

2ND EDITION

AQA AS

Economics

Ray Powell

Questions and answers

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Introduction

This online resource contains eight AQA exam-style data-response questions, which reflect the format and possible topic areas covered by questions in the exam. The first four of the eight questions assess your knowledge and understanding of topics in Unit 1 (Markets and market failure). The last four questions do the same for topics in Unit 2 (The national economy).

Each question is followed by examiner comments, and then by two candidates' answers to the question. One answer is of grade A quality and the other is of a quality lying between grade B and grade U. Examiner comments, indicated by **e**, follow each section of each answer. The answers that achieve a grade A are not necessarily perfect. Some answers are deliberately over-long; others sometimes drift away from the question and include irrelevant material. This allows the commentary to point out how to maintain focus and make best use of your time under examination conditions.

Examiners are instructed to mark positively rather than negatively. This means you are awarded marks for answering the question, but don't lose marks if you drift into irrelevance or, for example, follow a 'good point' with a wrong definition. Nevertheless, it is always best to stick to the question. Irrelevance means that valuable exam time is wasted, and in parts [04] and [08] answers to data-response questions, mistakes and drift probably mean that you won't reach the higher 'skills levels' set out in the mark schemes.

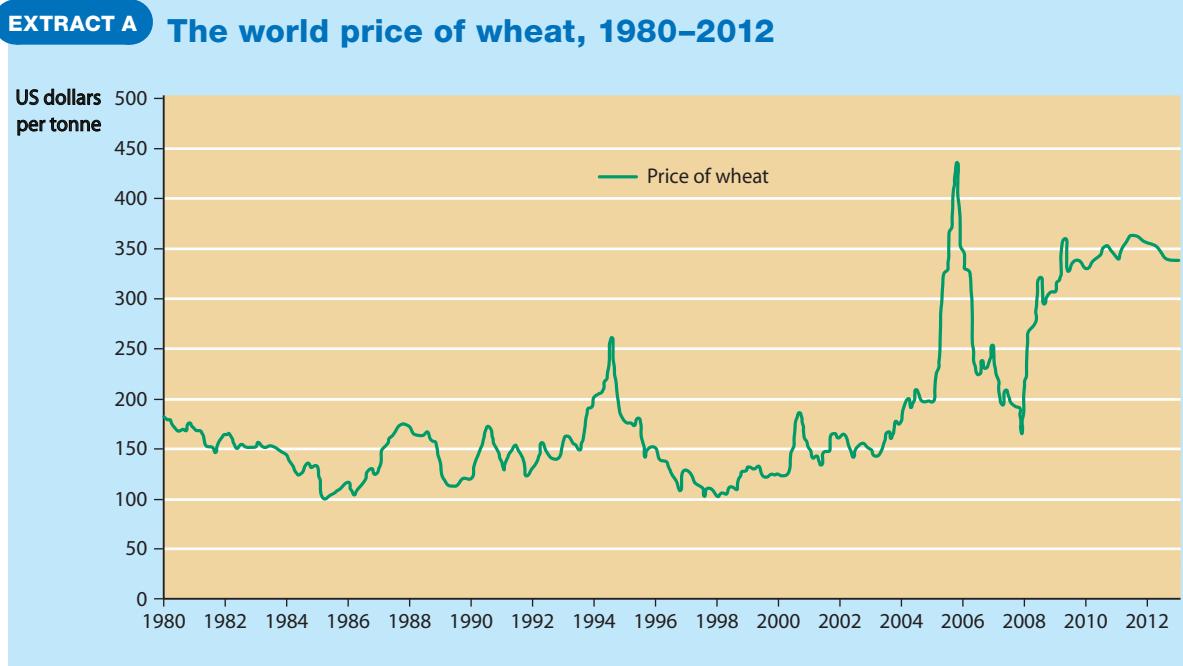
To find out more about examination skills, and particularly how to evaluate, you can read the *AQA AS Economics Unit 1 and Unit 2 Student Unit Guides* (for details, visit www.hoddereducation.co.uk). As well as providing advice on examination skills and how best to revise, the *Student Unit Guides* include a further range of data-response questions, similar to those presented here, but covering different topics. A 'model' student's answer and examiner comments follow each data-response question. The *Student Unit Guides* also include a selection of Objective Test Questions, written in the style of AQA questions, each with an accompanying question commentary.

Ray Powell

Markets and market failure

Question 1 The price of wheat

Study Extracts A, B and C, and then answer all parts of the question which follows.



EXTRACT B **The rising price of wheat**

For decades, wheat was a commodity no one needed to think much about, except the farmers who grew it. The grain was usually plentiful and prices were low. Recently, those assumptions have been turned upside down. With worldwide demand soaring and droughts crippling supply, the world's wheat stockpiles fell to their lowest level in 35 years.

5

Few farmers have enough wheat available to take advantage of the price increases. In 2008, for example, most producers sold the last of the wheat they grew in 2007 in the autumn of that year. At the time, for a farmer, the high price of wheat seemed to be too good to be true. However, speculative demand and foreign buying of US wheat was driving the market. The buyers included China, South Korea, Taiwan, Mexico, Nigeria

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and Venezuela. At the time, global economic growth gave people the means to improve their diets, and they are now developing a taste for products made from wheat.

Among the consequences of the rising wheat price are stretched wallets at home and abroad as food processors such as bakeries pass on higher costs. 'When the price of your raw material quadruples, you can't afford not to raise your prices, otherwise you're out of business,' said the president of the Dakota Growers Pasta Company in the USA. 15

The Food and Agriculture Organisation of the United Nations has reported that high international grain prices are causing food shortages, hoarding and even riots in some places. However, the US Department of Agriculture argues that the incentive function of prices is encouraging more fields to be planted with wheat. 20

Source: news reports, 2013

EXTRACT C The production of biofuels is pushing up farm prices

Biofuels, made from grains, sugar and oilseeds, are gaining popularity as countries look to reduce their dependence on fossil fuels and cut carbon emissions.

To diversify fuel supplies and cut greenhouse gas emissions, the European Commission has ordered EU member states to ensure that by 2020, 10% of the petroleum that our cars burn must be replaced with biofuels. The campaigning journalist, George Monbiot, 5 has argued that this will lead to an even bigger problem than world oil production peaking. He believes that if biofuels can't be produced in virgin habitats such as tropical rainforests, they must be confined to existing agricultural land. This means that every time we fill up our cars, we snatch food from people's mouths. This, in turn, raises the price of food, which encourages farmers to destroy pristine habitats, primary forests, 10 ancient grasslands and wetlands in order to grow more food.

There is no way out of this: on a finite planet with tight food supplies, to grow biofuel you either compete with the hungry or clear new land. Apart from used chip fat, there is no such thing as a sustainable biofuel.

The rapidly growing biofuel market will keep farm prices permanently high. A report 15 published by the Organisation for Economic Development (OECD) stated that biofuels will have a major impact on farming. In 2007, the OECD predicted that prices would rise by between 20% and 50% by 2016.

Source: news reports, 2013

- [01] Define the term 'incentive function of prices' (Extract B, lines 19–20). (5 marks)
 - [02] Using Extract A, identify two significant features of the changes in the price of wheat over the years from 1980 to 2012. (8 marks)
 - [03] With the help of an appropriate diagram and the information in Extract B, explain two causes of recent changes in the world price of wheat. (12 marks)
 - [04] Using the information in the data and your economic knowledge, evaluate the view that the best way to solve the world's energy crisis is to increase the amount of land devoted to the growing of biofuel crops. (25 marks)
- (Total: 50 marks)

Commentary

There are two data-response questions in the Unit 1 exam: often, one focuses on a well-defined market and the other relates more to market failure.

This question on the price of wheat is primarily about the market for an agricultural good. However, part [04] — the most important part of the question, which is worth 25 marks and tests the skill of evaluation — moves into a second market, the market for energy.

It might be possible to argue that some sort of market failure is occurring in the wheat market and/or the world's energy market, but be careful. Examination candidates are prone to assert that market failure is taking place, even when it isn't. Drawing on the key concept in part [01] — the incentive function of prices — you must remember that in a market economy (or the market sector of a mixed economy) changing relative prices for different goods creates incentives for producers to change the allocation of scarce resources between competing uses, and likewise for consumers to buy more goods which become cheaper, and fewer goods which become relatively more expensive. Rising prices (in this case of wheat) are not in themselves a market failure; they are a response to changing supply and demand conditions. Similarly, the fact that farmers are planting more wheat but then selling the crop for biofuel is not in itself a market failure, though arguably it could lead to undesirable consequences. These include greater poverty caused by 'agri-inflation' or rising food prices, soil erosion resulting from wheat monoculture, and faster global warming.

GRADE A ANSWER

[01] The incentive function of prices is the second of the three functions prices perform in markets, the other two being the signalling and the rationing/allocative functions. Changing relative prices of goods creates incentives for economic agents (e.g. farmers and shoppers) to alter the quantities they wish to sell or buy of a good. In this question, the rising price of wheat incentivises farmers to grow more wheat (because it will be more profitable), while creating a matching incentive for shoppers to economise with regard to the amount of wheat they are prepared to buy. Changing incentives in the market place thus induce a different allocation of scarce resources between competing uses.

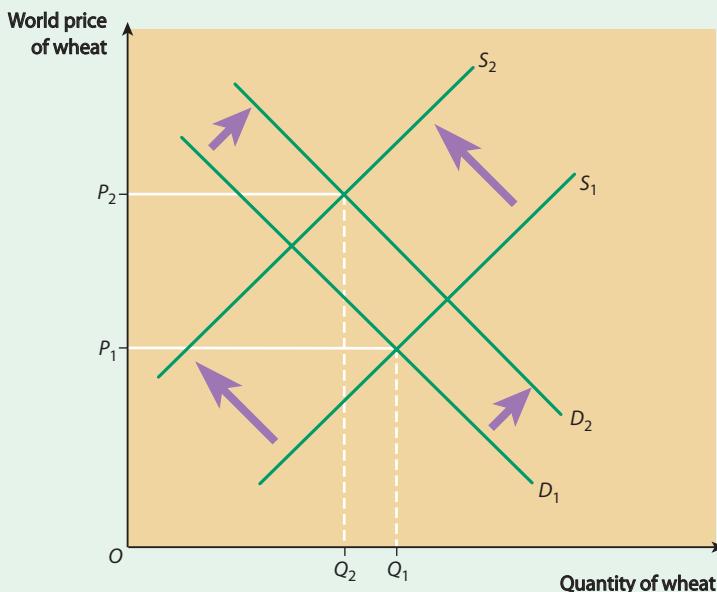
e 5/5 marks awarded. To earn all 5 marks available for part [01] of a data-response question on the Unit 1 and Unit 2 exam papers, all you have to do is provide 'an acceptable' definition. This answer provides an acceptable definition so earns 5 marks. However, compared to the next candidate's answer, this answer is rather over-long. It is usually possible to earn all 5 marks with a single-sentence answer, or possibly an answer restricted to just two sentences. Too much time spent on the answer to [01] eats into the time available to answer the more demanding parts of the question.

[02] The world price of wheat increased over the period, from about \$150 a tonne at the beginning of 1980 to about \$340 midway through 2012.

The highest price of wheat was in late 2005 or possibly early 2006 at about \$440 a tonne. By contrast the lowest price occurred twice during the whole period, at just over \$100 a tonne, in 1985 and late in 1997/early 1998.

e 8/8 marks awarded. The mark scheme for a part [02] question instructs examiners to 'award up to 4 marks for each valid point made (up to 2 marks for identification and up to 2 marks for supporting reference(s) to the data)'. The mark scheme then provides four or five examples, in this case, of a significant feature of the data. This answer identifies two significant features of the data and backs both with accurate reference to the statistics, so easily earns 8 marks.

[03] Extract B mentions two causes of the rapid rise in the price of wheat illustrated in Extract A: worldwide demand soaring and droughts crippling supply. The first of these leads to the rightward shift of the worldwide demand curve for wheat in the diagram below. The second is represented by the leftward shift of the worldwide supply curve. Just one of these would cause the price of wheat to rise, ceteris paribus. The two in combination reinforce each other and the price of wheat rises from P_1 to P_2 .



However, to answer the question properly, it is necessary to explain each factor further. Extract B mentions speculative demand for wheat. As with other commodities such as copper, speculators buy wheat, not because they need it or can do anything useful with it, but because they expect the price to rise further, thereby enabling them to make a capital gain. Indeed,

speculation is often self-fulfilling in this respect. When speculators enter the market in large numbers they bid the price up and produce the outcome they desire. The supply factor is self-explanatory. Drought in the world's 'grain bowls' such as the American prairies, perhaps caused by climate change, itself resulting from carbon emissions and global warming, leads to smaller wheat harvests. This causes the supply curve of wheat to shift leftward.

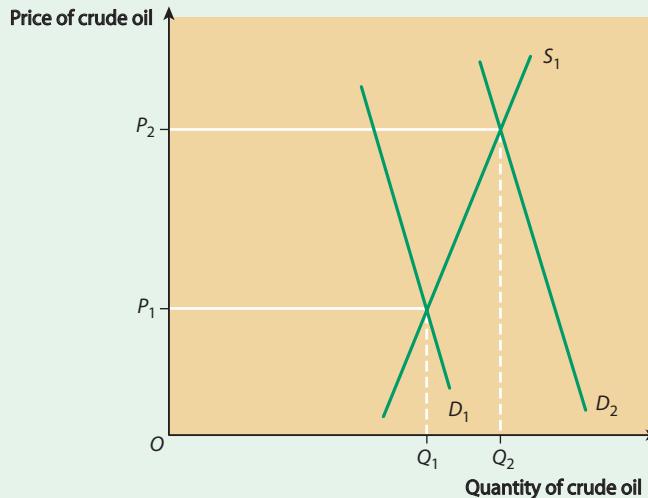
e 12/12 marks awarded. Part [03] of a Unit 1 data-response question on a market often includes the instruction: 'with the help of an appropriate diagram, explain...'. With this type of question, it is important to include an accurate and relevant diagram. The following instructions to examiners are likely to appear in the mark scheme: up to a maximum of 4 marks (out of the 12 possible marks) for the diagram, and up to 10 marks for the written explanation. It is therefore possible to earn 10 out of the 12 available marks without drawing a diagram, even though the question asks for a diagram to be drawn. For a question on a market (as distinct from a market failure), an 'appropriate' diagram is usually a supply and demand diagram, though occasionally other diagrams, such as a production possibility frontier diagram, might be regarded as appropriate. For a question on a market failure, a marginal cost and benefit diagram could well be 'appropriate'.

For this answer, the first paragraph earns 3 marks. The paragraph identifies, but does not really explain, the causes of the rightward shift of the demand curve and the leftward shift of the supply curve. However, the second paragraph of the answer provides the required explanation, so the written answer earns 10 marks. The diagram has already picked up 4 marks, so the full 12 marks are earned.

[04] Extract C quotes the journalist George Monbiot making a brief reference to world oil production peaking. Until quite recently, rising oil prices had been caused primarily by major oil producers, namely the member countries of the Organisation of Petroleum Exporting Countries (OPEC), artificially restricting supply. Without such market intervention, supply would probably have kept up with the growth of world demand, without the oil price rising significantly.

But things have now changed. The world's energy crisis referred to in the Extract and in the question results from an increasing inability of the supply of crude oil to keep up with demand. Arguably, the world's best oil fields have already been discovered and exploited. In future years, more marginal and less productive oil fields are likely to be brought into production. These will be high-cost fields from which oil is more difficult to extract and with fewer total reserves. Oil supplies will not be able to keep up with demand, particularly as the economic growth of emerging countries like China shifts the world's demand curve for oil permanently rightwards. In the diagram below, I have assumed that the supply curve for oil is in a fixed position, but that the demand curve for oil has shifted

rightward for the reason just explained. If the analysis and explanation are correct, the price of oil is likely to remain permanently high.



So far I have analysed how the energy crisis has come about and inferred that it cannot be solved by increasing production of crude oil, at least in the long run. This is where biofuels come in. All vegetable life contains chemicals that can be turned into ethanol, a form of alcohol that can be used as a substitute for petrol.

When biofuels were first developed, particularly in Brazil where ethanol was produced from sugar cane, they were thought by some to represent a ‘win-win’ situation. Biofuel could take the place of crude oil and solve the world’s energy crisis, and poor farmers, especially those in developing countries, would receive higher incomes as a result of the increased demand for biofuels.

However, as George Monbiot argues, devoting more and more land to the production of biofuel has a number of significant drawbacks, which might in the long run have more disadvantages than advantages.

On the one hand, increased production of crops for conversion into biofuel means that land is taken away from food production. This provides one of the explanations for the rising price of food described in Extract B. And with the world’s population currently rising rapidly, the resulting increase in food prices may prove disastrous for the great mass of the world’s population living near or on the breadline, who were struggling to survive even before the rise in food prices.

On the other hand, activities such as cutting down tropical rainforest in countries such as Indonesia and planting the cleared land with palm oil trees in order to produce biofuel can, as the question implies, mean that growing crops for biofuel is not the best way to solve the world’s energy crisis. Not only will it create new and potentially devastating

environmental problems, in terms of soil erosion and destroying carbon ‘sinks’, it may also actually accelerate the release of carbon into the atmosphere as evidence shows that biofuels are not carbon neutral.

My argument, therefore, is that although switching in whole or in part to biofuels will alleviate the energy crisis, this will be at the expense of creating new environmental problems which can be categorised as market failures. What the question ignores is the possibility that the best way to reduce the energy crisis is to reduce the demand for both fossil fuels and biofuels through a combination of changing to a less energy-intensive lifestyle and switching to alternative energy sources such as wind and wave power and solar energy. However, even this solution is easier said than done. We will probably have to live the rest of our lives through a failure to achieve any sustainable and environmentally viable solution to the growing energy crisis.

