



88135107

**ECONOMICS  
HIGHER LEVEL  
PAPER 3**

Candidate session number

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Tuesday 5 November 2013 (morning)

Examination code

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 in the 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]*.



20EP01

Answer **two** questions. Each question is worth **[25 marks]**. Write your answers in the boxes provided.

- 1. The table below shows data for price elasticity of demand and income elasticity of demand for seven product groups in Argentina in 2008.

	<b>Food and Beverages</b>	<b>Clothing and footwear</b>	<b>Housing</b>	<b>House furnishing</b>	<b>Health care</b>	<b>Transport</b>	<b>Recreation</b>
Price elasticity of demand	-0.49	-0.71	-0.79	-0.77	-0.96	-0.84	-1.03
Income elasticity of demand	0.67	0.96	1.07	1.05	1.31	1.16	1.41
Percentage of income spent by the average household on each product group	22%	5%	18%	6%	9%	16%	9%

[Source: adapted from <http://www.ers.usda.gov/publications>, 23 July 2011. U. S. Department of Agriculture]

There are concerns about rising food prices and their impact on households. Economists have forecast that rising food prices may have a negative effect on the demand for goods in other product groups.

- (a) Outline **one** reason why

- (i) the price elasticity of demand figures are negative;

[2]

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*(Question 1 continued)*

- (ii) the income elasticity of demand figures are positive. [2]

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(b) Using the price elasticity of demand data in the table

- (i) calculate the percentage change in quantity demanded for clothing and footwear if the price of clothing and footwear rises by 6%; [2]

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- (ii) calculate the percentage change in the price of house furnishings that can lead to a 2% fall in quantity demanded of house furnishings; [2]

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20EP03

**Turn over**

*(Question 1 continued)*

- (iii) describe what might happen to the revenues of food and beverages firms as the price of food and beverages increases. [2]

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- (c) The cross price elasticity between housing and house furnishing was estimated to be equal to  $-0.4$ . Using this cross price elasticity data, explain the possible impact that an increase in house prices might have on the demand for house furnishing. [4]

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*(Question 1 continued)*

(d) Using the income elasticity of demand data in the table

- (i) calculate the percentage change in quantity demanded for housing if household incomes rise by 4%; [2]

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- (ii) calculate the percentage change in household incomes that can lead to a 5% rise in quantity demanded of recreation. [2]

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*(Question 1 continued)*

(e) Argentina’s average household disposable income is currently US\$11 132 and household incomes are expected to grow in the future. The average Argentinean household income is forecast to rise by 27% by 2015.

(i) Calculate the amount the average Argentinean household currently spends on health care. [1]

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(ii) Calculate the forecasted average Argentinean household income for 2015. [2]

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*(Question 1 continued)*

- (iii) As a result of the forecasted average Argentinean household income for 2015, calculated in part (ii), explain what you would expect to happen to the proportion of income Argentinean households spend on health care. [4]

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2. A firm making handmade shoes is concerned with its productive efficiency. The management has looked at the production levels using different quantities of labour and the product and cost data are set out in the table below.

Labour input	Total product*	Total cost in USD
1	5	80
2	12	104
3	16	128
4	18	152
5	19	176

- (a) Outline the difference between fixed and variable costs of production.

[2]

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- (b) (i) Using the data in the table below, determine the marginal product for the different quantities of labour employed and complete the marginal product column in the table.

[2]

Labour input	Total product	Marginal product
0	0	–
1	5	
2	12	
3	16	
4	18	
5	19	

\* Total product: the total number of shoes that can be produced in an hour with a fixed amount of capital and with different quantities of labour.

