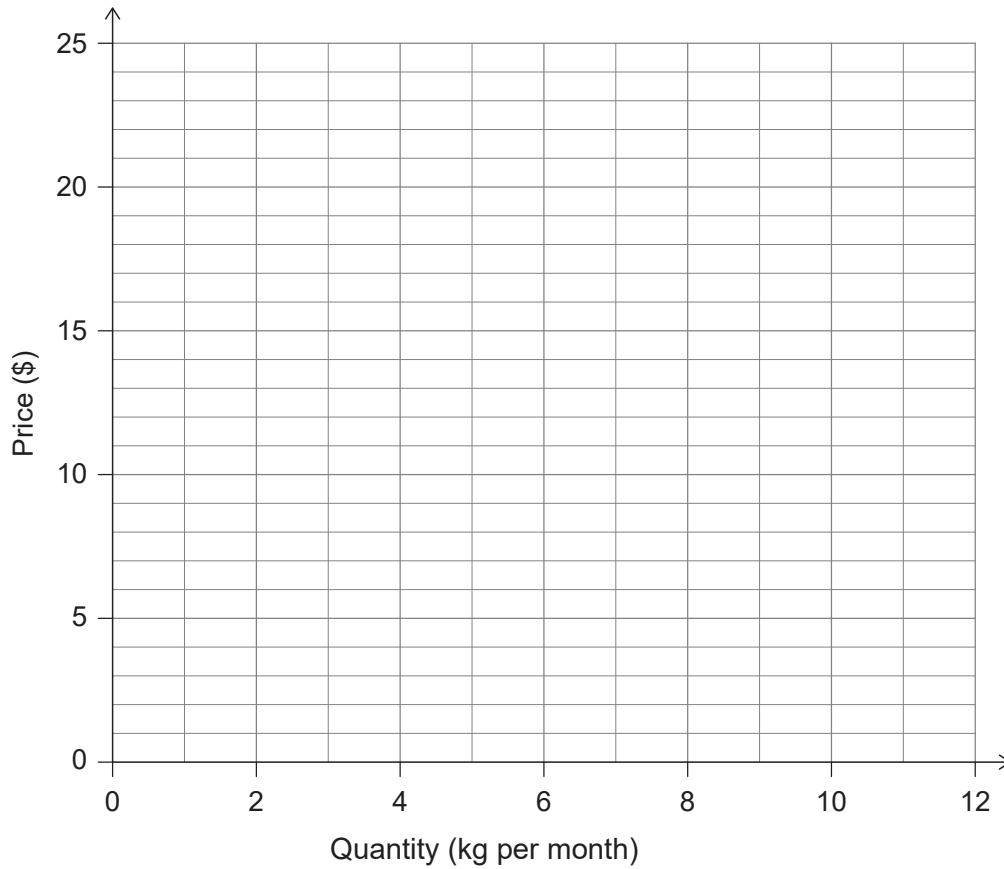
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20EP04

(Question 1 continued)

- (ii) Draw and label the marginal revenue (*MR*) curve for corn for an individual farmer in Nissos on the grid below. [1]



- (iii) Using **Figure 1**, calculate the consumer surplus in Nissos at the market equilibrium. [1]

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(This question continues on the following page)



20EP05

Turn over

(Question 1 continued)

Advisors to the government of Nissos suggest setting a price floor.

- (e) (i) Explain **one** possible advantage **and one** possible disadvantage of governments setting a price floor in agricultural markets. [4]

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- (ii) Draw and label on **Figure 1** a curve that illustrates the price floor in Nissos that leads to a monthly surplus of 3 million kg of corn. [2]

(This question continues on the following page)



(Question 1 continued)

The monthly corn surplus created must be purchased by the government of Nissos.

- (f) (i) State **one** measure that the government of Nissos might take to deal with this corn surplus, following the imposition of the price floor. [1]

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- (ii) Outline why purchasing this surplus implies an opportunity cost for the government of Nissos. [2]

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- (iii) Using **Figure 1**, determine the size of the decrease in monthly corn consumption following the imposition of the price floor. [1]

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- (iv) Using **Figure 1**, calculate the change in consumer expenditure on corn in Nissos. [2]

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2. The information in **Table 1** refers to Country A (base year: 2011).