22/25 marks awarded. This is a difficult question. The answer contains one or two unsubstantiated assertions, and the candidate makes no mention of recent developments in fossil fuel supply, such as the extraction of natural gas from shale rocks. Nevertheless, the answer does enough to reach Level 5 in the mark scheme (22–25 marks, out of a total of 25 possible marks). To reach Level 5, an answer must display most, but not all, of the characteristics outlined below:

Levels of response	Assessment Objective 1 KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology	Assessment Objective 2 APPLICATION of theories, concepts and terminology	Assessment Objective 3 ANALYSIS of economic problems and issues	Assessment Objective 4 EVALUATION of economic arguments and evidence, making informed judgements
Level 5 22–25 marks (mid-point 24) Good analysis and evaluation	Good throughout the answer with few errors and weaknesses	Good application to issues Good use of data to support answer	Relevant and precise with a clear and logical chain of reasoning	Good with a clear final judgement

This answer has successfully applied these concepts and models to answer the question. Clear understanding of alternative points of view is shown. Good use is made of evidence and/or theoretical analysis to evaluate the issues/arguments/economic models identified and to support conclusions. A clear final judgement is made. Spelling is accurate and the standard conventions of punctuation and grammar are usually followed. The answer is well organised. Descriptions and explanations are clearly expressed. Appropriate use is made of relevant economic terminology.

Scored 47/50 marks

94% = very high grade A

GRADE E ANSWER

[01] In a market economy, prices allocate scarce resources between competing uses. Demand and supply curves shift in response to changing conditions of demand and supply, causing prices to rise or fall. In response to the resulting changes in relative prices, producers and consumers alter the quantities of goods they want to sell or purchase.

e 1/5 marks awarded. The candidate has written about the last of the three functions of prices, the rationing or allocative function. There is nothing explicit in the answer about the incentive function of prices, although, to be generous to the candidate, there is a glimmer of recognition of this function. The answer does not contain an accurate definition, and only 1 mark is earned. The mark has been awarded for a definition of one of the other functions that prices perform in a market economy.

[02] Over the whole period shown by the data, the price of wheat peaked early in 2006 at about \$440 a tonne.

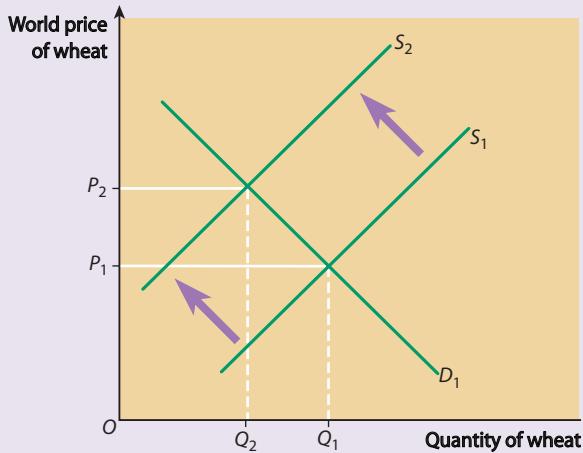
Throughout the whole data period, the wheat price was highly volatile.

e 6/8 marks awarded. When a part [02] or [06] question asks candidates to identify two significant features of the data, the general instructions to examiners, which are included in Unit 1 and Unit 2 mark schemes, are:

Identifies a significant feature. Makes accurate use of the data to support the feature identified. Unit of measurement given accurately.	4 marks
Identifies a significant feature. Makes accurate use of the data to support the feature identified. However, only one piece of data is given when two are needed and/or no unit of comparison is given and/or wrong date is given. Note: Candidates who fail to say that the data is a % of national output can only get a maximum of 3 marks.	3 marks
Identifies a significant feature. No use of correct data to support the feature identified.	2 marks
A significant feature of part of the data is identified but this does not provide an overview of the whole data series. Makes use of the data to support the feature identified. Unit of measurement given accurately.	1 mark

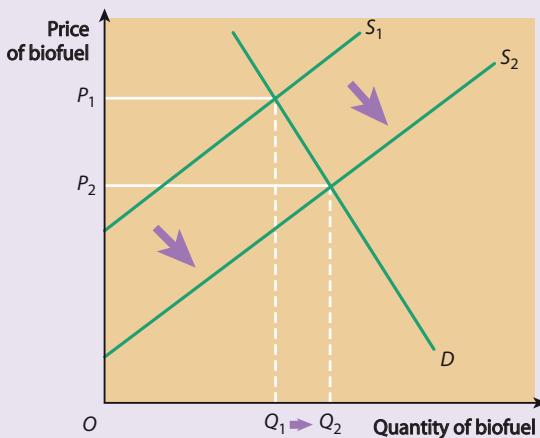
For this answer, the first feature identified earns all 4 of the available marks (identifies a significant feature; makes accurate use of the data to support the feature identified; unit of measurement given accurately). However, only 2 marks are earned by the second identified feature. The candidate makes no use of correct data to support the feature identified: namely, volatile prices over the whole data period.

- [03]** Extract B mentions droughts crippling supply and the hoarding of wheat. Both of these would cause the supply curve of wheat to shift to the left, as my diagram (below) illustrates. The supply curve shifts from S_1 to S_2 , thereby raising the equilibrium wheat price from P_1 to P_2 .



e 4/12 marks awarded. The diagram is accurate and relevant to the question, so earns all 4 marks available for a diagram. However, no marks have been awarded for the written part of the answer, which does no more than describe what the diagram shows. The question requires an explanation of how the two factors identified (droughts and hoarding) cause the supply curve to shift to the left from S_1 to S_2 .

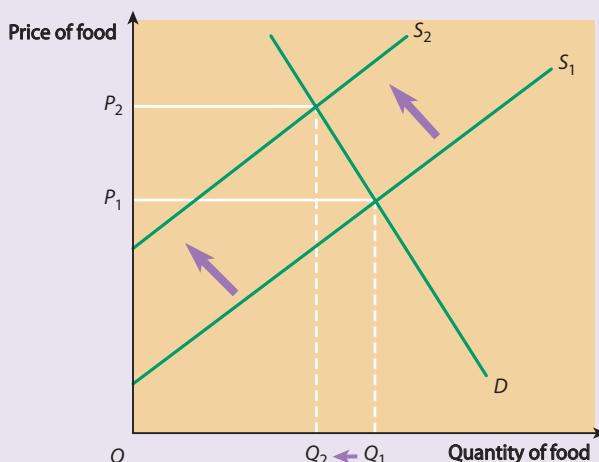
- [04]** Increasing the amount of land devoted to biofuel crops will undoubtedly increase the supply of biofuels, which are substitutes for fossil fuels, particularly crude oil. Obviously the more land devoted to biofuel production, the greater will be the supply of biofuels. The diagram below shows biofuel production increasing from Q_1 to Q_2 , following a shift to the right in the supply curve of biofuel.



Some economists argue that whereas crude oil is a finite resource that suffers from resource depletion, biofuels are different. Land can be continuously planted with biofuel crops such as sugar cane so the problem of resource depletion does not arise.

Other economists and environmentalists dispute this view. The crops which are converted into biofuel take a lot of goodness out of the soil. Soil fertility declines. To restore the fertility of the soil so as to maintain biofuel production levels, ever-larger doses of chemical fertilizer have to be added to the soil. Oil products are used to make chemical fertilizers. Because of this, biofuel production still leads to resource depletion, and the production of fertilizers incidentally leads to the production and discharge of negative externalities in the atmosphere and the soil.

Finally, as the Extracts indicate, the opportunity cost of producing more biofuels is the removal of land from the production of food. As the diagram below shows, a leftward move in the supply curve of foods leads to food prices rising from P_1 to P_2 . This will reduce people's standards of living and fall most harshly on lower-income groups, increasing poverty.



e 7/25 marks awarded. This is a Level 2 answer. The Level 2 range of marks extends from a low of 4 marks to a high of 9 marks. The final part [04] or [08] of a Unit 1 or Unit 2 data-response question is marked by using a chart showing the mark band descriptors for each of five skill levels. The descriptor chart for all five skill levels can be found near the beginning of the mark schemes for all past examinations. It is well worth accessing and downloading complete mark schemes for past exams. You can find these on the AQA web page: www.aqa.org.uk/subjects/business-studies/a-level/economics-2140/past-papers-and-mark-schemes.

AQA requires Economics examiners to read through the whole of a [04] or [08] answer and then decide which skill level the answer should be placed in. (The Level 5 skill descriptors are reproduced on page 10 of these notes.) Here are the Level 2 skill descriptors:

Levels of response	Assessment Objective 1 KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology	Assessment Objective 2 APPLICATION of theories, concepts and terminology	Assessment Objective 3 ANALYSIS of economic problems and issues	Assessment Objective 4 EVALUATION of economic arguments and evidence, making informed judgements
Level 2 4–9 marks (mid-point 7) Weak with some understanding	Limited and some errors are made	Partial application to issues with some errors Limited use of data to support answer	Partial but confused at times, lacking focus and development Limited logic and coherence	A very basic and simplistic attempt is made which is unsupported by analysis

Having selected the appropriate skill level, the examiner initially places the script at mid-point in the level — in this case, 7 marks. The examiner should then re-read the answer, first to confirm the skill level and second to decide whether there is a case for placing the answer closer to the top or bottom of the skill level.

For this answer, I have resisted the temptation to change the mark from the mid-point 7 marks initially chosen. To get into Level 2, an answer must show some relevant economic knowledge. This is evident in the answer, but unfortunately the answer does not really address the set question. The candidate does not: ‘EVALUATE the view that the best way to solve the world’s energy crisis is to increase the amount of land devoted to the growing of biofuel crops.’ The answer does contain some economic analysis and some limited evaluation, but not of the issue posed by the question.

Hence the decision to place the answer in Level 2, but at no higher than the mid-point. If the other parts of an answer are of reasonable quality, a mid-to-high Level 2 answer to the final part of a data-response question might result in a C grade being awarded, or even possibly a low B grade – if the other answers are really excellent. However, for this candidate the answers to the other parts of the question are so weak that overall the script earns only a basic E grade.

Scored 18/50 marks

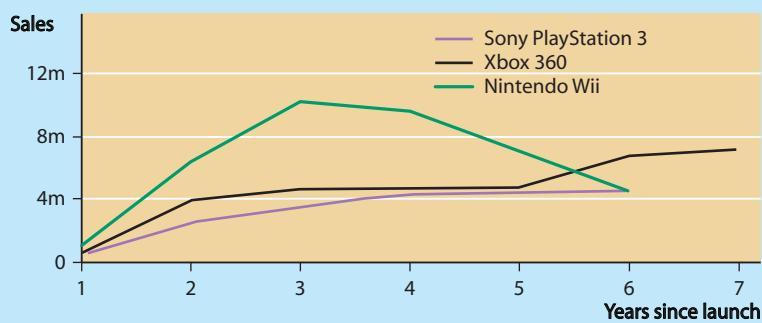
36% = grade E

Question 2 Toy markets

Study Extracts A, B and C, and then answer all parts of the question which follows.

EXTRACT A

US sales of games consoles in each year since product launch



EXTRACT B

Changes in the toy market

Significant changes have been taking place in the toy market. Until quite recently, toys could be regarded as consumer goods bought solely for children. Now, adults buy toys for themselves and children have been losing interest in traditional toys such as action figures, moving instead to electronic and video games. In 2003, for example, boys aged 9–12 who played video games spent about 40% less time playing with action figures than they did the previous year. This benefits the video games industry, but creates a big problem for the traditional toy industry.

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The changes taking place in toy markets are partly the result of 'age compression' or KGOY (kids getting older younger). The worst-affected age group is the 'tweens' – children aged 8–12. Faced with much wider media and entertainment choices, tweens have grown less interested in traditional toys and more interested in activities that tap into their world. Tweens have recently been moving out of traditional toys at a faster pace than in the past. Toy manufacturers should start taking notice. The trend towards electronic games is affecting boys in particular.

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What does it take to attract 'tween' consumers? One important factor is portability, because children spend a lot of time travelling in cars or buses en route to other activities. A toy also has to fit in with a child's social circle. For boys, that generally means a toy should have an electronic, internet or video component or a sports dimension. (About 70% of money spent on toys is for products with a built-in computer chip.) For girls, fashion and social interaction are the key. Children are exposed to the internet at an earlier age and are more tech-savvy than previous generations. They therefore look for more sophisticated toys.

15

Some parents say that many of the video games aimed at the 'tween' market are bad for children. They go on to argue that, even when video games are not bad, children spend too much time playing the games and not enough time on outdoor activities.

20

Source: news reports, 2013

EXTRACT C Are video games good or bad for children?

Parents frown on video games as time-wasters and some educationalists believe that games corrupt the brain. However, many scientists and psychologists counter that video games can have many benefits — the main one is making young people smart. According to this view, video games teach high-level thinking skills that youngsters will need in the future.

5

Some of the skills required by video games are the ability to follow instructions, coming up with creative ways to solve puzzles and other problems, good hand-eye coordination, quick thinking, fast analysis and decision making, and perseverance. In higher levels of a game, players usually fail the first time around, but they keep on trying until they succeed and move on to the next level.

10

Most of the bad effects of video games are concerned with the violence they contain. Indeed, the interactive nature of many games rewards players for being more violent. Some video games also teach the wrong values: for example, women are often portrayed as weaker characters who are helpless or sexually provocative. Games confuse reality and fantasy. Finally, spending too much time playing video games leads to impulsive behaviour and attention problems.

15

Source: news reports, 2013

- [01] Define the term 'consumer goods' (Extract B, line 2). (5 marks)
- [02] Using Extract A, identify two significant points of comparison between the sales of games consoles in the USA over the years since the year of product launch. (8 marks)
- [03] With the help of an appropriate diagram and the information in Extract B, explain how the growth in the sales of video games may have affected the market for traditional toys such as action figures. (12 marks)
- [04] 'Some parents say that many of the video games aimed at the "tween" market are bad for children' (Extract B, lines 23–24). In the light of the information in the Extracts and your economic knowledge, evaluate this statement and discuss how economic policy could be used to encourage children to play outdoor rather than indoor games. (25 marks)
(Total: 50 marks)

Commentary

Question 1 on the market for wheat is typical of a Unit 1 data-response question set mainly on a primary product market. Sometimes, however, data questions are set on a market for a manufactured good. The toy market is a good example. Examiners like to set data questions on the toy market, partly because of sudden changes of fashion among children and teenagers with regard to the toys and electronic goods they would like to have.

The toy market is also characterised by seasonal demand. The peak selling season is in the months before Christmas, when well over half of all toys are sold. In the

preceding summer months, toy manufacturers and retailers try to anticipate the ‘blockbuster’ toys that will sell well in November and December. Retailers place orders with manufacturers located in China as they try to second-guess the market, hoping that the toys they are ordering will become ‘must-have’ items. Retailers who guess correctly want to be in a position to be able to increase supply (from the stocks they have purchased), to meet the sudden rightward shift in demand they are expecting.

However, retailers who guess wrongly end up with unsold stocks of unwanted toys. In this situation, or if children suddenly decide that a previously fashionable toy has lost its ‘street cred’, heavy discounting of prices is likely in the January sales to get rid of the excess supply.

Toy markets therefore provide many opportunities for setting data questions on shifts of demand and supply curves. Questions can also be set that require an understanding of how price elasticity (particularly of supply) differs between the short run and the long run. Price elasticity of supply can be elastic in the short run, if retailers have already taken delivery of stocks of toys they wish to sell. But if and when the stocks run out, or if retailers are surprised by a sudden increase in demand for a toy that was not expected to be fashionable, supply is likely to be price inelastic. It can take weeks for Chinese manufacturers to produce and market a toy and the Christmas market may then be missed. Supply-chain problems following the introduction of a new video game player such as Xbox 360 can lead to a similar problem.

GRADE A ANSWER

[01] A consumer good is a good such as a toy that consumers (i.e. members of households) buy in order for the good to fulfil a consumer need. Consumer goods yield utility or economic welfare to the people who consume them. Some consumer goods, such as a radio, are known as consumer durable goods. They yield a continuous stream of consumer services over a long period of months or years. Other consumer goods, such as an apple or pear, are literally used up as they are consumed and then need replacing. These are non-durable consumer goods.

e 5/5 marks awarded. Long answers are not required for parts [01] and [05] of a data-response question. The first sentence of this answer earns all 5 marks as it provides a precise and accurate definition. The distinction between a consumer durable good and a non-durable consumer good is not necessary, although an example can pick up a mark if the definition provided is a bit vague.

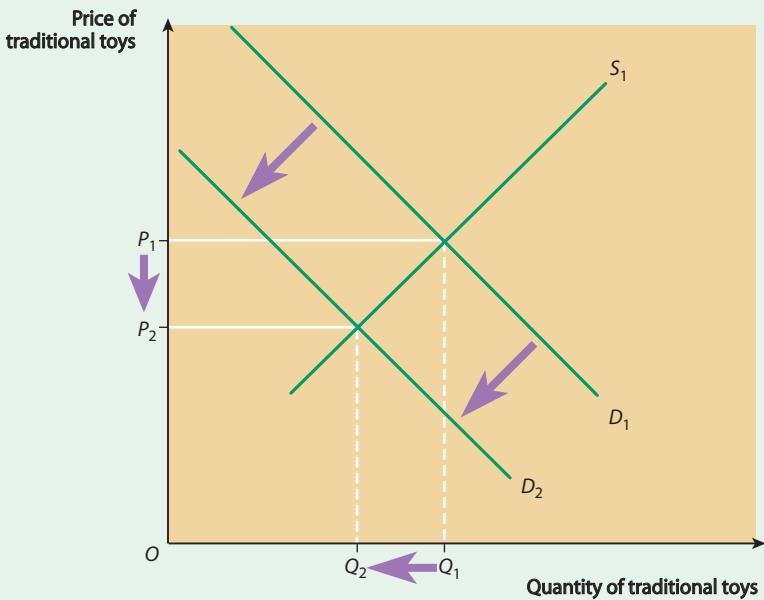
[02] My first point of comparison is that the sales of all three games consoles increased over the whole period of six or seven years after the launch onto the market of each product. Xbox 360 sales increased from about

1 million in the first year of sales to about 7 million at the end of the seventh year of sales. Sony PlayStation 3 increased over a six-year period from a similar starting point of about 1 million sales to about 4½ million in year 6.

My second point of comparison is that while the sales of both Sony PlayStation 3 and Xbox 360 grew or remained flat in all the years after their product launch, sales of Nintendo Wii fell during the second half of the product life shown in the data. Sales of Sony PlayStation 3 were flat at over 4 million a year from the end of year 4 onwards, but sales did not fall. By contrast, sales of Nintendo Wii fell each year from the end of year 3 (where they peaked at about 10 million a year) to just over 4 million at the end of year 6.

e 8/8 marks awarded. This answer identifies two significant points of comparison and backs up each point of comparison with evidence drawn from the statistics. The answer does not veer into unnecessary elaboration or try to explain the reasons for the changes in product sales. Remember, comparison or identification of key points is all that is required when answering the second part of a data question, providing this is backed by statistics drawn from the data.