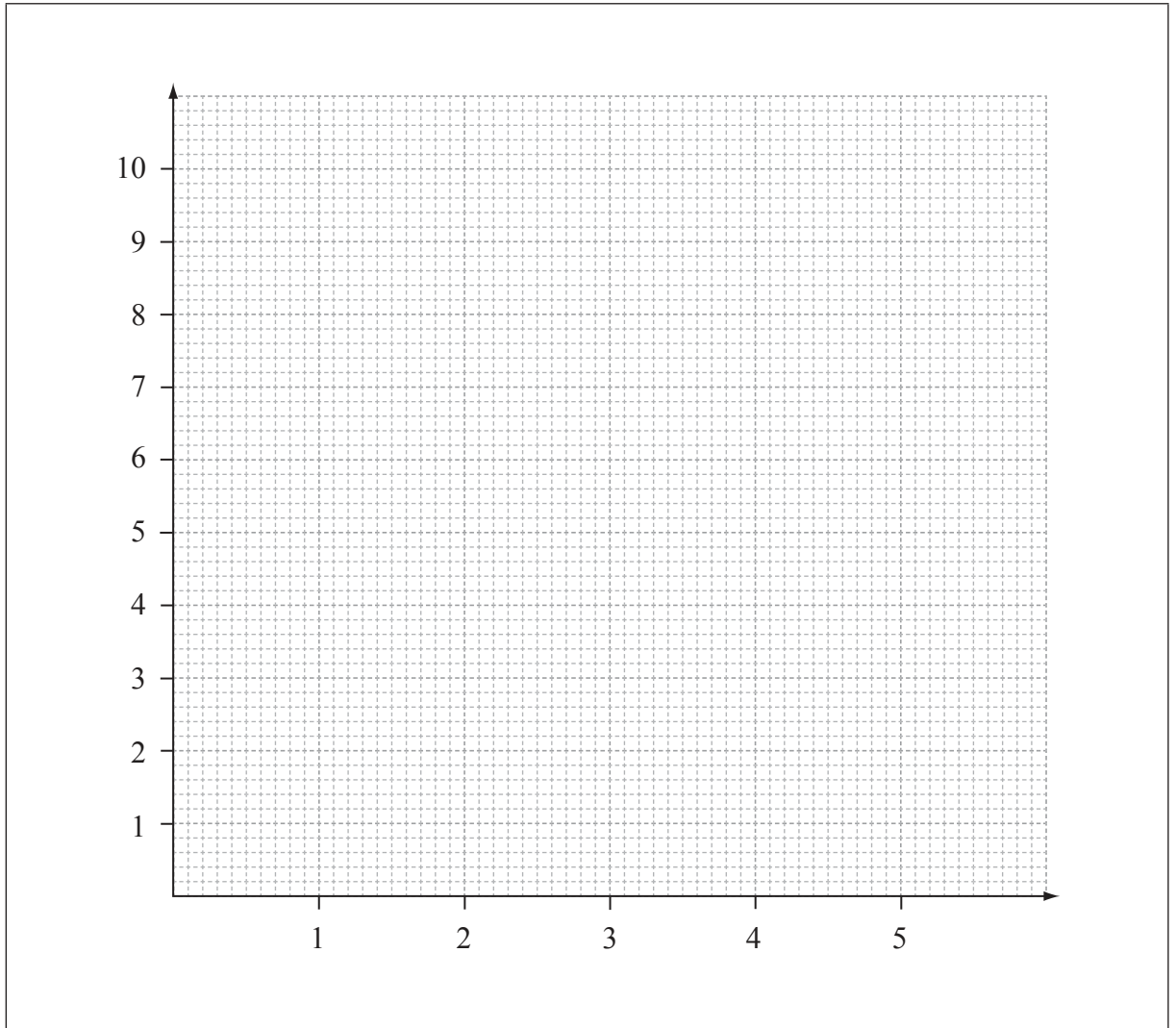
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(Question 2 continued)

- (ii) Using the data in the table in part (b)(i), draw a graph to show the relationship between marginal product and labour input. The axes and curve must be labelled. [2]



- (iii) On the graph above identify the point where diminishing returns set in. [1]

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(Question 2 continued)

- (c) (i) State the equation used to calculate [2]

average total cost; ..... .....  marginal cost. ..... .....
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- (ii) Using the data in the table, determine the marginal cost and average total cost figures for the different quantities of total product and complete the marginal cost and average total cost columns in the table. [4]

