## AQAE

Please write clearly in block capitals.

Centre number |  |  |  |  |  |
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Candidate number $\square$

Surname
Forename(s)
Candidate signature

## AS

## ECONOMICS

Paper 1 The operation of markets and market failure

Monday 15 May 2017
Morning Time allowed: 1 hour 30 minutes

## Materials

For this paper you must have:

- the insert
- a calculator.


## Instructions

- Use black ink or black ball-point pen. Pencil should only be used for

| For Examiner's Use |  |
| :---: | :---: |
| Question | Mark |
| Section A |  |
| Section B |  |
| TOTAL |  | drawing.

- Fill in the boxes at the top of this page.
- Answer all questions in Section A.
- Answer either Context 1 or Context 2 in Section B.
- You will need to refer to the insert provided to answer


## Section B.

- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.


## Information

- There are 70 marks available on this paper.
- The marks for questions are shown in brackets.
- No deductions will be made for wrong answers.


## Section A

Answer all questions in this section.

Only one answer per question is allowed.
For each answer completely fill in the circle alongside the appropriate answer.
CORRECT METHOD WRONG METHODS

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If you want to change your answer you must cross out your original answer as shown.


If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.


| $\mathbf{0}$ | $\mathbf{1}$ Demerit goods represent a type of market failure because |
| :--- | :--- | :--- |

A their consumption results in positive externalities.


B their production results in negative production externalities.
C they are over-consumed in a free market.

D they are under-consumed when left to free market forces.
[1 mark]

| 0 | 2 |
| :--- | :--- | :--- | Which one of the following sets of characteristics can best be used to distinguish between different market structures?

A The concentration ratio and the income elasticity of demand $\square$

B The ease of entry to the industry and the degree of product differentiation


C The number of buyers in the market and the productivity of firms


D The scale of production in the industry and the presence or absence of externalities


| $\mathbf{0}$ | $\mathbf{3}$ The following diagram shows the production possibility frontier for an economy |
| :--- | :--- | :--- | that produces bread and honey.



If the economy is initially at point W , then the opportunity cost of moving to point X is

A 6 units of honey. $\square$
B 8 units of honey.
C 12 units of bread.

D 23 units of bread. $\square$

| 0 | 4 | Which one of the following gives a positive value for the cross elasticity of |
| :--- | :--- | :--- | demand?

A A fall in air fares increases the demand for holidays


B A fall in the cost of car insurance increases the demand for cars


C A rise in the price of petrol decreases the demand for cars


D A rise in rail fares increases the demand for coach travel $\square$

| $\mathbf{0}$ | $\mathbf{5}$ | The following diagram shows the impact of a government subsidy for recycling |
| :--- | :--- | :--- | waste which shifts the supply curve from $S_{1}$ to $S_{2}$.



Which one of the following areas measures the cost of the government subsidy?
A ABCP ${ }_{1}$

B ABDP2
C FCDE
D $P_{1} C D P_{2}$
[1 mark]

| 0 | 6 | An economist puts forward a hypothesis which is assessed against evidence. As |
| :--- | :--- | :--- | a result of this, the hypothesis is accepted, rejected or modified.

This is an example of
A how normative but not positive economic statements are tested.


B how value judgements influence economic decision making.


C the methodology used to test economic theories. $\square$

D why economics is a social not a natural science. $\square$

| $\mathbf{0}$ | $\mathbf{7}$ | The table below shows the quantities of sandwiches that would be demanded |
| :--- | :--- | :--- | and supplied at different prices.


| Price of sandwich | Quantity demanded <br> per day | Quantity supplied <br> per day |
| :---: | :---: | :---: |
| $£ 2.25$ | 310 | 190 |
| $£ 2.50$ | 280 | 280 |
| $£ 2.75$ | 220 | 300 |
| $£ 3.00$ | 180 | 320 |

Following a rise in production costs, supply falls by 80 sandwiches at all prices. The new equilibrium price would be

A $£ 2.25$
B $£ 2.50$

C $£ 2.75$


D $£ 3.00$


| $\mathbf{0}$ | $\mathbf{8}$ | In economics, the 'long run' refers to the time period when |
| :--- | :--- | :--- |

A all factors of production are fixed.


B all factors of production may change.


C revenue is fixed.


D some factors of production are fixed, others may vary. $\square$

## Turn over for the next question

| $\mathbf{0}$ | $\mathbf{9} \quad$ The growth of car manufacturing around Birmingham led to firms producing |
| :--- | :--- | components for cars. As a result, car manufacturing firms experienced a fall in their average cost of production. This is an example of

A a financial economy of scale. $\square$

B a marketing economy of scale.