[03] Video games and traditional toys are substitutes for each other. The growth in sales of video games causes the demand curve for traditional games to shift leftward. This is shown by the shift from demand curve D_1 to demand curve D_2 in the diagram below. Following the shift of the demand curve (a decrease in demand), there is a leftward movement



along the supply curve S_1 to a new equilibrium (P_2, Q_2) below the original equilibrium (P_1, Q_1). This is called a contraction of supply. The contraction of supply occurs because, once the demand curve shifts, excess supply appears in the market at the original equilibrium price of P_1 . The manufacturers and retailers of traditional toys reduce the price they are prepared to accept to P_1 , to get rid of stocks of unsold toys (the excess supply).

e 8/12 marks awarded. This is a typical part [03] question on a market in the economy. With questions of this sort, you must draw a supply and demand diagram to show the market in an initial state of equilibrium, with the axes, curves and price and quantity coordinates correctly drawn and labelled. This earns 1 mark, although omission of one of these requirements would mean a zero mark. From the prompts in the relevant Extract, you must then identify which curve (demand or supply) has shifted, and in which direction (leftward or rightward). Correctly drawing the shifted curve and labelling it earns 2 marks. Finally, you need to draw and label the coordinates in the new equilibrium, after the appropriate shift of the demand or supply curve, to earn a fourth mark. Correct completion of these three tasks thus earns 4 marks; a further mark could also be earned by correctly labelling excess demand or excess supply on the diagram, before the price adjusts to the new equilibrium. However, the maximum mark for the 'appropriate' diagram is always 4.

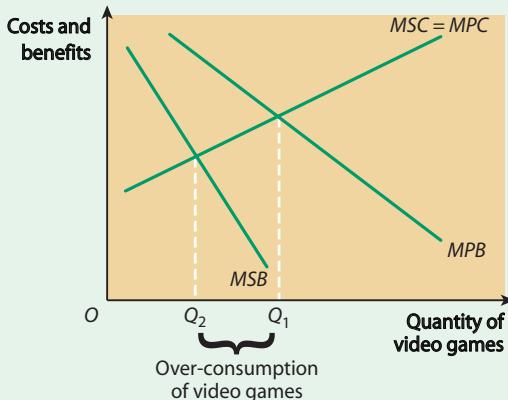
This answer completes all these tasks, so the diagram earns 4 marks. The written explanation earns 4 further marks, taking the total mark for [03] to 8 marks. On first sight, the answer simply repeats what the diagram shows. If nothing else was done, the written answer would earn no marks. However, 4 marks are picked up through the explanation of the market adjustment process to the new equilibrium: 2 marks for the mention of the contraction of supply, and 2 marks for explaining how the price falls to eliminate the excess supply that had emerged in the market.

[04] The implication of the statement in the question is that video games and similar toys are demerit goods, whereas outdoor games such as those played in a public park are merit goods. A demerit good has two main characteristics. In the first place, when children play video games, (arguably) they generate negative externalities that harm other people. However, this is only likely to be a feature of watching video games in the case of violent games that lead to the game watcher exhibiting 'copy-cat' tendencies — for example, going out and harming other people through violent behaviour immediately after playing a video game. Though there might be some strength in this argument, it can be countered by first stating that most video games are not that violent, and second, by stating that watching the game sublimates violent tendencies innate in many

male teenagers. In essence, watching the game gratifies the urge to violent behaviour, leading to an outcome in which the game player acts normally when out in the street.

In the second place, consuming a demerit good leads to a situation in which the consumer suffers costs in the future. The main example I can think of in the case of video games is obesity in later life through too much inactivity and not enough exercise. Less convincingly, watching too many video games may quicken the deterioration of eyesight, though other activities such as working on a computer or even watching television could be equally damaging.

In a market economy, prices create incentives for people to alter their economic behaviour. If prices are too low, they signal the wrong information and create the wrong incentives. If video games are a demerit good, the market price of a video game is too low because it takes no account of the cost of the negative externality (violent behaviour) that consumption generates. In the diagram below, the socially optimal level of consumption is Q_2 , where the marginal social benefit of consumption equals the marginal social cost of consumption ($MSB = MSC$). However, the market price of the video game (P_1) does not reflect the social costs. In the short run at least, the privately optimal level of consumption is Q_1 , where the game watcher's marginal private benefit equals his or her marginal private cost ($MPB = MPC$). As the diagram shows, too much of the demerit good is consumed, namely $Q_1 - Q_2$.



This is where public policy comes in (or in my view, shouldn't come in). Video games could be taxed to raise their prices and to discourage consumption. However, this would be seen as a tax on children and might be politically unpopular. To have much of an effect, the tax would have to be set very high. An outright ban on video games (the extreme form of regulation) is also possible, but I think this is only realistic if applied to very violent games. It represents censorship and limits personal freedom.

My view is that the family and not government intervention is the best form of control, though with the breakdown of social cohesion, even educated middle-class parents seem to be exercising less control over what their children do. However, I prefer a more libertarian approach (i.e. leaving it up to individuals and families to decide what to do) to authoritarian intervention by the state. I believe that individuals rather than governments know what is best for themselves. And as well as parents exercising more control over their children, this should be one of a school's roles, particularly in organising outdoor games. Private schools already do this to a large extent in the UK, but the provision of outdoor games has largely broken down in many state schools.

e 15/25 marks awarded. Before attempting to answer this question you need to work out exactly what it is getting at: namely, that it is a disguised question about demerit goods (and also merit goods). You also have to recognise, firstly, that a video game is an indoor good and, secondly, that arguably it is a demerit good.

While the candidate has recognised both factors, marks are lost because of the rather skewed nature of the answer. The answer provides good analysis of demerit goods. However, too much of the analysis is devoted to video games (demerit goods), while the answer makes little mention of outdoor activities as possible merit goods. In addition, although the answer analyses and evaluates government policies to discourage use of video games, it does not get to grips with how official policy can encourage outdoor activities. Outdoor games are mentioned, but there is no analysis of their merit good properties. The candidate has also included too much personal opinion. The opinions given are substantiated and justified, even though it is possible to disagree with some of them. The answer has therefore been placed in Level 3 (reasonable answer including some correct analysis but very limited evaluation). However, the evaluation of policies relevant for reducing consumption of demerit goods is sufficiently good to justify a mark at the top of Level 3.

Scored 36/50 marks

72% = low A grade

GRADE U ANSWER

[01] Unlike capital goods, which are used by firms to produce other goods, consumer goods are final goods which consumers, such as you and me, buy. An iPad is an example of a consumer good.

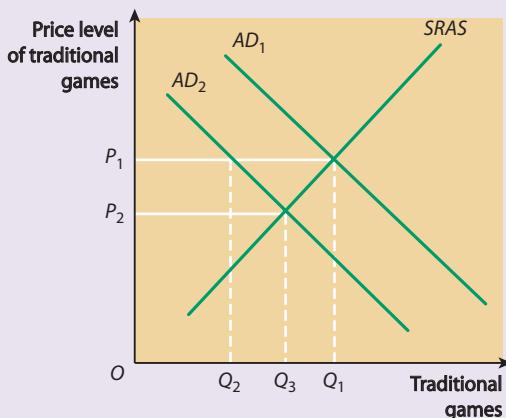
e 5/5 marks awarded. By comparing a consumer good to a capital good, the candidate shows a clear understanding of the term. The candidate gains all 5 marks in the first sentence. However, if the first sentence fails to provide an adequate definition, the naming of an example will always pick up a mark, as long as the example is relevant.

[02] Whereas sales of Nintendo Wii consoles falls over the second half of the console's product life, Sony PlayStation 3 and Xbox 360 consoles do not exhibit such a fall.

At their peak of sales at the end of the second year of their product life, Nintendo Wii sales are nearly twice as large as Sony PlayStation 3 sales at the peak of their sales at the end of year 6 in the PlayStation's product life.

e 4/8 marks awarded. The answer earns half of the available 8 marks by identifying two significant points of comparison. Unfortunately, no statistics have been selected from Extract A to provide evidence for the points of comparison, so no further marks are gained.

[03] Lines 4–6 of Extract B state: In 2003 boys aged 9–12 who played video games spent about 40% less time playing with action figures than they did the previous year. Later the Extract mentions the portability of video games, which can be played 'on the move' in cars and on buses, as a factor leading to the growth of video games and the decline of traditional games. Both of the events quoted lead to the aggregate demand curve for traditional games shifting to the left, as shown in the diagram below. At pre-existing price levels such as P_1 , excess supply emerges in markets for traditional games. The price of a traditional game then falls to price level P_2 to clear the market.



e 4/12 marks awarded. In this answer, the candidate makes a fundamental mistake which is very common in candidates' answers: confusing a microeconomic supply and demand diagram with a macroeconomic AD/AS diagram. Because of this mistake, the diagram earns no marks. The marks awarded for the written explanation are reduced from 8 to 4 marks because of the erroneous reference to the price level.

[04] Outdoor games are games such as rugby, football, hockey and netball, even though these games are sometimes played indoors in sports halls. Indoor games include the video games mentioned in the Extracts, together with games such as cards, darts, snooker, chess and draughts.

Economic policy can be used to encourage children to play outdoor rather than indoor games by investing in good-quality sports fields, changing rooms, floodlights and similar facilities, so that the games can be played in an attractive environment.

Besides investing in these facilities, indoor games could be taxed and outdoor games could be subsidised. This would make it cheap to play outdoor games and expensive to play indoor games.

The government should also pay for more sports teachers in schools, which should then organise after-school training sessions. Britain should also apply once again to hold the Olympic Games. The 2012 Olympic Games provided a very good advert to school children of the benefits and money that can be made from playing outdoor games.

e 2/25 marks awarded. This is a good example of what examiners call a 'general studies' answer. Such answers can be strong on opinion, and sometimes interesting to read, but unfortunately they contain no or very little economics. 'General studies' answers are placed in Level 1 (0 to 3 marks). The brief reference to investment, taxes and subsidies earns 2 marks for this answer, though none of these concepts is defined or explained. A glimmer of relevant analysis might have raised the answer to Level 2. However, it would be low Level 2, as the candidate has made no attempt to answer the first part of the question. The skills descriptors for a Level 1 answer are:

Levels of response	Assessment Objective 1 KNOWLEDGE and UNDERSTANDING of theories, concepts and terminology	Assessment Objective 2 APPLICATION of theories, concepts and terminology	Assessment Objective 3 ANALYSIS of economic problems and issues	Assessment Objective 4 EVALUATION of economic arguments and evidence, making informed judgements
Level 1 0–3 marks (mid-point 2) Very weak	Weak with a number of errors	Little, if any, application to issues No use of data to support answer	Poor and lacking clarity and focus	No relevant evaluation

Scored 15/50 marks

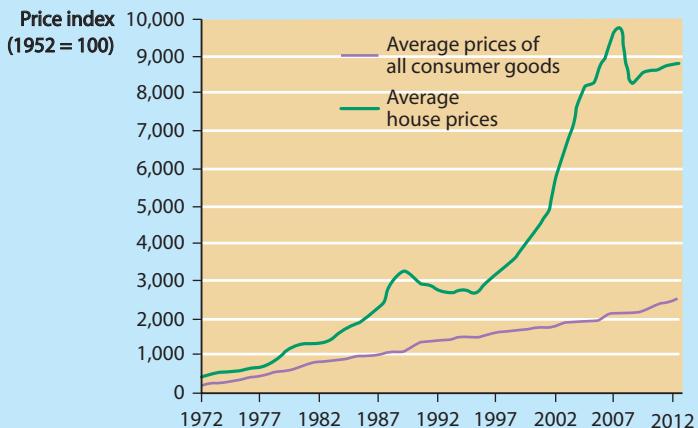
30% = U grade

Question 3 Housing markets

Study Extracts A, B and C, and then answer all parts of the question which follows.

EXTRACT A

Average prices of houses and all consumer goods, 1972–2012



EXTRACT B

A return to rented accommodation?

For several decades until 2008, owner-occupation of housing increased while private renting fell, partly on the back of generally rising house prices. All this changed when economic hard times hit the UK economy in 2008. Young people in their twenties and early thirties have been particularly hard hit. High house prices (in relation to young people's incomes) and a mortgage famine have forced the young to rent rather than to own.

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Rents across Britain will rise by more than 20% over the next 5 years from today's already record levels, a leading estate agent has forecast, as the mortgage famine forces more and more families into the private rented sector.

In a dramatic reversal of the era of mass home ownership, the estate agent said that by 2016 one in five households will be renting from private landlords, compared with 15% today and 7.5% in the late 1980s. It blamed the lack of mortgage availability for the increase, with steep deposits making it virtually impossible for people to put a foot on the property ladder. Dr Tim Leunig of the London School of Economics says, 'The only people who will be able to afford houses will be those with rich parents.'

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The worsening economic outlook also means that house prices are likely to be stagnant. After taking inflation into account, house prices are likely to end 2016 at the same real level they were in 2002. But stagnating house prices will not help first-time buyers. Between 1999 and 2008, 127,000 new households a year went into owner-occupation. But between 2009 and 2011, only 40,000 households were able to get on to the property ladder, with a net 72,000 quitting owner-occupation and moving into the rental market instead.

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Source: news reports, 2013

EXTRACT C**Elasticities of demand for, and supply of, housing**

Demand for housing is often price inelastic. Apart from renting, there are few substitutes to buying a house and home buyers thus see buying a house as a necessity. From an income point of view, a house is usually a normal good, with an income elasticity of demand higher than +1. As incomes rise, people choose to spend a higher proportion of their income on housing.

5

In the UK, the supply of new housing is, however, price inelastic. It takes months if not years to build a new house. This assumes that permission has already been given to build a new house. Planning laws and other regulations limit the amount of land available for new housing.

But new planning reforms are now in place, which require local authorities to do everything possible to identify and meet housing demand. The reforms are designed to boost 'significantly' the number of new homes completed, according to planning expert John Rhodes who helped draw up the new policy. Criticising the old system, Rhodes said: 'The planning system has constrained development exactly where it was most needed – in the southeast. That's why house prices have become unaffordable.'

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Source: news reports, 2013

- [01] Define the term 'mortgage' (Extract B, line 5). (5 marks)**
 - [02] Using Extract A, identify two significant points of comparison between changes in average house prices and changes in the average prices of all consumer goods over the period covered by the data. (8 marks)**
 - [03] With the help of an appropriate diagram and the information in the Extracts, and making use of the concept of elasticity, explain two reasons for changes in house prices in the UK in recent years. (12 marks)**
 - [04] Using the data and your economic knowledge, evaluate the view that falling house prices are better than rising house prices, both for young people and for old people. (25 marks)**
- (Total: 50 marks)

Commentary

At the microeconomic level, knowledge and understanding of housing markets are now tested in the Unit 1 exam. The specification states: 'Candidates should be able to apply their knowledge of the basic model of demand and supply to markets, including commodity markets such as oil and copper markets, agriculture, healthcare, housing, sport and leisure.' As Question 1 on the price of wheat illustrates, agricultural markets often provide the scenario for a Unit 1 data-response question on a market. You should prepare, however, for questions on other types of market, including housing markets.

GRADE A ANSWER

[01] A mortgage is a loan (usually a long-term loan, say over 25 years) taken out from a mortgage lender to help pay for a property. In the UK, the main mortgage lenders are building societies such as the Nationwide and banks such as Barclays. A mortgage is a secured loan. The mortgage lender holds the deeds of the property until the mortgage has been fully repaid. If the mortgagee (the borrower) falls behind on monthly repayments, the building society or bank can repossess the house. Few house buyers are 'cash buyers', namely people who buy the property outright with cash or a bank deposit, without a mortgage. Most house buyers have to take out a mortgage to enable them to buy.

e 5/5 marks awarded. This answer provides much interesting information to help you prepare for future exams, but the first sentence on its own earns full marks. The rest of the answer cannot earn any extra marks even though it is relevant and correct. For part [01] and [05] questions, once you have defined the key concept, any extra information you provide, whether correct or incorrect, simply wastes your time. However, it is useful to remember that because positive marking is used for data-response questions, you will not be penalised for mistakes or including unnecessary information. Positive marking rewards correct information, whereas negative marking deducts marks for incorrect information.

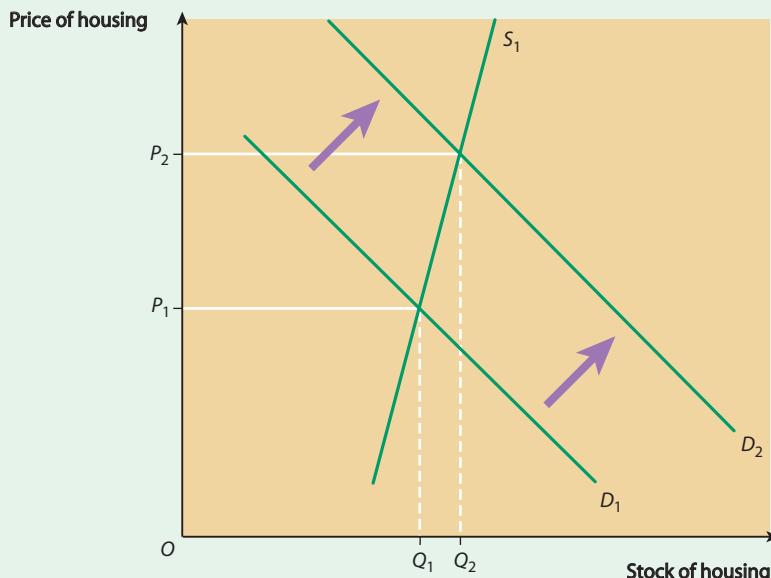
[02] Average house prices and the average prices of all consumer goods both increased over the whole data period. Average house prices increased from an index number of approximately 900 in 1972 to just under 9,000 at the end of the data period in 2012. Average consumer good prices increased from an index number of approximately 700 in 1972 to about 2,500 in 2012. The figures tell us that the rate of house price inflation was much higher than the rate of consumer price inflation.