Table 1

Year	2012	2013	2014	2015
Consumer price index (CPI)	99.08	100.55	102.51	107.52
Inflation rate (%)	-0.92	1.48		
Employed (millions)	12.50	12.60	12.85	13.05
Unemployed (millions)	0.99	0.71	0.68	0.61
Population (millions)	20.75	21.48	21.82	22.02
Unemployment rate (%)			5.03	4.47

(a) (i) Calculate the inflation rate for 2014 **and** for 2015. Enter your results in **Table 1**. [2]

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(ii) Calculate the unemployment rate for 2012 **and** for 2013. Enter your results in **Table 1**. [2]

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(This question continues on the following page)



(Question 2 continued)

The central bank of Country A aims to achieve price stability, defined as “inflation below but close to 2% annually”.

(b) Explain **two** reasons why low and stable inflation is desirable. [4]

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(c) State **two** functions of a country’s central bank. [2]

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(d) Using the data in **Table 1** to support your answer, identify **two** reasons why many economists would consider Country A’s economy to be performing poorly in 2012. [2]

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(This question continues on the following page)



(Question 2 continued)

- (e) State **one** reason why monetary policy is considered to have limited effectiveness in increasing aggregate demand if an economy is in a deep recession.

[1]

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- (f) Explain **two** reasons why fiscal policy may prove effective in lifting an economy out of a deep recession.

[4]

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- (g) Outline the meaning of the natural rate of unemployment, with reference to the long-run Phillips curve and types of unemployment.

[2]

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20EP10

(Question 2 continued)

The information in **Table 2** refers to Country B, an economically less developed economy.

Table 2

Year	2014	2015
Nominal gross national income (GNI) (\$ billion)	291.53	
Factor income sent abroad (\$ billion)	68.30	75.90
Factor income earned abroad (\$ billion)	8.13	9.49
Nominal gross domestic product (GDP) (\$ billion)		358.97
GDP deflator	100	100.88
Real GDP (\$ billion)		

(h) Using the information in **Table 2** for Country B:

(i) calculate nominal GDP in 2014. Enter your result in **Table 2**. [1]

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(ii) calculate nominal GNI in 2015. Enter your result in **Table 2**. [1]

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(i) Using the information in **Table 2** for Country B, determine real GDP in 2014 **and** in 2015. Enter your results in **Table 2**. [1]

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(This question continues on the following page)



(Question 2 continued)

- (j) Using the information in **Table 2** for Country B, calculate the rate of economic growth between 2014 and 2015.

[1]

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The data in **Table 2** suggest that Country B may have attracted significant foreign direct investment (FDI).

- (k) Outline **one** possible disadvantage of foreign direct investment (FDI) for economically less developed countries.

[2]

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3. In the country of Gardia, the currency is the gamma. The exchange rate of the United States dollar (US\$) to the gamma is US\$ 1 = 6.20 gamma.

(a) (i) If a visitor to Gardia from the US buys a towel that costs 23 gamma, calculate the cost in US\$. [1]

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(ii) More foreign tourists are visiting Gardia. Outline the effect on the value of the gamma. You must give a reason for your answer. [2]

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(iii) State **two** factors that could cause Gardia's current account to be in deficit, even though its balance of trade in goods is in surplus. [2]

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(iv) Determine the size of Gardia's current account surplus/deficit when the sum of the financial and capital accounts is US\$ 2 billion. [1]

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(Question 3 continued)

- (b) Gardia is aiming to increase its economic growth rate. Explain **two** sources of economic growth for economically less developed countries.

[4]

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Gardia received a loan of US\$ 4 million from a foreign bank in 2018 when the exchange rate was US\$ 1 = 5.3 gamma. It must pay back US\$ 4.2 million (original amount borrowed plus interest) in 2019 when the exchange rate is US\$ 1 = 6.2 gamma.

- (c) Calculate the additional cost of paying back the loan in gamma in 2019, due to the interest and the change in the exchange rate.

[2]

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(Question 3 continued)

Both the gamma and the US\$ are fully convertible currencies, which float freely in foreign exchange markets. The supply and demand for US\$ (in billions) are given by the functions

$$Q_s = -2 + g$$
$$Q_d = 10 - 2g$$

where g is the exchange rate of the US\$ in terms of the gamma, Q_s is the quantity of US\$ supplied per month and Q_d is the quantity of US\$ demanded per month.