C a technical economy of scale. $\square$
D an external economy of scale.

| 1 | 0 |
| :--- | :--- | Claire's sweet stall in Chorley market sells sweets in 100 g bags. She has the following costs of production:


| Stall rental | $£ 25$ per day |
| :--- | :---: |
| Sales assistant's wages | $£ 32$ per day |
| Various varieties of sweets | $£ 0.26$ per 100 g |
| Paper bags | $£ 0.01$ per bag |

Assuming Claire sells 100 bags of sweets per day, what is the average cost of a bag of sweets?

A $£ 0.57$ $\square$

B $£ 0.59$


C $£ 0.83$ $\square$

D $£ 0.84$ $\square$
[1 mark]

| 1 | 1 |
| :--- | :--- | The equilibrium market price of a good increases. The establishment of the new equilibrium at a higher price would most likely result from

A a fall in the price of a substitute.


B a rise in the price of a complementary good. $\square$
C excess demand at the original price. $\square$
D new firms entering the market. $\square$
[1 mark]

| $\mathbf{1}$ | $\mathbf{2}$ The diagram below shows the demand and supply curves for new houses. |
| :--- | :--- |



The initial demand and supply are $D_{1}$ and $S_{1}$. Other things being equal, which one of the following combination of events is most likely to cause demand and supply to shift to $D_{2}$ and $\mathrm{S}_{2}$ ?

A A fall in mortgage interest rates and a relaxation of planning restrictions


B A fall in the price of new homes and a fall in the productivity of construction workers

C A fall in the price of rented accommodation and a fall in the price of raw materials


D A rise in incomes and a rise in wages of construction workers

| 1 | $\mathbf{3}$ A government builds a new road to reduce traffic congestion on existing roads. |
| :--- | :--- | This project would inevitably result in government failure if

A local residents raised environmental objections to the new road.


B the cost of the new road was twice as large as the original estimate.


C the reduction in traffic congestion was smaller than forecast.


D total benefits from the new road were less than the cost of the new road.


| 1 | 4 | A supermarket has estimated values of the income elasticity of demand for some |
| :--- | :--- | :--- | of its products as shown in the table below.


| Product | Income elasticity of demand |
| :--- | :---: |
| Fruit | 0.30 |
| Cheese | 0.20 |
| Milk | 0.10 |
| Eggs | 0.01 |

If incomes increase by $5 \%$, for which of these grocery items will the quantity demanded increase by more than $1 \%$ ?

A Eggs


B Fruit


C Fruit and cheese


D Milk and eggs

| 1 | 5 | In the diagram below, $D_{1}$ and $S_{1}$ are, in the absence of government intervention, |
| :--- | :--- | :--- | the market demand and supply curves for a vaccine. The demand curve $D_{2}$ shows how much of the vaccine would have been demanded if the external benefits could have been captured by the market.



The diagram illustrates that there is a misallocation of resources because in a free market

A the price of the vaccine is too high. $\square$
$B$ there is excess demand equal to $\left(Q_{3}-Q_{1}\right)$. $\square$
C there is under-consumption of the vaccine equal to $\left(Q_{3}-Q_{1}\right)$. $\square$

D there is under-production of the vaccine equal to $\left(Q_{2}-Q_{1}\right)$. $\square$

| 1 | 6 | In an economy, the median total household wealth was $£ 218400$ whilst the |
| :--- | :--- | :--- | median total household income was $£ 32100$. Which one of the following can be concluded from the above statement?

A A household with an income of $£ 32100$ would be expected to have wealth of $£ 218400$


B Exactly $50 \%$ of the population had wealth higher than £32 100


C The average household income was higher than the average household wealth $\square$
D The average household wealth was nearly seven times the average household income

[1 mark]

| 1 | $\mathbf{7} \quad$ The diagram below shows the original market demand $\left(D_{1}\right)$ and supply (S) curves |
| :--- | :--- | for fresh strawberries. A decrease in the demand for fresh strawberries shifts the demand curve from $D_{1}$ to $D_{2}$.



From the above diagram, it can be concluded that when the equilibrium price of fresh strawberries falls from $£ 5$ per kilo to $£ 4$ per kilo, the price elasticity of supply of strawberries is

A -0.8 $\square$

B +0.8


C -1 $\square$

D +1 $\square$

| 1 | 8 |
| :--- | :--- | The supply and demand curves for a good in a free market are $S_{1}$ and $D_{1}$. If the good generates negative externalities in production but positive externalities in consumption, which intersection, A, B, C or D, could represent the socially optimal equilibrium?