A second point of comparison is that while the average prices of all consumer goods rose smoothly, and without volatility, over the whole data period, there were two periods in which house prices rose very sharply and then fell. The house-price 'bubbles' or 'spikes' occurred in the late 1980s and around 2006/7, just before the 2008 recession. In the latter 'spike', the house price index rose from about 8,200 in 2005 to peak just below 10,000 in late 2006/early 2007, before falling back again to around 8,200 in 2008/9.

e 8/8 marks awarded. The answer earns full marks because two accurate points of comparison are made, in each case backed up by more or less accurate statistics. When the data are difficult to read, the examiners will accept approximate answers, provided the unit of measurement (in this case, index points) is included. The candidate drifts a little bit into interpreting the data. This shows the candidate's

knowledge of the state of the housing market in the early 2000s, but does not earn any marks as it is irrelevant to the question.

- [03] In the short run, rising house prices, which occurred in the years before 2008 and to a lesser extent in 2011 and 2012, are explained primarily by the short-run demand curve shifting rightward along the near-vertical short-run supply curve. The diagram below shows the demand curve shifting rightward from D_1 to D_2 , causing house prices to rise from P_1 to P_2 , with only a small increase in supply.



In the short run, as the diagram shows, the supply of housing is highly price inelastic or unresponsive to price changes. The factors that explain this include: the general shortage of land; the effect of planning controls, which make it difficult to convert land from other uses; and the length of time taken to build a new house.

There has been a long-run trend for house prices to rise in the UK, ignoring short-run booms and busts. Both the demand for and the supply of housing have increased (or shifted rightward) in the long run, but demand has increased faster than supply. Supply has increased because the quantity of new houses added to the housing stock each year exceeds the number demolished or converted to other uses. The supply of housing for owner occupancy has generally increased even faster because landlords have withdrawn from the rental market and sold their properties. Sometimes, however, when housing market conditions are more favourable for private

letting, the reverse happens. The main causes of the long-run rightward shift of demand have been: population growth; the growth in the number of households; real income growth (housing being a normal good with a positive income elasticity of demand); and people switching to owner occupancy, which they treat as a superior good (income elasticity of demand $> +1$) and away from the perceived inferior substitute — rented accommodation.

e 10/12 marks awarded. This is a very good answer which almost earns full marks. The answer drops a couple of marks because it lacks explanation of falling house prices in the years immediately after 2008. The explanation lies in the leftward shift of the demand curve along an inelastic supply curve. Note that the horizontal axis of the diagram has the label 'Stock of housing'. This is to help convey the idea that, because it takes a long time to build houses, the supply of new houses that add to the existing stock of housing is price inelastic. By contrast, the supply of second-hand housing within the overall stock is rather more elastic. Can you think why?

[04] To provide a proper answer to this question, it is important to distinguish between changes in nominal house prices and changes in real house prices. Until the onset of the 2008 recession, house prices generally rose faster than prices in general (or the general rate of inflation). In this situation, real house prices rose as well as nominal prices. For example, if the general rate of inflation is 3%, but nominal house prices are rising by 10% a year, in real terms (relative to the prices of other goods) houses have become more expensive. If house prices are rising by only 2% a year (as in the early months of 2008), but prices in general are rising by 3%, then real house prices are falling. Finally, if nominal house prices themselves fall (as in many parts of the UK in the recessionary years from 2008 to 2011, and perhaps again in the future), while prices in general rise, then, quite clearly, the fall in real house prices is greater than the fall in nominal house prices.

As the data indicate, whether rising house prices are good for people depends on whether they already own a property, and if so, whether they can afford interest payments and capital repayments on the mortgages they took out when they bought the property. The nature of this information links closely to people's ages.

Middle-aged people with jobs often live in houses they bought many years earlier. Not only have their incomes risen during their working lives, but the size of their mortgages have stayed the same (or have fallen if they have been making monthly repayments of capital), while the values of their houses have increased significantly. Such households enjoy positive equity (what they own is greater than what they owe), and this makes them wealthier year by year.

Older people such as pensioners have usually paid off their mortgages (which means they no longer pay interest to a building society), but their retirement incomes are usually less than the salaries they received before retirement. Owner-occupier pensioners have done well out of rising house prices, but the value of their wealth might decline if they 'trade-down' to smaller houses to release spending power (equity release or equity withdrawal). If they go into nursing homes, their houses may have to be sold to pay for their care in the homes, although the government says it will impose a maximum limit on how much old people have to pay.

Falling real house prices are obviously bad for the age groups described above, as the personal real wealth of middle-aged and pensioner age groups also falls. (A possible exception is when grown-up children live with their owner-occupier parents, unable to afford properties of their own. In this situation, falling house prices could make houses affordable for the children, enabling the parents to get their offspring onto the housing ladder and out of the family house.)

In contrast to the position of older age groups, most young people are likely to benefit from falling real house prices. It makes owner-occupancy affordable and enables people in their twenties to get onto the housing ladder. However, there are caveats to this proposition. Suppose falling house prices make owner-occupancy affordable for young people, but house prices continue to fall after they have bought their houses. In this situation and assuming that they have taken out a 90% mortgage, they may suffer from negative equity (what they owe exceeds what they own). This makes it difficult if not impossible to sell their properties and move, if they want to move to jobs in another part of the country, for example.

In conclusion, rising house prices are generally better for all age groups — providing they are already on the housing ladder. However, older people rather than young people are much more likely to be in this position. Falling real house prices are bad for people who already own houses, be they old or young, because it reduces their personal wealth. Young people not yet on the housing ladder benefit, at least in the short run, from falling house prices because it gives them access to the market. The danger, however, is that if house prices continue to fall, a young person who had only just managed to buy a house quickly gets trapped by negative equity.

e 21/25 marks awarded. For the most part this is a very good answer, showing good knowledge of UK housing markets, and an ability to analyse and evaluate. It evaluates each point as it is introduced into the argument and brings together the main points in the final paragraph.

However, overall, the answer does not climb into Level 5. It fails to obey the instruction in the question to use the data provided. There is a token reference to the data, but no more. When part [04] and [08] questions require use of the data, the mark scheme includes the words: 'A maximum of 21 marks may be awarded if there is no explicit reference to the data.'

The examiner must, of course, use his or her judgement when deciding whether the answer refers explicitly to the data. If the judgement is unfavourable to the candidate, as in this case, then however good the answer, the mark awarded is restricted to Level 4 in the mark scheme.

Scored 44/50 marks

88% = solid A grade

GRADE D ANSWER

[01] A mortgage is a long-term unsecured loan.

e 2/5 marks awarded. The definition is wrong but earns 2 of the available 5 marks. The statement that a mortgage is a loan picks up 1 mark, as does the statement that it is long term. However, a mortgage is a secured long-term loan, usually secured against the value of a house or some other form of property.

[02] Except possibly in 2009 when consumer prices might have fallen for a short period, average consumer prices rose over the whole data period from approximately 200 to 2500.

My second point of comparison is that average house prices were always higher than average consumer good prices.

e 0/8 marks awarded. This answer does not earn any marks. The first point does not compare average prices of all consumer goods and house prices. The second point is simply wrong, showing that the candidate does not understand what index numbers show. Examiners in all Unit 1 and Unit 2 exams award marks for part [02] and [06] questions by obeying the following instructions:

Award up to 4 marks for **each** significant point made.

Identifies a significant point of comparison. Makes accurate use of the data to support the comparison identified. Unit of measurement given accurately.	4 marks
Identifies a significant comparison. Makes use of the data to support the comparison identified. However, only one piece of data is given when two are needed and/or no unit of measurement is given and/or the unit of measurement is inaccurate and/or the wrong date is given.	3 marks

Identifies a significant point of comparison.	2 marks
No correct use of data to support the comparison identified.	
Identifies a significant feature of one data series but no comparison is made.	1 mark
Makes use of the data to support the feature identified. Unit of measurement given accurately.	

(Note the differences between these instructions and the rather similar instructions reproduced in the commentary on the grade E answer to part [02] of Question 1. The differences stem from the fact that part [02] of Question 1 relates to *features* of the data, whereas this question is about *points of comparison*.)

Although houses are almost always more expensive than consumer goods, this cannot be inferred from the data. The candidate has failed to realise that two different indices are used to measure average house prices and average prices of consumer goods, so the two line graphs cannot be compared in this way.

.....

[03] Elasticity measures the proportionate change in one variable following an initial change in another variable. The two elasticities most relevant to this question are price elasticity of demand and price elasticity of supply. The elasticities can be measured using the following formulas:

$$\text{Price elasticity of demand for housing} = \frac{\% \text{ change in quantity of housing demanded}}{\% \text{ change in the price of housing}}$$

$$\text{Price elasticity of supply of housing} = \frac{\% \text{ change in quantity of housing supplied}}{\% \text{ change in the price of housing}}$$

One of the factors responsible for house prices changing in recent years has been more young people reaching adulthood and wanting to buy property. At the same time, too many older people whose children have left the family house are refusing to ‘trade down’ to smaller houses, so empty bedrooms appear. If the older people could be forced to move, parents with young children could move into their houses, leading to a much more efficient utilisation of the nation’s housing stock. House prices would cease rising, or rise at a much slower rate.

.....

e 4/12 marks awarded. Mark schemes for part [03] and [07] questions always allow 2 marks to be earned by including two *relevant* definitions in the answer. The candidate earns both marks by defining price elasticities of demand and supply. However, the definitions, including formulas, are over-long. Short, snappy definitions would be much better. The rest of the answer picks up only 2 marks. The candidate has not obeyed the instructions in the question, including neither an appropriate diagram nor explanations, based on sound analysis, preferably building on the ‘prompts’ in Extract B. However, 2 marks

are earned by a not very well-stated explanation of a reason why house prices have risen.

[04] Whether rising house prices are good or bad, both for young people and for old people, depends on a number of factors. The first factor is the size of the price rise, and for how long prices continue to rise. A price rise of 1% a year will obviously have very little distortive effect on the housing market, whereas a 25% annual increase would introduce considerable distortions. Likewise, a price rise extending for just two years would have a smaller effect than a large price rise continuing for twenty years.

A second factor, especially significant for younger people, relates to whether or not they have already become a first-time buyer. Twenty-five years ago, my parents bought a house for £60,000, financing the purchase with a £40,000 mortgage. They certainly benefited from the rising house prices that followed. The price of their house has risen to £500,000.

Meanwhile the debt they owed on their mortgage stayed the same and they have just paid it off. My parents have certainly benefited. The high price of their house has made them very comfortably-off.

However, younger people coming along in the next generation cannot afford to get onto the ‘housing ladder’. My elder brother and sister, both in their mid-twenties, still live in my parents’ house, saving madly to try to be able to afford mortgages as first-time buyers. I imagine I shall be in the same position in a few years time. Still, we are lucky to have quite well-off parents, who like us living at home!

My argument suggests that older people have done very well out of rising house prices (providing they are owner-occupiers and not renting), but that many young people are suffering from houses becoming unaffordable for people on low-ish incomes and no property to sell. However, in one sense, all age groups may benefit from rising house prices. This is because of a ‘wealth effect’ which benefits all. When house prices are rising, people feel more confident about the future. This means they spend their incomes and this creates national prosperity. At least, this is what the *Daily Mail* (my mother’s newspaper) keeps on telling its readers!

So, rising house prices can be good especially for existing owner-occupiers, be they young or old, but usually more so for older people who have owned their properties for a long time. To a large extent, the analysis and evaluation relating to a fall in house prices is the obverse of what I have written so far. Young people, not yet owning houses, should find it easier to buy property for the first time when house prices are falling. Providing there are no offsetting factors such as a collapse in the national economy causing large-scale unemployment among the young, young people should benefit from falling house prices. But having said that, young people who

have just bought houses, financed by large mortgages, would not benefit if falls in the value of the properties they now own lead them to suffer from 'negative equity'. Older people could suffer similarly if the prices of their houses drastically fall. Some older people treat their houses as their pensions. A sudden loss of wealth means they are much poorer in old age.

e 16/25 marks awarded. This answer has been placed at the top of Level 3 — the level extends from 9 to 16 marks with a mid-point at 13 marks. The candidate possesses a lot of knowledge about events in housing markets. Analysis is reasonable, both sides of the question are explored, and there is reasonable evaluation. However, neither analysis nor evaluation is sufficiently good to take the answer into Level 4, and the answer lacks a final paragraph containing a summarising conclusion.

Scored 22/50 marks

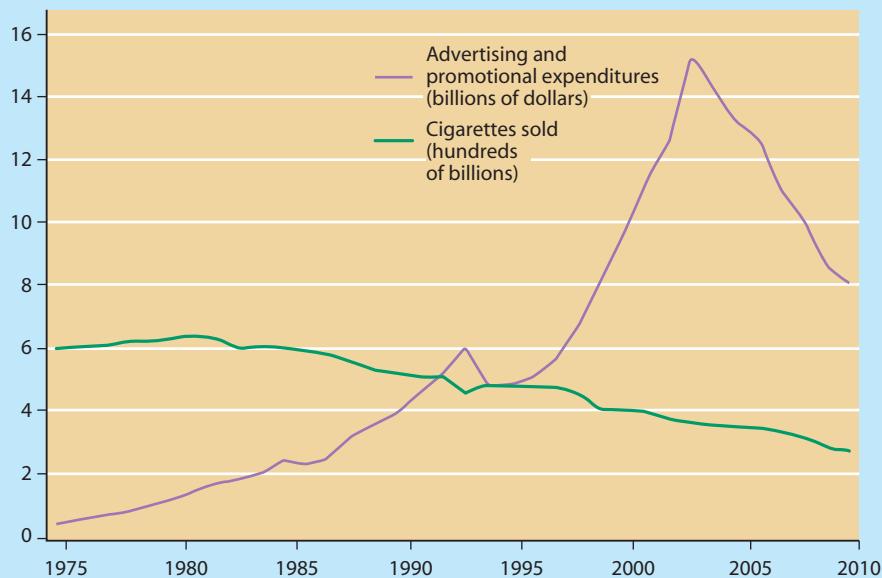
44% = D grade

Question 4 Cigarette markets

Study Extracts A, B and C, and then answer all parts of the question which follows.

EXTRACT A

Advertising and promotional expenditure on cigarettes, and the number of cigarettes sold in the USA, 1975–2010



EXTRACT B

The ban on smoking in public places causes a fall in cigarette sales

A ban on smoking in public places was introduced in England in July 2007, following the introduction of similar bans in Scotland and Wales. A drop in cigarette sales gathered speed at the end of 2007. Smokers in Britain bought 47 billion cigarettes in the 12 months to February 2008, an annual fall of about 4%. The quantity sold fell by over 6% in the period from July to the end of September 2007. Bans on smoking may be more effective than raising tobacco taxes because the demand for cigarettes is price inelastic. Tobacco taxes are good revenue raisers for governments, but they are less effective in encouraging people to give up smoking.

These figures contrast with a decline in sales of only 0.1% a year in the 6 months previous to the start of the ban. Smokers spent more money on cigarettes in 2007 than in 2006. However, because of the fact that the demand for tobacco is price inelastic, this was mainly due to higher tobacco taxation.

Since 2008, there have been calls for the government to go a stage further and introduce minimum price laws for demerit goods such as tobacco and alcohol. Other policies suggested, or already partially introduced, include the banning of displays of tobacco in shops, banning tobacco advertising, requiring health risks to be displayed in cigarette packets, and greater spending on public health advertising to alert people to the health dangers of smoking.

Source: news reports, 2013

EXTRACT C

Banning the under-18s from buying tobacco

Teenagers are to be banned from buying cigarettes until they are 18 under new government plans announced recently. Although smoking rates have been coming down, there is continuing concern about the trends among children and young people. About 9% of 11–15-year-olds smoke and most of them say they get their cigarettes from small shops such as newsagents and general stores.

The public health minister said that raising the bar from 16 to 18 would make it easier for shopkeepers to identify the youngest smokers, whose health is most at risk. She said that 'Smoking is dangerous at any age, but the younger people start, the more likely they are to become lifelong smokers and to die early. Someone who starts smoking aged 15 is three times more likely to die of cancer due to smoking than someone who starts in their late twenties.'

The change would bring the legal age for buying cigarettes in line with the legal age for buying alcohol. The government is also proposing tougher sanctions on shopkeepers who sell cigarettes to those who are under age. Public health organisations are likely to support the raising of the age bar, although most believe it is not enough to stop children smoking. They argue that the new limit is only going to be effective if it is properly enforced and part of a broad set of actions designed to discourage young people from starting to smoke.

Source: news reports, 2013

- [01] Define the term 'price inelastic' (Extract B, line 6). (5 marks)
- [02] Using Extract A, identify two points of comparison between changes in advertising and promotional expenditure on cigarettes and total sales of cigarettes in the USA over the years from 1975 to 2010. (8 marks)
- [03] 'Tobacco taxes are good revenue raisers for governments, but they are less effective in encouraging people to give up smoking' (Extract B, lines 7–8). With the use of an appropriate diagram, explain how an increase in the tax on cigarettes can lead to the government collecting more revenue from tobacco taxation. (12 marks)
- [04] In the light of the information in the Extracts, do you agree that the best way to prevent smoking by teenagers is to ban the purchase of tobacco by people under the age of 18? Justify your answer. (25 marks)

(Total: 50 marks)

Commentary

One of the two data-response questions in the Unit 1 exam might focus on how a market fails to function properly. Market failure occurs whenever a market functions inefficiently or inequitably. The main market failures you need to know are: monopoly; public goods; externalities; merit goods; demerit goods; and inequalities in the distribution of income and wealth.

Of these, merit goods such as education and healthcare, and demerit goods such as alcohol and tobacco, provide some of the most fruitful topics on which to set questions. There are always plenty of articles and stories in newspapers and magazines about problems facing the NHS and education (in the case of merit goods), and 'binge' drinking and the long-run adverse health effects of smoking (in the case of demerit goods). These provide useful raw material for examiners searching for an interesting theme for a data-response question. So whatever you do in your revision programme, make sure you thoroughly cover merit goods and demerit goods.

Two words of warning, however. First, don't expect the words 'merit good' or 'demerit good' to appear in the question itself. The examiner wants to find out whether you can recognise the properties of a merit good or a demerit good in the context of the 'good' in the question. Second, and following on from this, there is a growing tendency for exam candidates to classify virtually *all* goods as being either merit goods or demerit goods. According to this line of reasoning, if a good is mostly good for you it is a merit good, but if it could possibly have some harmful effects it is a demerit good. This is nonsense.