(d) Calculate the equilibrium exchange rate for the US\$ in terms of the gamma. [2]

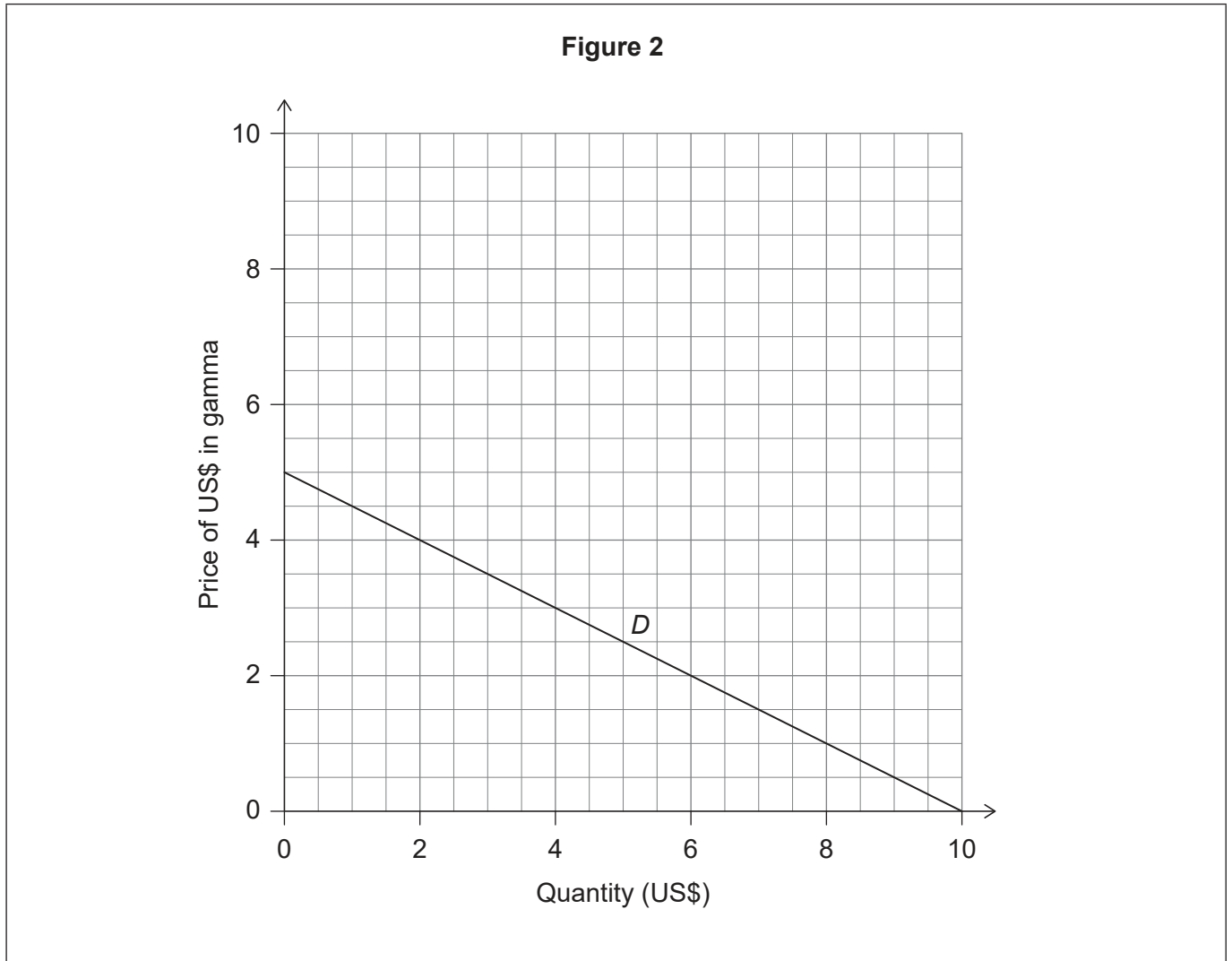
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(Question 3 continued)

The demand (*D*) function is represented in **Figure 2**.



Assume that the monthly supply of US\$ changes to the function

$$Q_s = -0.5 + g$$

(e) Plot and label the new supply curve on **Figure 2**. [2]

(f) (i) Using **Figure 2**, calculate how many US\$ are needed to buy one gamma at the new exchange rate. [1]

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(This question continues on the following page)



20EP16

(Question 3 continued)

- (ii) State **two** reasons that could have caused an increase in the supply of US\$. [2]

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Gardia's investment (in plant and equipment) increased by 11 million gamma in the last month. In the same month, its government spending decreased by 8 million gamma. It has been estimated that the marginal propensity to consume (MPC) on domestic goods and services in Gardia is 0.75.

- (g) Calculate the maximum possible increase in real gross domestic product (GDP) in Gardia that could result from the changes in investment and government spending. [2]

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(Question 3 continued)

- (h) Using a fully labelled monetarist/new classical diagram, explain why, while there may be short-term fluctuations in output, the economy will always return to the full employment level of output in the long run.

[4]

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20EP19

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20EP20