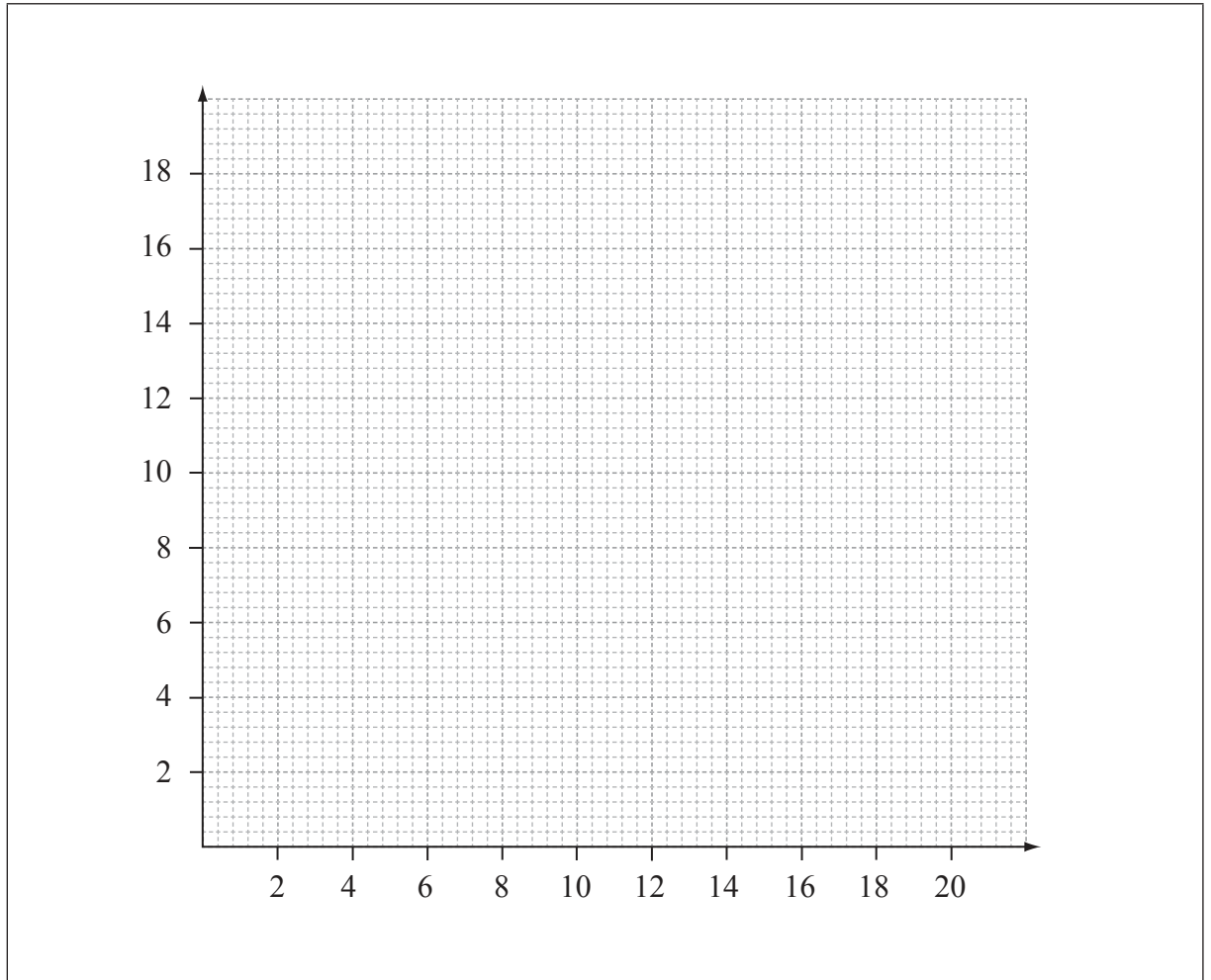
Labour input	Total product (units)	Total cost (in USD)	Marginal cost (in USD)	Average total cost (in USD)
0	0	56	–	–
1	5	80		
2	12	104		
3	16	128		
4	18	152		
5	19	176		

*(This question continues on the following page)*



(Question 2 continued)

- (iii) Using the data in the table in part (c)(ii), draw a graph to show the firm's average total cost curve. The axes and curve must be labelled. [2]



- (iv) Define the term *productive efficiency*. [2]

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20EP11

Turn over

(Question 2 continued)

- (d) Explain how the law of diminishing returns affects this firm's marginal costs. [4]

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- (e) Explain **one** possible source of economies of scale that this firm might benefit from if it increases its scale of production. [4]

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20EP13

Turn over

- 3. Table 1 below sets out data for the South Korean economy for the years 2009 and 2010. These data are used to calculate the South Korean GDP using the expenditure approach. Many economists see the success of South Korea's economy as being due to its strong exports and high level of investment.

**Table 1**

	<b>2009</b>	<b>2010</b>
Exports	412	448
Investment	205	223
Consumption	386	408
Imports	334	356
Government expenditure	89	93

Figures are in billions<sup>1</sup> of US dollars in nominal terms.

The GDP deflator for South Korea in 2009 is 97 and for 2010 it is 100. Average growth rate of OECD<sup>2</sup> economies in 2010 is 2.9%.

Table 2 below shows the marginal propensities to save (MPS), tax (MPT) and import (MPM) for South Korea.

**Table 2**

<b>MPS</b>	<b>MPT</b>	<b>MPM</b>
0.3	0.3	0.2

- (a) Define the term *expenditure approach*.