In the case of a merit good, the properties are:

- (i) consuming a merit good such as education yields positive externalities that benefit other people
- (ii) consumption also yields long-term private benefits to the consumer him- or herself

- (iii) because the consumer fails to take full account of the positive externalities and the long-term private benefits, when the good is only available at a market price, it ends up being under-consumed.

In the case of a demerit good such as tobacco, the topic of this question, its properties are:

- (i) consuming the demerit good yields negative externalities that harm other people
- (ii) the consumer suffers long-term private costs such as deteriorating health
- (iii) because the consumer fails to take full account of the negative externalities and the long-term private costs, in a free market prices are too low and the demerit good ends up being over-consumed.

GRADE A ANSWER

[01] Price inelastic, in the context of the question which is referring to the response of demand to a change in the price of tobacco, means that demand is not very responsive to a change in the good's price. For example, if a 10% increase in the price of tobacco leads to a 2% fall in quantity demanded, price elasticity of demand is -0.2 , which is price inelastic.

e 5/5 marks awarded. This answer shows a good understanding of elasticity. Examiners frequently test understanding of elasticity because the concept discriminates well between good and not-so-good candidates.

Weaker candidates are prone to making one or more of the following mistakes when answering a question which involves elasticity:

- (i) confusing the elasticity of a demand or supply curve with its slope or gradient — elasticity and slope are not the same concept
- (ii) writing a formula for elasticity 'upside down'
- (iii) missing out the word 'proportionate' or the '%' sign from an elasticity formula
- (iv) confusing the four main elasticity formulas (price elasticity of demand, income elasticity of demand, cross-elasticity of demand and price elasticity of supply).

A correct elasticity formula can be used to define a particular elasticity, though unless the question specifies that it must be used, an elasticity formula is not required. For this question, the correct elasticity formula is:

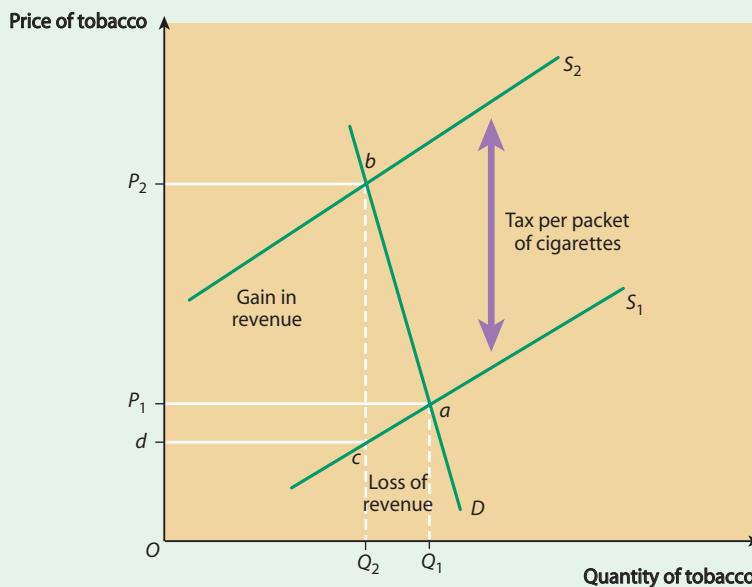
$$\text{Price elasticity of demand} = \frac{\text{proportionate change in quantity demanded}}{\text{proportionate change in the good's own price}}$$

- [02]** Over the whole period from late 1974 to 2010, the number of cigarettes sold in the USA fell from 6 hundred billion to about 2.5 hundred billion while expenditure on advertising and promotion rose from about \$0.5 billion to about \$8 billion.

The number of cigarettes sold peaked in 1979 at about 6.4 hundred billion, whereas advertising and promotion spending peaked in about 2003 at just over \$15 billion. Presumably, advertising spending fell after 2003 because of new US laws to prevent advertising of tobacco products.

e 8/8 marks awarded. The answer earns all the available 8 marks for making two significant points of comparison, each backed up with accurate statistical evidence. At the end of the answer, however, the candidate strays into explaining a possible cause of the second point of comparison. Even if the rest of the answer was flawed, no marks are available for explaining causes of the events highlighted in the answer. Resist the temptation to stray away from the question. Remember, part [02] and [06] questions don't test your economic knowledge. Irrelevant material wastes valuable exam time.

- [03]** The diagram below illustrates how an increase in the tax on cigarettes can lead to the government collecting more revenue from tobacco taxation. Cigarettes are an addictive or habit-forming good. This means that demand is likely to be highly price inelastic, as shown by the demand curve in the diagram.



Before the tax is increased, total sales revenue (part of which is tax revenue that goes to the government) is shown by the area OQ_1aP_1 . The government now levies a tobacco tax on each packet of cigarettes. The tax per packet equals the vertical distance between the initial supply curve S_1 and the new supply curve S_2 , which includes the tax per packet.

The price, including the tax, rises from P_1 to P_2 per packet of cigarettes. Because demand is price inelastic, the total sales revenue, which divides into the part going to cigarette retailers and the part paid to the government in tax revenue, increases in size to equal the rectangle bounded by the points OQ_2bP_2 . Note that total sales revenue falls by the rectangle labelled 'Loss of revenue', but increases by the larger rectangle labelled 'Gain in revenue'. Since the latter is larger than the former, overall there has been a net gain in sales revenue. A large part of this is paid to the government as additional tax revenue.

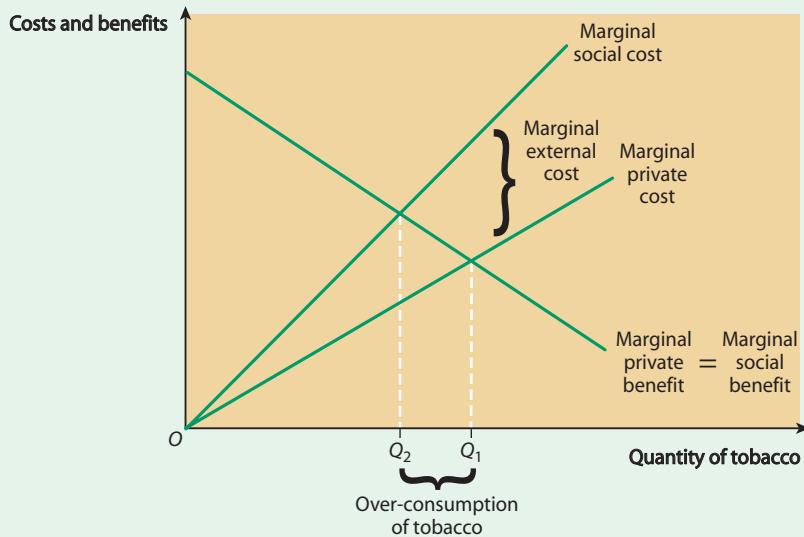
e 10/12 marks awarded. This is a difficult question. Questions that bring together elasticity and the effect of a tax levied on the suppliers of a good always induce mistakes in answers. With this question, the essential thing to show on the demand and supply diagram is total sales revenue rising because demand for the good is price inelastic. If demand had been elastic, the price rise would have induced a fall rather than an increase in total sales revenue.

Although the candidate illustrates and explains the change in total sales revenue brought about by the tax, the exact size of the increase in total tax revenue has not been mentioned. It is shown by the rectangle bounded by the points $dcbP_2$. This omission means that the answer cannot gain full marks.

[04] Tobacco is a demerit good. As the name suggests, a demerit good is the opposite of a merit good such as education and healthcare. In the same way as the consumption of merit goods generates positive externalities which benefit the wider community, a smoker emits negative externalities which harm non-smokers, for example through passive smoking. Too many cigarettes are bought when tobacco is bought at market prices unaffected by taxation or subsidy. In the diagram below, too many cigarettes are bought at the privately-optimal level of consumption of Q_1 . The privately-optimal level of consumption is where $MPB = MPC$. This is greater than the socially-optimal level of consumption, Q_2 , located where $MSB = MSC$. Free-market provision of tobacco therefore leads to overconsumption, and hence overproduction.

The diagram below shows that some smoking is socially optimal. Increasingly, however, in recent years, many people, particularly doctors and health experts, have argued that in many situations, the social costs of smoking are so severe that smoking should be banned. But, because

tobacco is addictive and habit-forming, attempts to ban smoking can be counterproductive. Consumption is not abolished; the market is simply driven underground. Indeed, the social costs of consumption in an illegal and completely unregulated market may well exceed the social costs occurring when consumption is legal but closely regulated.



A net increase in the social cost of smoking might occur if smoking is banned for everybody. However, the question is not about this issue. Rather it is about the case for and against the raising of the legal age for buying tobacco from 16 to 18, a change which took place in October 2007.

The question asks whether the best way to prevent smoking by teenagers is to ban the purchase of tobacco by young people under the age of 18. As yet, there is insufficient evidence available to conclude that the ban on underage access to cigarettes has been effective. However, I suspect that the ban is having little effect. Young teenagers have generally managed to get their older friends to buy tobacco and alcohol on their behalf. Presumably this will continue, even with the threshold age of 18. And significantly, the ban applies solely to the purchase of tobacco, and not to its consumption.

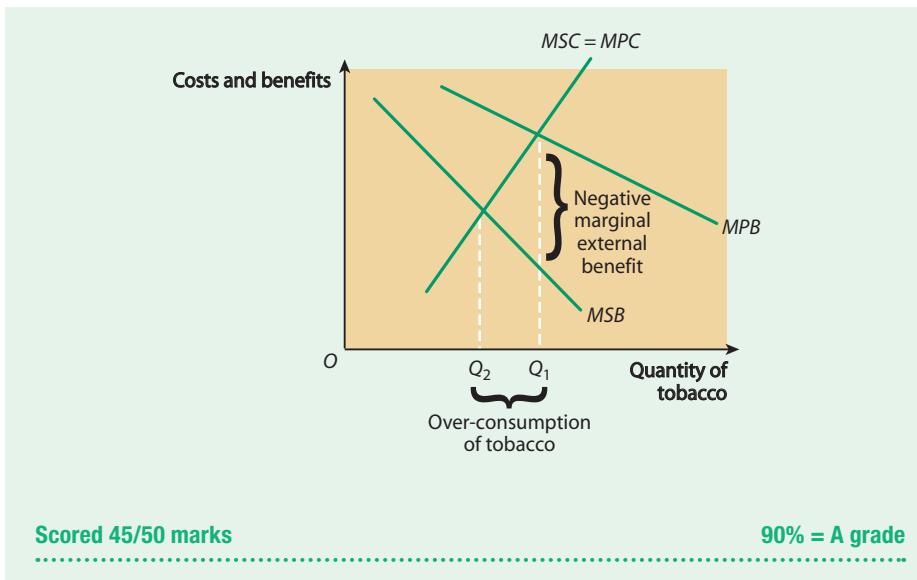
Underage smokers are also affected by the general ban on smoking in public places. This ban came into effect in July 2007. The Extracts suggest that this ban is working. However, the ban on smoking in public places will not prevent children in their early teens from smoking in the streets and on waste ground, particularly if the ban on the underage purchase of cigarettes is not effectively policed and enforced. At the moment, many small shops continue to sell tobacco to teenagers, without asking for identification and without being punished for breaking the law.

Tobacco is already taxed and taxation is an alternative to banning consumption. However, as my answer to part [03] explains, the price inelastic demand curve for tobacco means that, although the tobacco tax is a good revenue raiser for the government, it is relatively ineffective in encouraging smokers to reduce or break their habit. Tobacco taxation is already very high in the UK. For a tobacco tax to be successful in reducing consumption by teenagers, it would have to be raised enormously. In this case, the first danger would be forcing smoking into an illegal criminalised market. The second danger would be teenagers switching to worse drugs such as crack cocaine that can already be bought on the street.

To end on a slightly more optimistic note, I return to the evidence in the data that the ban on smoking in public places seems to be working. I believe that this ban will reduce smoking significantly, particularly as it reinforces two other changes taking place in society: the success of advertising in alerting people to the health dangers of smoking, and cultural change. In the latter case, more and more people, particularly middle-class adults, see smoking as an unacceptable social activity at dinner parties, for example. Smokers are now seen as rather sad people indulging their habit outside office and pub doors. However, this cultural change is much stronger among adults than among teenagers, who, as always, are prone to a bit of rebellion. If their parents and society in general discourage smoking, teenagers may be all the more likely to light up at their own parties and social activities, and on their way to and from school.

e 22/25 marks awarded. This is an excellent answer that reaches Level 5 in the mark scheme (22–25 marks). It begins by recognising that tobacco is a demerit good and explaining the nature of a demerit good. It then considers and evaluates the policy options for reducing underage smoking: for example, by relating the underage ban on purchasing tobacco to the general ban on smoking in public places that was introduced in the UK at more or less the same time in 2007. The answer makes references to the data and to the earlier answer to part [03] of the question. With regard to evidence, it notes that there has been insufficient time since the introduction of the ban to judge its success.

There is, however, one significant mistake in the answer, which is in the diagram that the candidate has drawn. The candidate's diagram is based on the assumption that when people smoke, they discharge negative *production* externalities: for example, the tobacco fumes that passive smokers reluctantly inhale. This is wrong. The externalities discharged are negative *consumption* externalities, which should be illustrated as shown in the following diagram:



GRADE D ANSWER

[01] Price inelastic means that when the price of a good changes, there is not much change in the quantity demanded or supplied.

e 2/5 marks awarded. This answer is insufficiently accurate to earn all 5 marks.

Price-inelastic supply (or demand) means that there is a *less than proportionate* change in quantity supplied (or demanded), following an initial change in the price of a good. The words 'not much change' in the answer are too imprecise.

[02] A significant point of comparison is that the cigarettes sold equalled advertising expenditure on cigarettes in about 1992 and again in 1994/95.

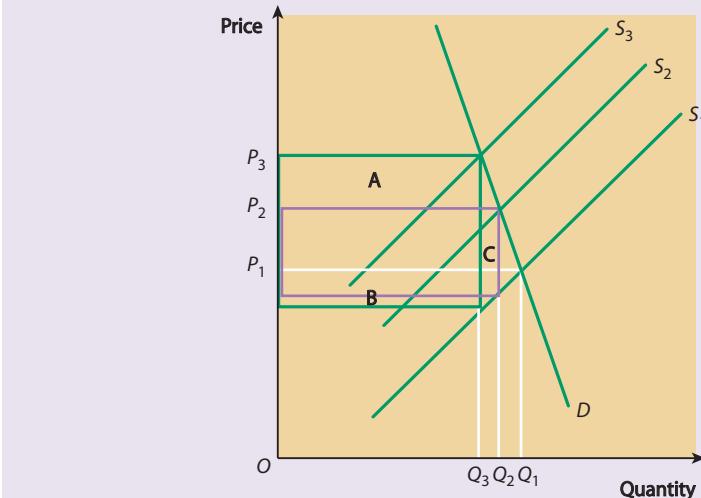
Related to this, a second significant point of comparison is that the number of cigarettes sold was higher than advertising expenditure in the first half of the data period, but generally lower in the second half of the data period.

e 0/8 marks awarded. This is a very bad answer, showing an inability to comprehend data presented on a graph. The two data series show completely different variables, measured in different units. The units of measurement are shown in the labels attached to each data line, and not on the vertical axis, where only numbers are shown. This appears to have confused the candidate, although this is no excuse for a failure to quote from the statistics in the answer and to state in each case the units of measurement. It is vital to remember that in [02] and [06] answers, you must always perform these two tasks.

[03] My diagram below shows the effect on tax revenue of increasing the tax on cigarettes. Before the tax was first levied, the supply curve of cigarettes was S_1 . Obviously, the government collected no tax in this situation. The government then introduced a tax, which shifted the supply curve upward to S_2 . The vertical distance between S_2 and S_1 shows the size of the tax, per packet of cigarettes sold. The government's tax revenue is shown by the rectangle bounded by green lines.

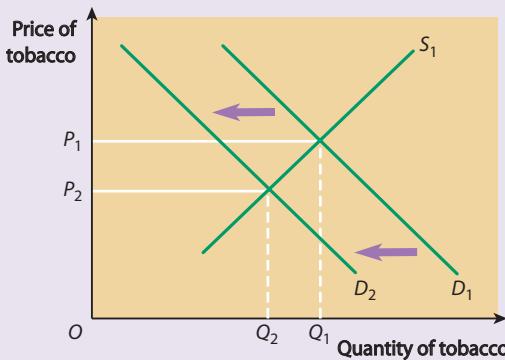
The government now increases the tax per packet of cigarettes so as to take the supply curve to S_3 . The government's total tax revenue is now shown by the rectangle bounded by purple lines.

Comparing the two tax rectangles, *before* and *after* the increase in the cigarette tax, tax revenue has gone up by the size of the two rectangles A and B, but it has fallen (because the quantity of cigarette sales has fallen from Q_2 to Q_3), by the rectangle C. Since A and B are larger than C, tax revenue has increased. The increase in total tax revenue results from the fact that demand is inelastic.



e 12/12 marks awarded. In complete contrast to the candidate's answer to the previous [02] question, this is an excellent answer, which earns all the available 12 marks: 4 marks are earned by the accurate diagram, and 8 marks by the written explanation. Now draw a similar diagram, but one with a highly elastic demand curve rather than an inelastic demand curve. You will see that the rectangle bounded by purple lines shrinks compared to the rectangle bounded by green lines. This means that total tax revenue falls following an increase in the tax on cigarettes.

[04] A ban on the purchase of tobacco products by young people under the age of 18 would work in the way suggested by the following diagram:



Banning under-18s from buying cigarettes would reduce the total size of the market for tobacco products. As a result, the demand curve for cigarettes would shift to the left from D_1 to D_2 . Tobacco sales would fall from Q_1 to Q_2 , though the size of the fall would depend on the size of the shift of the demand curve and the elasticity of the supply curve. For example, a completely inelastic supply curve (which is vertical) would lead to a large fall in price, but no fall at all in tobacco sales.

The effectiveness of the ban would also depend on how it is enforced. Young teenagers might still be able to buy cigarettes from shopkeepers who break the law, and they could also ask older friends to buy cigarettes for them. Would teenagers have to show an identity card to tobacconists, and if so, might a market in fake ID cards come into operation, as it has in the USA?

