Diploma Programme
Programme du diplôme
Programa del Diploma

Economics
Higher level
Paper 3

Wednesday 4 November 2015 (morning)

1 hour

Candidate session number

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]**.

14 pages

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

1. The following diagram illustrates the weekly demand for sunglasses in the town of Picton.
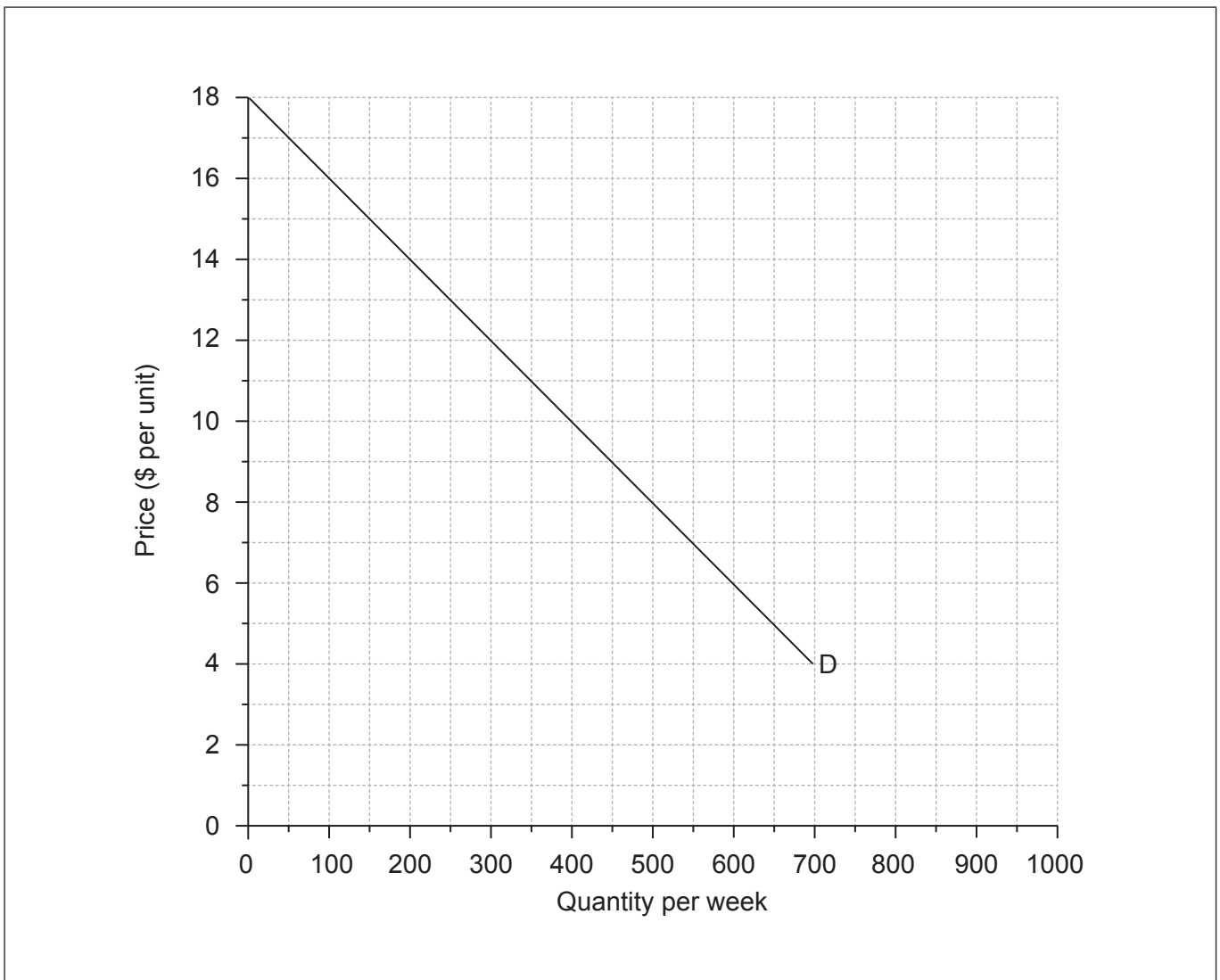
The market supply for sunglasses in Picton is given by the equation

$$Qs = -450 + 100P$$

where Qs is the quantity supplied per week and P is the price per pair of sunglasses in dollars ($).