[2]

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<sup>1</sup> billion: one thousand million (1 000 000 000)

<sup>2</sup> OECD: the Organization for Economic Co-operation and Development (formed in 1961). The members in 2010 were: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

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*(Question 3 continued)*

- (b) (i) Using the data in Table 1, calculate the nominal GDP in 2009 and 2010 for the South Korean economy. [2]

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- (ii) Using the GDP deflator, calculate the real GDP for South Korea for 2009 and 2010. [2]

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- (iii) Calculate the real economic growth rate for the South Korean economy for 2009 to 2010. [2]

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20EP15

**Turn over**

*(Question 3 continued)*

- (iv) Describe the relative growth performance of the South Korean economy in 2010 compared with OECD countries. [2]

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- (c) (i) Using the data in Table 2, calculate the value of the Keynesian multiplier in South Korea. [2]

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- (ii) Using the multiplier calculated in (c)(i), calculate the change in South Korea's real GDP brought about by the rise in its exports from 2009 to 2010. [3]

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*(Question 3 continued)*

- (iii) On the axes below, draw an appropriate AD/AS diagram and use it to explain the impact on South Korean real GDP of the change in South Korean exports from 2009 to 2010. [4]

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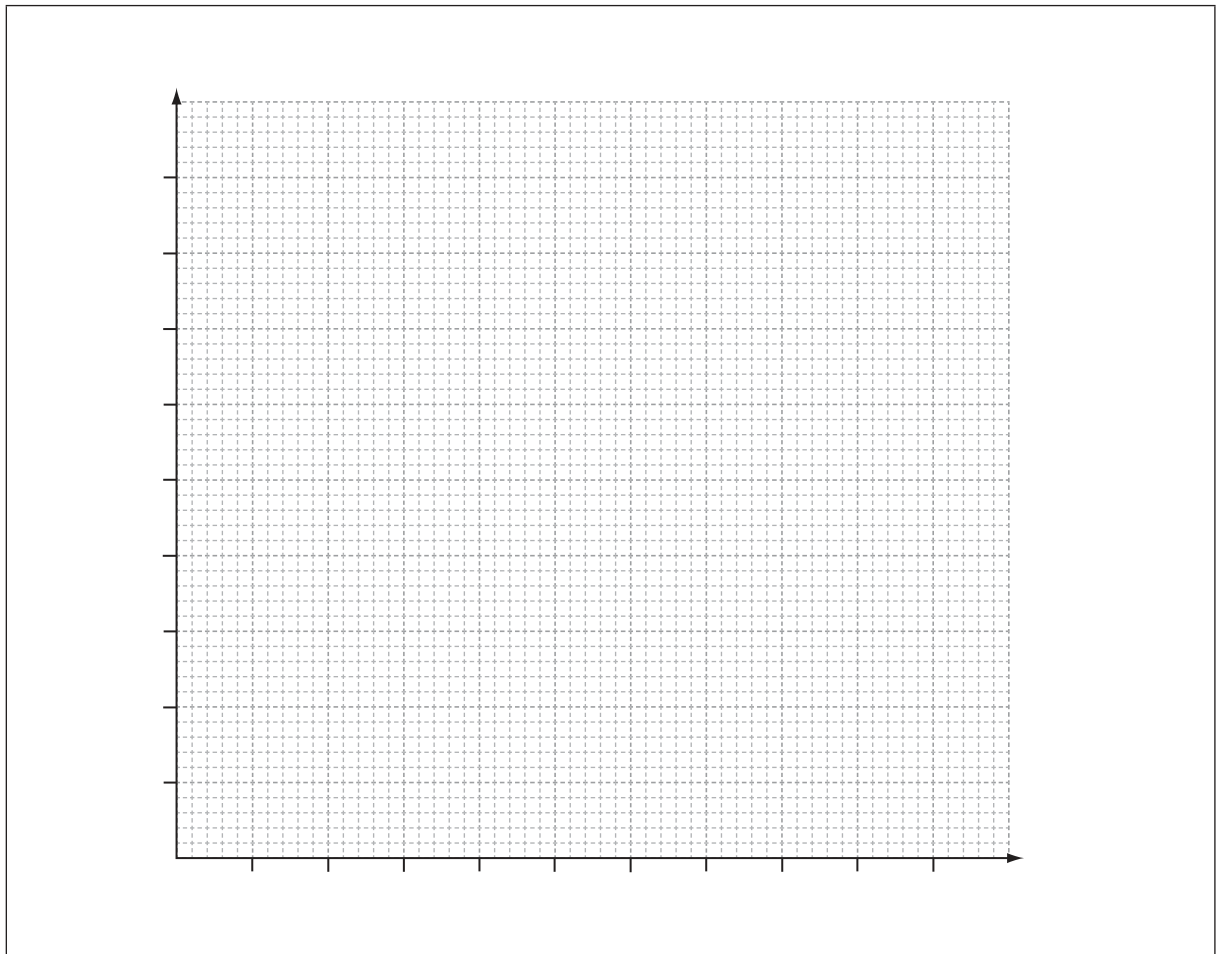
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20EP17

**Turn over**

(Question 3 continued)

- (d) (i) Outline **one** possible reason for the high level of investment in South Korea. [2]

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- (ii) Explain **one** supply-side benefit to the South Korean economy of a high rate of investment. [4]

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20EP19

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20EP20