The government could use other policies either in addition to a ban on sales, or as alternative policies, if it wishes to reduce tobacco sales. These policies include: raising the tax on tobacco; limiting places where people can legally smoke, banning cigarette advertising; and informing young people about the health danger resulting from smoking cigarettes.

e 8/25 marks awarded. After writing an excellent answer to part [03] of the question, the candidate has reverted to writing a disappointing answer. (Without the answer to part [03] of the question, the script would not have achieved a pass mark.) The answer to part [04] starts off with some accurate and relevant analysis. However, there is no analysis of tobacco as a demerit good. To repeat a point made earlier, it is unlikely that the words 'demerit goods' and 'merit goods' will appear explicitly in a question Extract. It is up to you, the candidate, to recognise that the good on

which the question focuses may be a demerit good or a merit good, and then to develop your analysis accordingly.

The answer goes on to disappoint in other significant ways. The candidate does no more than present a list of alternative or complementary policies to banning tobacco consumption. Although a point is made about their alternative or complementary relationship, the point is not explained or developed. And finally, and possibly most important of all, the candidate has not addressed the issue posed by the question: is banning the sale of tobacco to the under-18 age group the 'best' way of preventing smoking by teenagers?

Because of the strength of the analysis at the beginning of the answer, and for stating reasons why a ban may not work, the answer is placed towards the top of Level 2 (4 to 9 marks). At this point, go back and read again the Level 2 grade descriptors on page 14.

Scored 22/50 marks

44% = D grade

The national economy

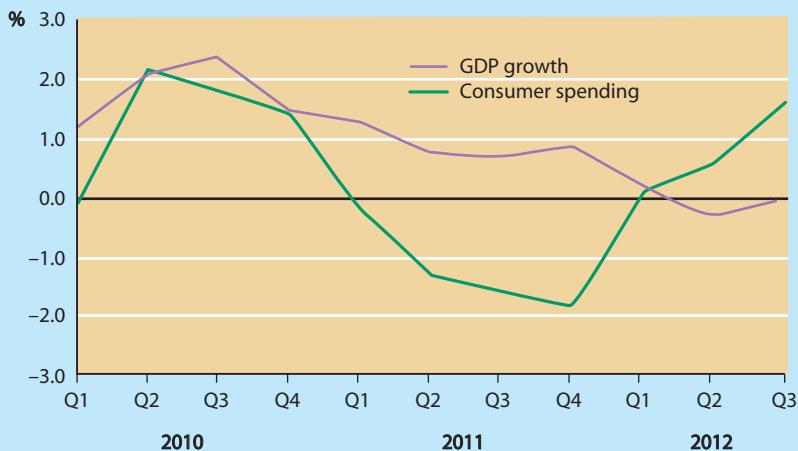
Unit 2

Question 1 Economic growth

Study Extracts A and B, and then answer all parts of the question which follows.

EXTRACT A

Annual percentage changes in real GDP growth and in real consumer spending, Quarter 1 2010 to Quarter 3 2012



EXTRACT B

The causes and effects of economic growth

William Keegan, the *Sunday Observer*'s respected economics editor, recently wrote an article about economic growth. He began by stating that technological progress is the mainspring of economic growth. Politicians may claim the credit for the growth that occurs on their watch, but the fact is that the growth in productivity associated with new inventions and new methods (or better use of old methods) allowed most advanced industrial economies to grow by 2 or 3% a year in the years before the 2008 recession. Such compound growth rates meant that the average standard of living doubled over 25 to 30 years.

5

Keegan went on to argue that, these days, more emphasis is placed on quality of life (the elusive achievement of 'happiness') than on growth for growth's sake; and it is now widely accepted that uninhibited economic growth has a potentially disastrous effect on the environment. However, research into new technologies that are more friendly to the environment is becoming a factor that itself promotes growth.

10

For Keegan, the trouble with economic growth, as with many aspects of life, is that there are pros and cons to technological progress. The economy is a bit like a balance sheet: the assets accumulate, but so do the liabilities. Thus scientific progress produces more and more sophisticated weapons, which provide the capability to destroy on a large scale, but which are justified as providing the means of defending our threatened way of life.

15

During the past 20 years the most prominent example of technological progress has been in information technology, which has contributed enormously to improvements in productivity, most notably in the USA. However, some of these ‘improvements’ end up as tiresome complications to the business of living. In Keegan’s view, large swathes of business and government have taken advantage of technological innovations to make life difficult for the customer. Keegan quoted a business tycoon, apocryphal or real, who is alleged to have said: ‘Don’t you realise my secret? By driving them on to the internet, we make the customers do the work.’

20

Most economists would agree with William Keegan about the importance of technical progress as a mainspring of economic growth. However, they would also add in the role of investment, both in terms of investing in physical capital goods and investing in human beings or human capital.

25

30

Source: news reports, 2013

- [01] Define the term ‘standard of living’ (Extract B, line 7). (5 marks)**
- [02] Using Extract A, identify two points of comparison between the changes in UK real GDP and the changes in real consumer spending from Quarter 1 2010 to Quarter 3 2012. (8 marks)**
- [03] With the help of an appropriate diagram, explain how investment causes economic growth. (12 marks)**
- [04] Discuss the extent to which governments can succeed in resolving the conflicts between achieving economic growth and also achieving other macroeconomic policy objectives. (25 marks)**
- (Total: 50 marks)

Commentary

Unit 2 data-response questions normally focus on one of three possible topic areas, although sometimes they involve more than one. The different components of aggregate demand make up the first topic area: consumption (or its opposite, saving), investment, government spending and the current account of the balance of payments (X and M). The second topic area comprises macroeconomic policy instruments (fiscal policy, monetary policy and supply-side policy) and the third topic area concerns the main macroeconomic policy objectives. This question is fairly typical of ones set on the third topic area.

One of the main benefits of economic growth is that it usually increases the standard of living of the people living in the country. It can involve a number of costs, particularly environmental ones, but the costs and benefits of economic growth are an A2 topic and should not be examined in the AS Unit 2 exam.

In 2013 the ONS revised the official data on GDP, with the result that the fall in GDP shown in Quarter 2 of 2012 in Extract A (the so-called ‘double-dip’ recession) disappeared.

GRADE A ANSWER

- [01] The term ‘standard of living’ refers to three main factors that contribute to the level of economic welfare enjoyed by the population at a particular point in time. These are:
- (i) welfare gained from the consumption of goods and services bought in markets
 - (ii) welfare gained from goods and services provided free at the point of consumption, or at subsidised prices, by the state
 - (iii) welfare gained from intangibles such as friendships and the benefits of positive externalities received. The term ‘standard of living’ can refer to the whole population, or to particular groups or individuals within the population.

e 5/5 marks awarded. The term ‘standard of living’ is not in the Unit 2 specification and therefore is unlikely to appear in part [01] or [05] of an exam paper. Nevertheless, I have included the term in this question because all economics students should be familiar with what it means. This candidate provides an excellent definition, if a slightly over-long one, given that only about 3 minutes should be spent answering the first part of the data question.

While revising for the exam, it is a good idea to print a copy of the specification (downloadable from the AQA website at www.aqa.org.uk), and then use a highlighter pen to identify all the terms and concepts in the Unit 2 (or Unit 1) specification. Having done this, check about five of the definitions each day. This is a good way of varying your revision activities.

- [02] In Extract A, a comparison of the peaks in the two data series shows that the annual rate of change of real consumer spending peaked at the end of Quarter 1, 2010, at a 2% change, whereas the rate of change of real GDP peaked later, in the first part of Quarter 3 in 2010 at a 2.4% rate of change.

Second, the annual change in real consumer spending falls rapidly from Quarter 4 in 2010 to Quarter 4 in 2011 (by a difference of 3.5%), whereas the annual rate of change of real GDP fluctuates over the same period, before falling in Quarter 2 of 2012.

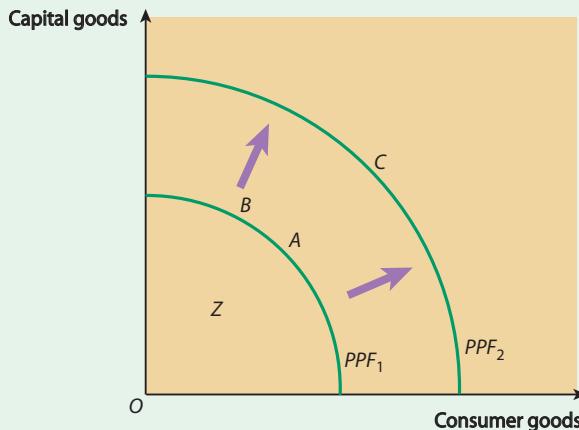
e 6/8 marks awarded. This answer earns 6 of the available 8 marks. The first point of comparison earns 4 marks (2 for identifying a significant comparison and 2 for the statistical evidence). The answer avoids making a common mistake in data interpretation. Often candidates who are weak at interpreting statistical data

wrongly state that a fall in the rate at which a variable is increasing means that the variable's level must be falling.

From Quarter 1 in 2010 until Quarter 1 in 2012, real GDP was growing, though the rate of growth slowed down after Quarter 2 in 2010. The data show real GDP falling at the end of the data series, when the rate of growth was negative. (Although not relevant to the question, Quarter 1 in 2010 was after the end of the recession which started in 2008, whereas the negative growth in 2012 occurred in the so-called 'double dip'. By the time you read these notes, you should know whether the UK actually suffered a 'double dip'.)

The candidate's second point of comparison is significant, despite the fact that the first three-quarters of the data do not figure in the comparison. However, 2 marks are lost because the statistical evidence is incomplete.

[03] It is useful to divide economic growth into short-run economic growth and long-run economic growth. Short-run and long-run economic growth are both illustrated in the diagram below. Short-run growth is shown by the movement from point Z inside the economy's production possibility frontier (PPF_1) to point A on the frontier. Long-run growth is depicted by the movement from point A (on PPF_1) to point C on PPF_2 . Short-run growth makes use of spare capacity and takes up the slack in the economy, whereas long-run growth increases total productive capacity.



Investment can contribute to short-run growth because investment is one of the components of aggregate demand in the aggregate demand equation:

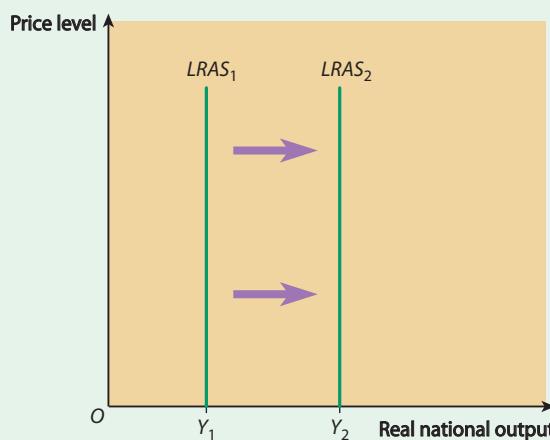
$$AD = C + I + G + (X - M)$$

If the economy produces at a point such as Z *inside* the production possibility frontier, the economy is suffering from deficient aggregate demand. An increase in investment (or in C, G or X) increases aggregate demand and causes short-run economic growth.

However, when economists talk about economic growth, they usually mean long-term economic growth. Long-term growth adds to the economy's production potential. As Extract B indicates, technical progress is possibly the main factor causing long-term economic growth. But as the extract also says, investment is the second cause of economic growth, especially when it involves the purchase of 'state-of-the-art' capital goods embodying the latest in technical progress. Investment can be defined as the purchase of capital goods such as machines. Net investment over and above the replacement investment which replaces worn-out capital goods, adds to the national capital stock. It enables more output to be produced in the future, thus contributing to economic growth. By substituting capital goods for consumer goods, a movement from point A to point B on PPF_1 enables the production possibility frontier to shift outward to PPF_2 at a faster pace than would be the case had investment not increased.

e 12/12 marks awarded. This is an excellent answer that shows a good understanding of the meaning of investment. The mark scheme would focus on long-run investment and the outward movement of the economy's production possibility frontier. However, it is equally valid to explain the role of investment in promoting short-term economic growth (or economic recovery). This answer covers both the short run and the long run. It also avoids the common mistake of confusing investment with saving.

Part [03] or [07] Unit 2 questions are less likely than similar Unit 1 questions to ask for the use of a diagram. However, this question does ask for an 'appropriate' diagram. Diagrams generally improve the accompanying written answer, as in this case, where a production possibility frontier diagram has been used. Whether or not a diagram is asked for, mark schemes always allow marks to be awarded for the use of a relevant and accurately drawn diagram. For this question, an LRAS diagram, such as the one drawn below, could also be used.



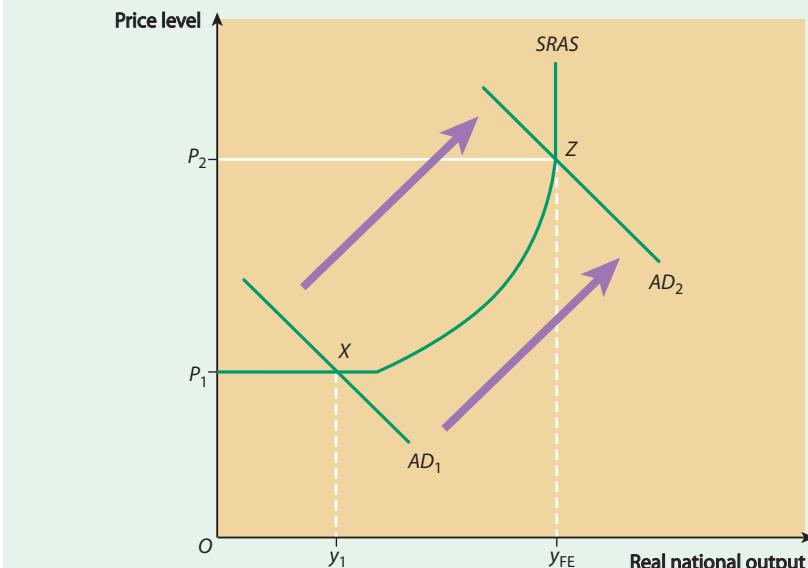
Economic growth shown by a rightward shift of the LRAS curve

[04] A government's main macroeconomic policy objectives are usually said to be: full employment, economic growth, controlling inflation and achieving a satisfactory balance of payments. It is difficult, however, for a government to achieve all these objectives simultaneously because they tend to conflict with each other.

With regard to the first two objectives there should be no conflict, at least in the short run. When economic growth takes place, real output in the economy increases. With the exception of when the new output results from replacing labour-intensive methods of production with capital-intensive production methods, the production of new output requires more labour to be employed. This means that economic growth helps to create and sustain full employment.

Strictly, this may only be completely true in the case of short-term economic growth, which takes up the 'slack' in an economy in which there is significant unemployment. In a fully employed economy, already producing on its production possibility frontier, any further (now long-run) economic growth may run into the wall of capacity constraint. Because of labour shortages, without immigration, it may be impossible for the growth to continue. This means it is difficult to *sustain* economic growth in a fully employed economy.

Also, when growth is pursued in a fully employed economy, inflation is likely to raise its ugly head. To explain why, I shall use the AD/AS diagram below.



I shall assume that the economy is initially producing below the full employment level of national income, at a macroeconomic equilibrium at

which $AD = AS$ at point X. In this situation a rightward shift of the AD curve along the horizontal section of the $SRAS$ curve results in economic growth but no inflation. Suppose, however, the AD curve shifts rightward from AD_1 to AD_2 , bringing about macroeconomic equilibrium at point Z. The economy now enjoys the full employment level of output (y_{FE}), but any further attempt to bring about economic growth (in the short run) by increasing aggregate demand creates excess demand in the economy and demand-pull inflation. (According to my diagram, demand-pull inflation occurs, along with some short-run economic growth, *before* y_{FE} is reached.)

Economic growth, brought about by increasing aggregate demand, is also likely to harm the balance of payments on current account. This is because more and more imports are sucked into the economy as aggregate demand increases.

The question asks for an evaluation of the extent to which governments can succeed in resolving the conflicts between achieving economic growth and achieving other macroeconomic policy objectives. In the short run, governments can ‘trade off’ between competing policy objectives, for example by aiming for a successful combination of relatively high employment, relatively low inflation and reasonable and possibly sustained economic growth. But I believe that the policy objectives, including growth, that I have listed, can all be achieved through the use of successful supply-side policies rather than through the use of demand management. However, supply-side policies may introduce another conflict between economic growth and an equitable or fair distribution of income. This is because supply-side policies tend to require wider income differences between rich and poor in order to create the personal incentives deemed necessary for the policies to achieve long-term *sustainable* economic growth.

e 23/25 marks awarded. The final part of a Unit 2 data-response question is unlikely to include the instruction: ‘With the help of an AD/AS diagram...’. Nevertheless, the AD/AS macroeconomic model of the economy provides the theoretical framework that examiners often expect candidates to use in their answers to these questions. Therefore it is a good idea to write in pencil the words ‘With the help of an AD/AS diagram’ before the last part of the data-response question you choose to answer. (For some questions, a production possibility frontier diagram or a circular flow diagram could be more appropriate, or could be used in conjunction with an AD/AS diagram.)

This is an excellent answer that reaches Level 5 (22–25 marks). It starts by explaining the key concepts in the question: namely, the different objectives of macroeconomic policy and the meaning of economic growth. This is followed by appropriate analysis and evaluation. As is the case with most very good answers,

the strength of each argument is evaluated as it is brought into the answer, and the final paragraph discusses the extent to which governments can succeed in resolving the conflicts between achieving economic growth and achieving other macroeconomic policy objectives. A slightly fuller analysis and evaluation of at least one policy conflict and the resulting policy ‘trade-off’ is needed for full marks to be earned.

Scored 46/50 marks

92% = high A grade

GRADE D/E ANSWER

[01] The standard of living is the cost of the good and services bought by the average British family, measured by a price index such as the CPI or the RPI.

e 0/5 marks awarded. The candidate has fallen into the trap of confusing the standard of living with the cost of living. Unfortunately, no marks can be awarded for this answer.

[02] GDP growth percentage falls from 2010 quarter 1 to 2012 quarter 3 from 1.3% to 0.0% whereas overall consumer spending increases from 0.0% in 2010 quarter 1 to 1.5% in 2012 quarter 3.