(a) (i) On the diagram, plot and label the supply curve for sunglasses in Picton. [2]

(This question continues on the following page)

(Question 1 continued)

(ii) Using the diagram, identify the equilibrium price and quantity.   [1]

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(iii) State the price at which 50 pairs of sunglasses will be supplied.   [1]

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(b) The government decides to grant a subsidy of $3 per pair of sunglasses.

(i) On the diagram, plot and label an appropriate curve to show the effect of
the subsidy.   [2]

(ii) Calculate the excess demand or supply at the original equilibrium price.   [2]

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(iii) State the new equilibrium price and quantity.   [1]

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(This question continues on the following page)

(Question 1 continued)

(c)   With reference to the diagram on page 2, analyse how the subsidy results in a new
market equilibrium and therefore a reallocation of resources used for the supply of
sunglasses.   [4]

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(d)   (i)   Define the term *producer surplus*.   [2]

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(ii)   Calculate the level of government expenditure necessary to fund this subsidy.   [2]

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(Question 1 continued)

(iii) Calculate the change in consumer surplus resulting from the subsidy. [2]
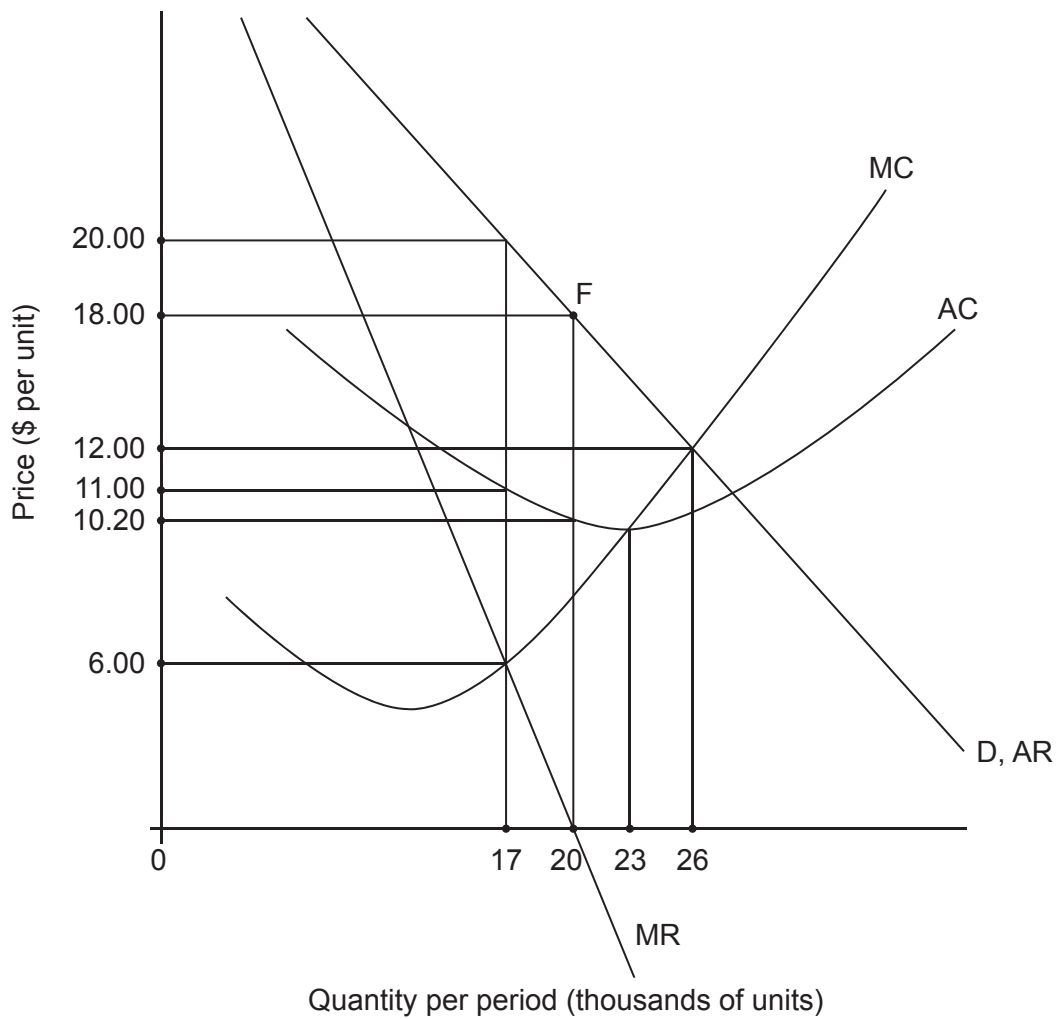
(iv) Calculate the change in producer surplus resulting from the subsidy. [2]