A Intersection A


B Intersection B
C Intersection C $\square$
D Intersection D

| 1 | 9 | If firms in an industry increase their spending on advertising, it is likely to |
| :--- | :--- | :--- |

A help firms to differentiate their products. $\square$

B make it easier for new firms to enter the industry. $\square$
C make the demand for the firms' products more elastic.
D reduce the monopoly power of the firms in the industry. $\square$
[1 mark]

| $\mathbf{2}$ | $\mathbf{0}$ The diagram below shows the market demand curve (D) for a product. The |
| :--- | :--- | :--- | market is currently operating as a monopoly with price $P_{1}$ and output $Q_{1}$.



If barriers to entry to the market are removed, the most likely result will be that

A firms will experience diseconomies of scale.


B the benefits from economies of scale will increase. $\square$

C the market price falls and output increases.


D the market price rises and output falls. $\square$
[1 mark]

## QUESTION 20 IS THE LAST QUESTION IN SECTION A

## Section B

Look at the insert and choose to answer EITHER Context 1 OR Context 2.
Answer EITHER Questions 21 to 26 in the spaces below
OR
Questions 27 to 32 on pages 23 to 32 of this answer booklet.
There is a total of 50 marks for either Context.

Shade the circle below to indicate which context you have answered.

$$
\begin{array}{|l|l|l|l|}
\hline \text { Context } & \mathbf{0} & \mathbf{1} & 0 \\
\hline
\end{array} \quad \begin{array}{|l|l|l|l|}
\hline \text { Context } & \mathbf{0} & \mathbf{2} & 0 \\
\hline
\end{array}
$$

WRONG METHODS $\square$ CORRECT METHOD

## EITHER

## Context 1

Total for this Context: 50 marks

## SUPERMARKETS

Use the source booklet provided to study Questions 21 to 26 and Extracts A, B and C, and then answer the questions in the spaces which follow.

| $\mathbf{2}$ | $\mathbf{1}$ | Define 'internal economies of scale' Extract $\mathbf{B}$ (line 15). |
| :--- | :--- | :--- |

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| 2 | 2 |
| :--- | :--- | Use Extract B to calculate the three firm concentration ratio for sales in the supermarket industry in December 2015.

[4 marks]

| 2 | 3 |
| :--- | :--- | Use Extract A to identify two significant points of comparison between the changes in real income and real food prices for low-income households in the UK over the period shown.

## Comparison 1

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Comparison 2
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| 2 | 4 | $U s e$ |
| :--- | :--- | :--- | the supermarket industry of each of the following in December 2015: Asda, Morrisons, Sainsbury's, Tesco and 'the rest'.

[4 marks]


As a guide, each sector of the pie chart above represents $10 \%$ of the total market share. Use of a protractor is not required.

| 2 | $\mathbf{5}$ | Extract B (lines 2-3) refers to 'the monopoly power of well-established firms' in |
| :--- | :--- | :--- | the supermarket industry.

Explain two factors that could influence the monopoly power of firms in the supermarket industry.
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| 2 | 6 | Extract C (lines 16-17) states 'have the changes in the supermarket industry |
| :--- | :--- | :--- | been for the better, and if so, for whom?'

Use the extracts and your knowledge of economics to assess whether the changes in the supermarket industry are likely to be better or worse for consumers and firms.
[25 marks]
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Do not answer Context 2 if you have answered Context 1.
OR
Context 2
Total for this Context: 50 marks
GAMBLING
Use the source booklet provided to study Questions 27 to $\mathbf{3 2}$ and Extracts D, E and F, and then answer the questions in the spaces which follow.

| $\mathbf{2}$ | $\mathbf{7} \quad$ Define 'external costs' Extract F (line 18). |
| :--- | :--- | :--- |

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| 2 | 8 | Use Extract E to calculate, to one decimal place, the percentage change in the |
| :--- | :--- | :--- | number of workers in the gambling sector between 2011 and 2015.

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| 2 | 9 | Use Extract $\mathbf{D}$ to identify two significant points of comparison between the |
| :--- | :--- | :--- | changes in income for bingo and the National Lottery in Great Britain over the period shown.

Comparison 1
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Comparison 2
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3 0 Use the data in Extract $\mathbf{D}$ to draw a bar chart to show income from casinos for the years 2008-09, 2011-12 and 2014-15.
[4 marks]


Turn over for the next question

| 3 | $\mathbf{1}$ | Extract $\mathbf{E}$ (lines 1-2) states 'in 2007, before the recession, $68 \%$ of adults |
| :--- | :--- | :--- | gambled, but by 2010, this had risen to $73 \%$.'

Explain two factors that could have increased the percentage of adults who gamble.
[10 marks]
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| 3 | 2 | Extract $\mathbf{F}$ (lines 17-18) states 'should there be more regulations or taxes to try to |
| :--- | :--- | :--- | reduce the effects of gambling, in terms of both its private and external costs?'

Use the extracts and your knowledge of economics to assess whether the UK government should intervene more in the gambling industry.
[25 marks]
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END OF QUESTIONS

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