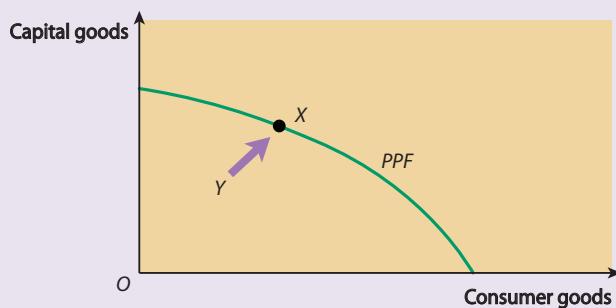
GDP growth percentage only falls from negative in Q1–Q2 2012 and dips to +0 to –0.25% but rises back to 0.0% soon after whereas consumer spending falls to below 0% in 2011 Q1 and dips with more than GDP growth at –0.9% in 2011 Q4.

e 3/8 marks awarded. The first point of comparison scores 3 out of the 4 available marks, dropping a mark because of the looseness of the numbers quoted, which have not been expressed as annual percentage rates of change.

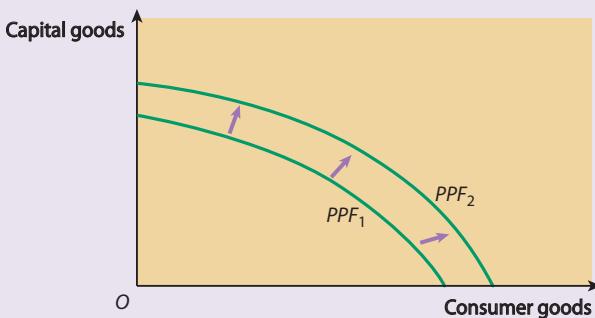
The second point of comparison is impossible to understand and does not earn any marks.

[03] Investment: when firms and companies purchase capital goods in order to expand output capacity. Economic growth: growth of aggregate demand over a period of time.

There are two types of economic growth, long run and short run. Investment in the short run causes aggregate demand as $AD = C + I + G + (X - M)$. Investment leads to an increased multiplier effect which leads to economic growth shown by the PPF curve:



Long-run economic growth can be caused by investment as it enlarges the capital stock. Investment causes the PPF curve to shift outward from PPF_1 to PPF_2 so the capital stock increases and economic growth occurs.



e 7/12 marks awarded. The answer wisely starts with two definitions, but only the first definition picks up a mark. The candidate then earns 4 marks for explaining how investment causes short-term economic growth, with the explanation illustrated by an accurately drawn PPF diagram. Another 2 marks are earned by the diagram illustrating long-term growth, but in this case the textual explanation is too unclear to earn any further marks.

[04] Economic growth is the growth of aggregate demand over a sustained period of time. Macroeconomic policy objectives include increased and sustained aggregate demand, a low inflation rate of around 2.5%, low unemployment, a high standard of living and a balance of payments.

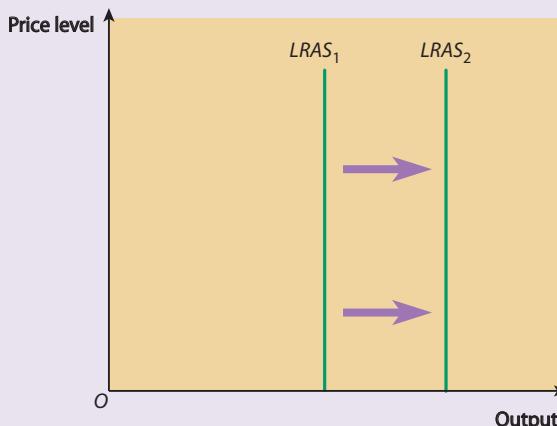
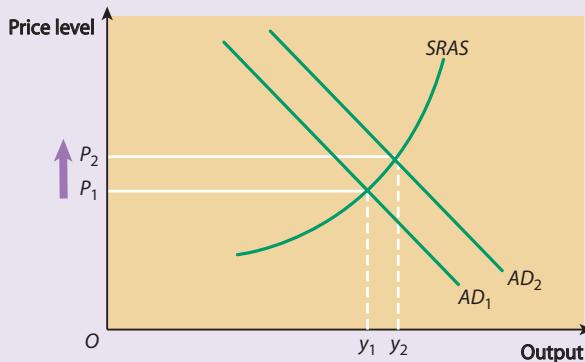
Governments often implement policies to try and satisfy the macroeconomic objectives. However, it is often hard to meet all the objectives, such as aggregate demand increase and inflation trade-off, and a growth of aggregate demand and balance of payments trade-off.

Government policies to achieve economic growth can be the use of expansionary fiscal policy where there is a decrease in taxation and

increased government spending in order to increase investment, therefore increasing aggregate demand and level of employment. However, the increase in AD often leads to a rise in inflation and to a deterioration in the balance of payments.

Increased AD causes price level to rise (increase in inflation). To avoid inflation, long-run aggregate demand can increase output capacity so there is no inflation, this can be done by using supply-side policy which shifts the long-run aggregate supply to the right. Long-run economic growth can trigger a growth in exports and imports which is good for the balance of payments and achieve economic growth.

Supply-side economic policies involve increasing the economy's capacity to produce output which if successful can increase AD , decrease unemployment, avoid inflation and satisfy the Balance of Payments.



Governments can also use monetary policies which involve interest rates and controlling inflation. If interest rates are lowered, investment is encouraged which would lead to an increase in AD and employment. However, in order to lower inflation, interest rates are increased which

leads to unemployment and recession. It is very difficult to resolve conflicts between economic growth and inflation by using monetary policies. If interest rates are increased, the value of the pound increases and imports become cheaper, so causes a current account deficit.

Overall, in order for the government to succeed in resolving conflicts between economic growth and macroeconomic policies, long-run economic growth is the best way to achieve economic growth, avoid inflation, increase employment and have a good Balance of Payments. In order to achieve long-run economic growth, supply-side policies would be most effective, such as supply-side fiscal policy where tax and government spending are cut in order to create incentives so capacity of the economy is increased. However, supply-side economics in the short term often leave negative impacts on the economy, but in the long term they can be effective.

e 11/25 marks awarded. The answer starts by repeating once again the earlier incorrect definition of economic growth. This is followed by a mix of incorrectly and correctly stated objectives of macroeconomic policy.

Examiners are instructed to mark positively rather than negatively. This means rewarding correct knowledge and analysis, while ignoring mistakes in the answer. However, [04] and [08] parts of the question are essay questions. When marking these, the examiner uses the Levels mark scheme. The examiner is expected to mark ‘holistically’, which means reading the whole of the answer and then deciding to place the answer in one of the five Levels. To reach the higher Levels 3, 4 and 5, lines of reasoning and argument which are developed in the answer must be coherent. If the candidate includes muddled understanding and inappropriate terminology in the answer, otherwise good lines of reasoning become confused. In this situation, the examiner cannot really place an answer in one of the higher Level bands.

For this reason, this answer would be placed at the bottom of Level 3. Ignoring the confused parts of the answer, such as the argument that ‘Long-run economic growth can trigger a growth in exports and imports which is good for the balance of payments’, there is sufficient correct analysis to reach Level 3. However, other parts of the analysis are muddled, so consequently the evaluation (which is in the answer) is weak rather than strong.

Scored 21/50 marks

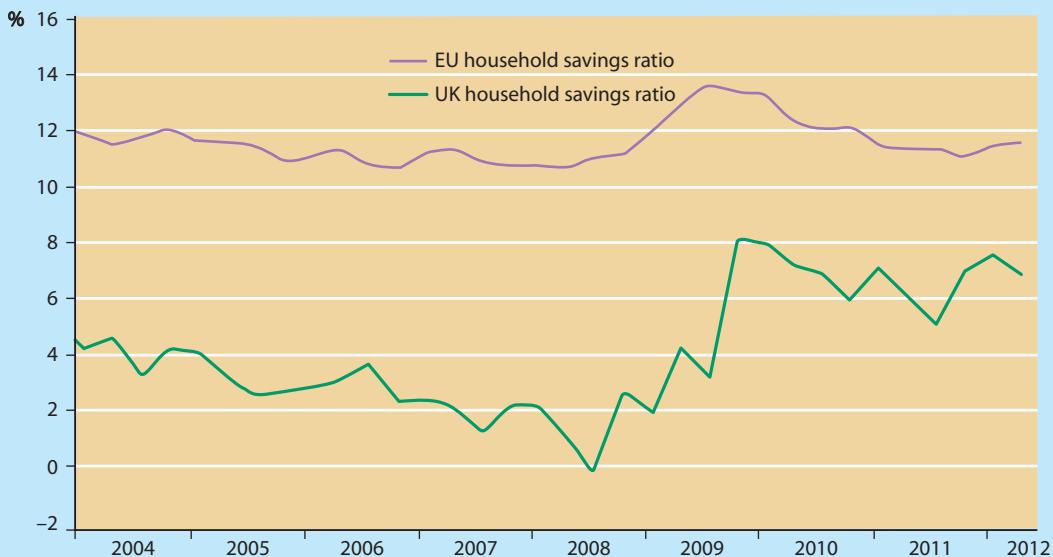
42% = D/E grade boundary

Question 2 Consumption and saving

Study Extracts A, B and C, and then answer all parts of the question which follows.

EXTRACT A

The household savings ratios in the European Union (EU) and the UK, 2004–2012



EXTRACT B

The household savings ratio

The household savings ratio, which measures the fraction of income that households save rather than spend on consumption, is a good barometer of the overall state of the economy.

People in Britain save less money every month than those in almost every other country in the developed world. The USA has a lower savings ratio than the UK, where the amount people are saving has fallen in recent years close to all-time lows. 5

In 2008, the UK savings ratio fell to below 0%, more than 7% lower than the long-term UK average of 7.9%, and less than half the ratio of countries such as Germany and China, where workers put away more than 10% of their income.

A number of factors are responsible for changes in the household savings ratio. These include the state of the economy, confidence or lack of confidence in the future, changes in wealth and real income, and changes in interest rates. 10

Source: news reports, 2013

EXTRACT C**The average household is feeling the pinch**

Spending by private households is the biggest slice of gross domestic product (GDP), accounting for 63% in 2012. During the boom years of the early 2000s, which ended with the onset of recession in 2008, average household incomes rose at a faster rate than average prices. Average weekly earnings grew at 4% a year between 2001 and 2007, while prices went up by just 2% a year. In these years, people's buying power increased steadily and strong private consumption underpinned rising GDP. But in 2008 the numbers flipped. Since then pay increases have been 2% a year, price increases above 3%. Workers' cash buys less and less.

Since 2008, consumer spending has been remarkably weak. A look at the income and spending of a typical wage or salary earner in 2012 helps to explain this. Average pre-tax income was £37,000. Tax and national insurance then took up £9,400, leaving disposable income at an average of £27,600. Borrowing, mainly mortgage payments, drained a further £7,700. Then, with council tax, utility bills and petrol costs running to £5,000 a year, the average wage or salary earner was left with about £15,000 to save or to spend on other consumption items.

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Source: news reports, 2013

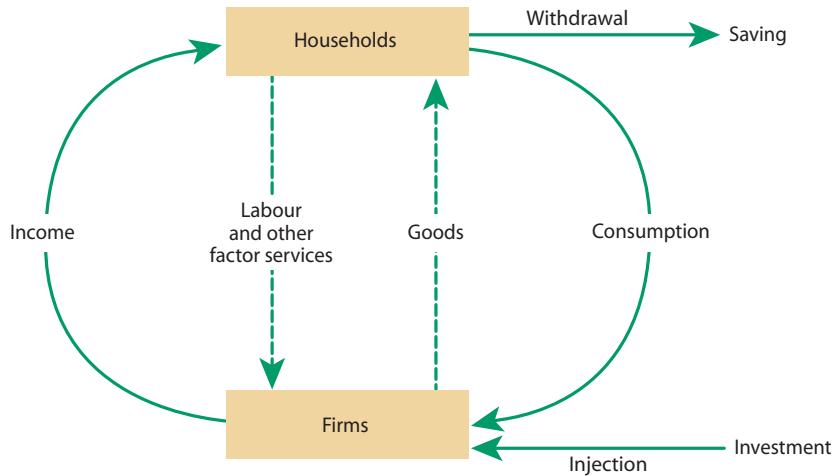
- [01] Define the term 'real income' (Extract B, line 12). (5 marks)**
- [02] Using Extract A, identify two significant points of comparison between changes in the household savings ratio in the European Union and in the UK over the period 2004 to 2012. (8 marks)**
- [03] With the help of the information in Extract B, explain two factors that may be responsible for some of the changes in the UK household savings ratio shown in Extract A. (12 marks)**
- [04] Using the information in the data and your economic knowledge, evaluate the view that household consumption behaviour has been a main cause of poor macroeconomic performance in the UK in recent years. (25 marks)**
- (Total: 50 marks)

Commentary

This is a question on consumption, the first of the components of aggregate demand in the AD equation:

$$AD = C + I + G + (X - M)$$

It is also a question about saving, the opposite of consumption, which does not itself figure in the aggregate demand equation. Like imports and taxes, saving is a leakage or withdrawal of spending from the circular flow of income. The relationship between consumption and saving is shown in the following circular flow of income diagram:



The diagram shows that spending on consumption by households circulates round the economy and is received as income by firms. However, household income that is saved and not spent on consumption is a withdrawal or leakage from the circular flow. The household savings ratio, which figures in parts [02] and [03] of the question, is a measure of *actual* savings in a past year as a ratio of household income in that year. The household savings ratio is not the same as the average propensity to save, which measures how much households *plan* to save as a ratio of the income they expect to receive. Whereas part [03] focuses on saving, part [04] is about consumption. However, saving and consumption are simply the opposite of each other. If we know at any level of income how much households plan to save, we simultaneously know how much they intend to spend on consumption (and vice versa). Saving is defined as income which is not consumed. Part [04] of the question centres on how consumption behaviour has affected the way the macroeconomy has performed in the past.

GRADE A ANSWER

[01] People's income is the wages and salaries they receive in return for working. Unlike wealth, which is an accumulated *stock* of assets, income is a *flow*. Income which is not spent adds to assets. The money people receive in return for working is their *nominal* income. *Real* income, by contrast, is the amount of goods and services people can buy with their nominal income. If nominal income rises, but the price level rises even faster, people's real income falls.

e 5/5 marks awarded. This is a comprehensive definition, and the candidate clearly understands the meaning of both income and the word 'real' used in this context.

As the answer hints at, the relationship between real income and nominal income can be expressed in the following equation:

$$\text{real income} = \frac{\text{nominal income}}{\text{price level}}$$

and

$$\text{change in real income} = \text{change in nominal income} - \text{change in the price level}$$

[02] The first significant point of comparison is that the household savings ratio is higher in every year in the data period in the EU as a whole than in the UK. For example in 2004, the first year in the period, EU households saved about 12% of their incomes, whereas UK households saved around 4% of their incomes. In the last year in the period covered by the data (2012), EU households saved about 11.5% of their incomes, whereas UK households saved about 7% of their incomes.

A second significant point of comparison is that comparing all the years between 2004 and 2012, the difference between the peak and the trough of the household savings ratio was greater for UK savings than for EU savings. The UK peak was a household savings ratio of just over 8% in late 2009, compared to a trough of just under zero per cent in mid-2008 — a difference of over 8%. In the EU as a whole, by contrast, the household savings ratio peaked at just under 14% in mid-2009, compared to a trough of about 10.5% in late 2006 — a difference of just under 3.5%.

e 8/8 marks awarded. This is an excellent answer which identifies two significant points of comparison, and then backs up each point with statistical evidence from the data. Both points of comparison make reference to the whole of the data period, which is something you must do in order to earn full marks.

[03] A first factor which may explain changes in the UK household savings ratio is changes in the level of consumer income. According to J. M. Keynes, when income rises, consumption also rises, but it rises at a slower rate than income. This means that a greater proportion of income is saved. This in turn means that the household savings ratio increases. Conversely, when income falls, a smaller proportion of income is saved, so the household savings ratio in turn falls.

A second factor which may explain changes in the UK household savings ratio is the level of household wealth. In the boom years of the early 2000s, household wealth rapidly increased, particularly with house prices rising faster than prices in general. As a result, owner-occupiers of houses felt wealthier. With rising wealth, they didn't need to save: rising house prices were doing their saving for them. As a result the UK savings ratio fell.

e 10/12 marks awarded. In most respects this is a very good answer. The candidate identifies and explains two strong reasons why the UK household savings ratio may change, and develops the answer well. However, the answer fails to earn full marks because in the first point made, the candidate ignores the instruction in the question to relate the answer to the changes in the UK household savings ratio shown in Extract A. This is a data-response question, but the answer fails to respond sufficiently to the data.

[04] The UK's macroeconomic performance can be judged by factors such as the rate of economic growth, the extent to which the growth rate has been sustainable, and by the levels of employment and unemployment and whether employment has been growing and unemployment falling consistently in recent years. Stable prices and a low rate of inflation are indicators of satisfactory macroeconomic performance, since, in the long run, they provide a necessary condition for sustaining economic growth and keeping unemployment low. The price and quality competitiveness of the country's exports is a further indicator of macroeconomic performance, since it reflects Britain's ability to compete in world markets and with imports in the domestic market.

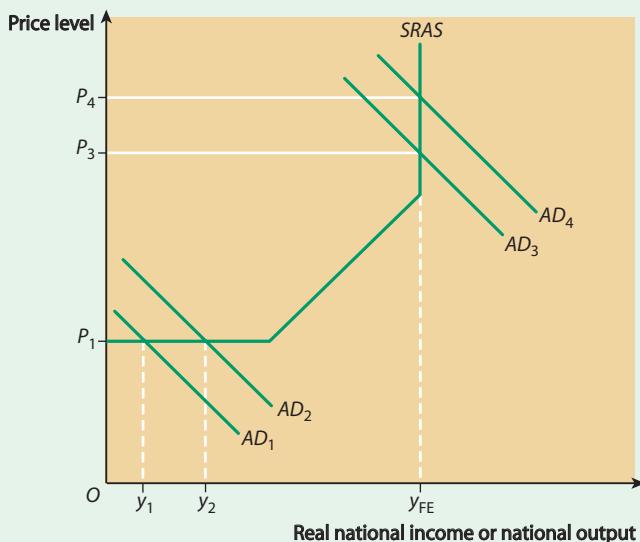
As Extract B states, the household savings ratio measures the fraction of income that households save rather than spend on consumption. A low household savings ratio, of say 2%, means that on average UK households are spending 98% of their incomes on consumption and imports. A figure of 2% does not mean that every single household is spending 98% and saving 2% of its income. Rather it means that some are saving considerably *more* than 2% of their incomes, but this is offset by the fact that other households are spending more than their incomes, financing the excess spending by borrowing. (Borrowing means that households are indulging in negative saving, or *dissaving*.)