(e) With reference to the diagram on page 2 and your answers to part (d), explain how the subsidy will impact on allocative efficiency in the market for sunglasses in Picton. [4]

Turn over

2.   The following diagram illustrates the demand and cost conditions of a firm.

(a)   Identify whether this firm is in perfect competition. You **must** give a reason for
your choice.   [2]

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(Question 2 continued)

(b)   Identify the profit maximizing level of output for this firm. You **must** give a reason for
       your choice.   [2]

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(c)   Calculate the total revenues **and** the total costs **and** the profits or losses for this firm
       at the profit maximizing level of output.   [3]

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(d)   Identify the level of output this firm would choose if instead of profit it aimed at
       maximizing revenues. You **must** give a reason for your choice.   [2]

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(This question continues on the following page)

(Question 2 continued)

(e)   Explain the meaning of the term "allocative efficiency" and its implication for social (community) surplus.   [4]

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(f)   Referring to the diagram on page 6, identify the level of output that should be produced for allocative efficiency to be achieved. You **must** give a reason for your choice.   [2]

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

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(Question 2 continued)

(h)   Calculate the price elasticity of demand when the price decreases from $18.00 per unit to $12.00 per unit.   [2]

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(i)   With reference to the firm's revenues, comment on the price elasticity of demand at point F of the demand curve in the diagram on page 6.   [2]

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(j)   Explain why a profit maximizing firm with monopoly power will never choose to operate on the inelastic portion of its average revenue curve.   [4]

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3.   In Aceland, the "typical basket of goods" purchased by the average consumer consists of
48 pizzas, 120 litres of chocolate milk and 18 jazz concerts. The following table shows the
prices for these products in 2013 and 2014.

Table 1

	Price per unit in dollars ($)	
	2013	**2014**
Pizza	12.50	12.90
Chocolate milk (litres)	1.15	1.25
Jazz concert	45.00	46.00
Total cost of the typical basket		

(a)   (i)   Calculate the cost of this basket in 2013 **and** 2014. Enter your answers in
Table 1.   [2]

(ii)   Using your results from part (a)(i), calculate a consumer price index (CPI) with
2013 as the base year.   [1]

(This question continues on the following page)

(Question 3 continued)

(iii)   Calculate the rate of inflation in Aceland in 2014. [1]

(b)   Outline the reason why, in addition to a consumer price index (CPI), a producer price index may also be useful to economists. [2]

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(Question 3 continued)

The following table shows data for Boarland (all figures in billions of dollars ($)).

Table 2

Year	2007	2008	2009	2010
Nominal GDP	20.7	21.9	22.6	22.3
GDP deflator	100.0	102.3	107.6	103.7
Real GDP	20.7			21.5

(c)   (i)   Calculate Boarland's real GDP for 2008 **and** 2009 expressed in 2007 prices.
Enter your answers in **Table 2**.   [2]

(ii)   State the reason why a country's gross domestic product (GDP) may be greater
that its gross national income (GNI).   [1]

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(Question 3 continued)

(iii) Calculate the rate of economic growth for Boarland in 2007–2008, 2008–2009
and 2009–2010.   [3]

(iv) Using your answer to part (c)(iii), identify the year Boarland was in recession.   [1]

(v) Using the data in **Table 2** and your answers to part (c), explain how real GDP
could decrease while nominal GDP is increasing.   [4]

(This question continues on the following page)

(Question 3 continued)

The Boarland statistical agency has also collected the following data:

Table 3

	2013
Population	5 394 735
Number of employed	2 803 600
Working age population	3 895 538
Number of unemployed	456 400

(d) (i) Calculate the unemployment rate for Boarland in 2013.   [2]

(ii) Outline **one** difficulty in measuring unemployment.   [2]

(iii) Explain **two** economic consequences of unemployment.   [4]

Please **do not** write on this page.

Answers written on this page
will not be marked.