Two issues come to the fore from my introduction to this answer. The first arises from the question: 'Has UK macroeconomic performance actually been poor in recent years?' The second relates to the fact that the size of the household savings ratio has both *demand-side* and *supply-side* effects, and these can have opposite implications for macroeconomic performance.

With regard to the first issue, in my view, UK macroeconomic performance has indeed been poor in recent years. Although the economy grew continuously year-by-year from the end of recession in 1992 and into the early 2000s, the onset again of recession in 2008, followed by very weak recovery and the threat of 'double dip' recession, means that economic performance has been poor.

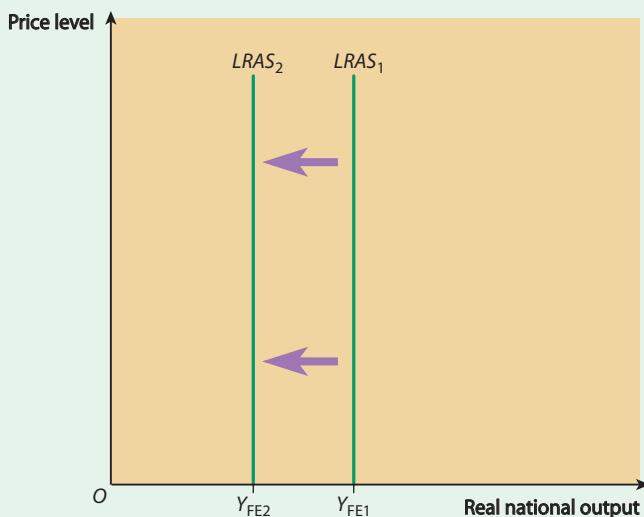
One of the reasons for the recent recession was that the ‘boom’ years were fuelled by a consumer spending spree. Consumer spending, rather than investment or exports, was financed by ‘live-now-pay-later’ borrowing that led to an unsustainable boom. Second, a significant and growing fraction of household spending went into the purchase of imports rather than domestically produced goods and services. This led to an ever-widening balance of payments deficit, a fact that is hardly a good indicator of sound macroeconomic performance.

The growth of consumption and imports leads into the second of the two issues I mentioned earlier: the fact that a low household savings ratio has both demand-side and supply-side effects. The demand-side effect takes place through the increase in aggregate demand that results from increased spending on consumption. (The increase in aggregate demand is reduced, however, by the growth of spending on imports.) As the diagram below shows, a rightward shift of the AD curve from AD_3 to AD_4 results in excess demand pulling up the price level in a demand-pull inflation. In the early 1990s, however, when the UK economy was recovering from the earlier recession, the falling savings ratio shifted the AD curve from AD_1 to AD_2 , stimulating real output and employment rather than the price level.



Now let’s consider the supply-side effect of a fall in the saving ratio. In this context, savings are the ‘seed corn’ of next year’s investment. If household savings are in short supply because households are spending rather than saving their incomes, the rate of interest may rise. This increases the cost of borrowing, which in turn reduces investment in new capital goods by firms. The resulting failure to undertake investment projects essential for

modernising the UK economy makes UK goods and services uncompetitive in world markets. This contributes to the growth of imports, and causes the economy's *LRAS* curve to shift inward (in the extreme case shown in the diagram below), or to shift rightward by only a very small amount. But having said this, UK interest rates have not risen in recent years, which rather weakens this chain of reasoning.



To conclude, the immediate effect of the fall in the UK savings ratio was to shift the *AD* curve rightward. However, the main long-term effect may lie in the way the fall has harmed the supply side of the UK economy, and by implication, the UK's long-term macroeconomic performance.

e 18/25 marks awarded. This answer would be placed in Level 4. The main reason for not placing it any higher is that the answer drifts away from analysing the effect of household consumption behaviour into too much focus on the household savings ratio. Granted, consumption and the household savings ratio are related to each other. However, it would have been preferable to provide more analysis of how excess consumption fuelled the property boom in the years prior to 2008 and of how the consumption-led speculative bubble which accompanied the property boom, when burst, led the economy into recession. At the time of writing these notes, soon after the March 2013 budget, the Coalition government seems to be hoping for another consumption-led and house-price-led recovery from recession. The failure to achieve either an investment-led or an export-led recovery is leading to the fall-back position of relying on consumer spending to try to bring about improved macroeconomic performance, with the risk that it might all end once again in tears.

Scored 41/50

82% = solid A grade

GRADE E ANSWER

[01] Real income is cash, such as ten pound notes or two pound coins. Bank deposits by contrast are not real income. Real income is tangible, but bank deposits are intangible and cannot be seen.

e 0/5 marks awarded. This answer earns no marks. The candidate has confused income with money. The statement that cash is tangible while bank deposits are intangible is correct, but has nothing to do with the meaning of real income. A better starting point is the distinction between nominal income and real income (see the previous answer).

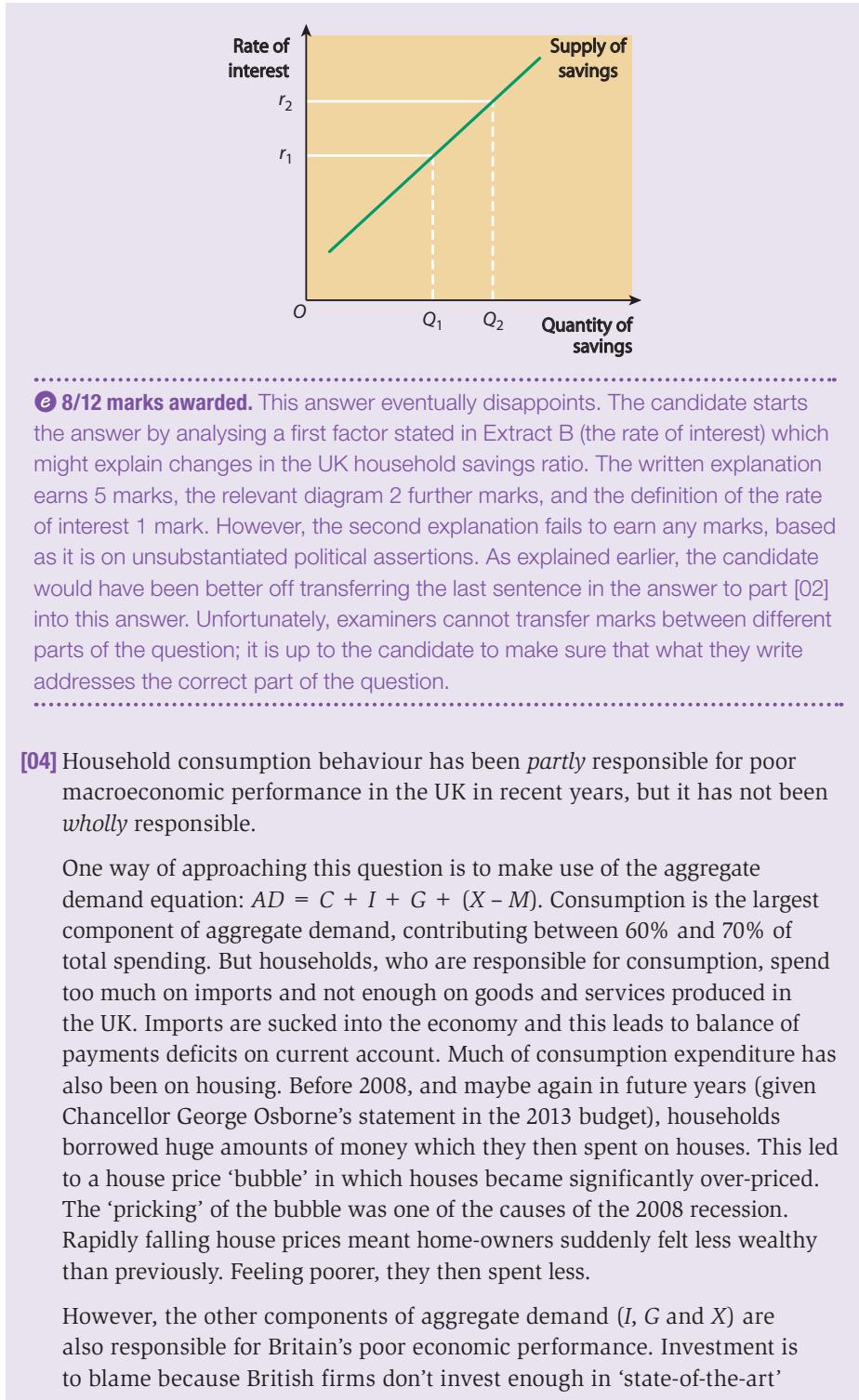
[02] Over the whole period from 2004 to 2012, the data showing the changes in the UK household saving ratio is more volatile (it fluctuates more) than the data showing the changes in the EU household savings ratio.

Both data series reach their peaks at more or less the same time, in mid-2009 for the EU household savings ratio, and in late 2009 for the UK household savings ratio. This is probably because people undertook precautionary saving as they were scared of losing their jobs in the depth of the recession which hit both the UK and the wider European Union.

e 4/8 marks awarded. The answer includes two valid significant points of comparison but unfortunately neither is backed up by statistical evidence from the data. In the last sentence the candidate drifts into discussing a possible reason why the saving ratios reached their peaks in 2009. While a good point is made, it is irrelevant to the question and earns no marks. The point would have been more usefully included in the answer to part [03] of the question.

[03] One of the factors which might explain the changes in the UK household savings ratio between 2004 and 2012 is changes in the rate of interest. The rate of interest is the reward for saving, and for deferring consumption to some year in the future. As my diagram shows, savings rise when the rate of interest rises, and fall when the rate of interest falls.

A second factor is the political party that forms the government. Voters were relatively confident about the Labour government until 2008 and felt they did not need to save as much as they did from 2008 onward in the latter days of the Labour administration. Savings rose, but with the election in 2010 of the new Coalition government, dominated by the Conservatives, they felt much more secure about the future and decided to save less.



new capital goods which would make them competitive in world markets. Because they are uncertain about the future, British firms prefer to put their profits into ‘cash mountains’ and dividend payments to shareholders rather than to take investment risks in new capital projects. The banking system is partly to blame for this; since the onset of the banking crisis in 2007, UK banks have been reluctant to lend to British businesses.

Successive governments must also shoulder some of the blame as they have built up huge budget deficits which have led to the sovereign debt problem. The socialist Labour government stifled enterprise and also gave far too much of our money to benefit scroungers. Since Labour was correctly voted out of office, from 2010 onward, the Coalition government has not done much better. Under the control of wishy-washy Lib-Dem government ministers, the Coalition keeps on giving in to Europe.

Finally, there are problems with exports. For this, the eurozone is to blame. The eurozone crisis has led to a fall in UK exports to countries such as France and Italy.

Also, Britain pays far too much to the EU in its contribution to the EU budget. This reduces UK standards of living. The EU also allows workers from Bulgaria and Romania to come over here and take our jobs and to act as benefit scroungers.

What we need is to slash public spending much more than we have been doing and to create a ‘fortress Britain’ which has nothing whatever to do with the European Union. The future should lie with Nigel Farage and UKIP and not with any of the other political parties.

e 7/25 marks awarded. After starting off with a promising sentence, the answer then deteriorates as it develops. While it is reasonable to structure the answer on the impact of changes in the components of aggregate demand on UK macroeconomic performance, the analysis is superficial and descends into a number of unsubstantiated assertions. Indeed, in its focus on the impact of the European Union on the UK economy, the answer becomes a rant against all things related to the EU. It is inadvisable to adopt such a one-sided approach, even if you strongly believe in the views you are putting forward. Just in case the examiner has views that are completely the opposite of yours, adopt the stance of a neutral consultant advising a client. Sentence structures which contain the words ‘On the one hand this... But on the other hand that...’ are always preferable to the polemical approach adopted by this candidate towards the end of the answer.

Note also that the candidate has made no attempt to explain what is meant by UK macroeconomic performance. Whenever you see these words in an exam question, you should start your answer by defining the term. If nothing else, the definition provides a bed-rock on which to develop your answer.

Scored 19/50 marks

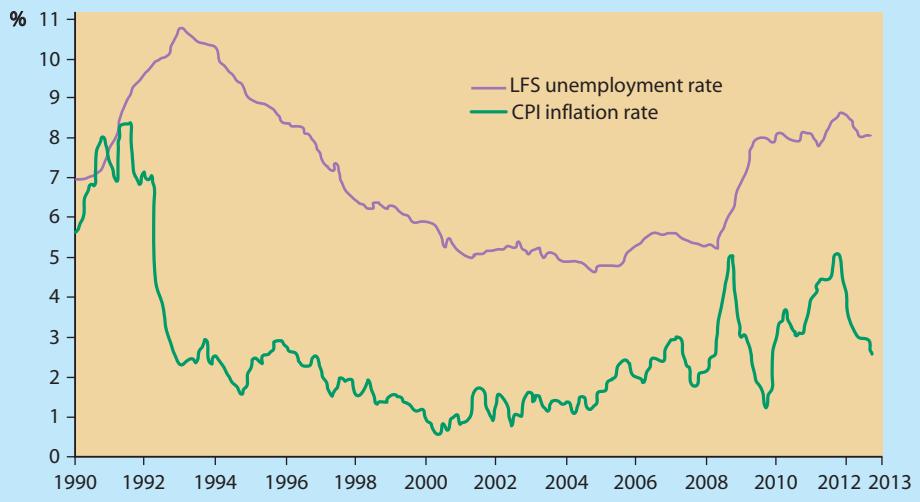
38% = E grade

Question 3 Unemployment and inflation

Study Extracts A, B and C, and then answer all parts of the question which follows.

EXTRACT A

UK unemployment and inflation, measured by the Labour Force Survey as a percentage of the labour force and the consumer prices index (CPI), 1990–2013



EXTRACT B

Cost-push inflation rears its ugly head

A number of factors have been contributing to an upsurge in cost-push inflation in the UK. These include input-price inflation within the UK and events happening in China. Input-price inflation is measured by the annual increase in the costs of raw materials and energy used by firms producing within the UK. Input-price inflation should not be confused with factory-gate inflation, though the former is a determinant of the latter. Factory-gate inflation measures the annual increase in the selling prices of goods produced by UK firms. Other factors determining the rate of factory-gate inflation are wage and salary costs and changes in labour productivity.

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Food prices are forecast to reach record highs next year with skyrocketing agricultural commodity prices causing the world to re-enter a period of 'agflation'. It has been predicted that the Agricultural Organisation Food Price Index will rise by 15 per cent by July 2013.

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Since the 2008 price 'spike', global food stocks have not been replenished. This leaves markets without any buffer in the event of adverse growing conditions in future years. However, efforts by governments to rebuild stocks are likely to add to food prices

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and take supplies off the market at a time when they are most needed. Government intervention could make matters worse. Attempts to deal with the problem of market failure could lead to the unintended consequence of government failure.

Source: news reports, 2012

EXTRACT C

Can monetary policy successfully reduce cost-push inflation?

In the late 1990s and the early 2000s, there was little cost-push inflation in the UK economy. This resulted from factors such as the benign effect on the UK economy of globalisation, and the rewards reaped by the supply-side policies introduced by earlier UK governments in the 1980s and early 1990s.

During these years, low UK inflation was caused primarily by excess aggregate demand.⁵ But at the same time, through raising or lowering interest rates, the Bank of England became very successful at managing the level of aggregate demand, which prevented overheating in the UK economy and prevented excessive demand-pull inflation.

In recent years, by contrast, the rate of inflation has not only been consistently above the 2% CPI target set by the government, it has almost exclusively been cost-push inflation.¹⁰ Over 40 years ago when the UK last experienced a bout of cost-push inflation, it was largely caused by wages rising faster than the growth in labour productivity. This was wage-cost-push inflation. But recent cost-push inflation has mostly been import-cost-push inflation, caused by increases in global energy and raw material prices over which the UK authorities have little influence or control.¹⁵

Are monetary policy and the changing of interest rates still appropriate for controlling inflation in the UK? Some say 'yes', via the effect of interest rates on the exchange rate. But others say 'no' and argue for other policies such as price controls, government subsidies and reducing the tax rates imposed on commodities such as oil.

Source: news reports, 2013

- [01] Define the term 'cost-push inflation' (Extract B, line 1). (5 marks)
- [02] Using Extract A, identify two significant points of comparison between the annual changes in the UK's unemployment rate and inflation rate, over the period 1990 to 2013. (8 marks)
- [03] Using the information in the data, explain how increased costs affect both the rate of inflation and unemployment. (12 marks)
- [04] Do you agree that governments should rely solely on monetary policy to control inflation, or should they also use other policies such as fiscal policy and price controls? Justify your answer. (25 marks)
(Total: 50 marks)

Commentary

Reducing unemployment and controlling inflation are two of the standard macroeconomic policy objectives that governments try to achieve. The levels of employment and unemployment and the rate at which inflation is occurring and possibly accelerating also provide some of the indicators of an economy's macroeconomic performance.

You should expect data-response questions quite often to focus on these two key macroeconomic variables. This question starts by asking for a definition of one of the two types of inflation you are expected to know: namely, cost-push inflation. Part [03] then asks for an explanation, not only of cost-push inflation, but also of the effect of rising production costs on the level of unemployment.

Although the other main type of inflation, demand-pull inflation, is only briefly mentioned in the data, a good answer to part [04] should recognise that the policies appropriate for reducing the rate of inflation depend on the underlying cause of inflation, rising business costs or excess demand. Part [04] is concerned with the appropriate policy instruments for reducing and controlling the rate of inflation.

GRADE A ANSWER

[01] Inflation is defined as a continuously rising average price level, or as a continuous fall in the value or purchasing power of money. Cost-push inflation is inflation caused by rising costs of production. These can be wage costs, raw material costs or energy costs. Rising wage costs lead to wage cost-push inflation; the rising costs of imported energy, raw materials and food contribute to import cost-push inflation.

e 5/5 marks awarded. The first two sentences of this answer earn all 5 marks. The rest provides useful elaboration and could have picked up marks had the initial definition been imprecise.

[02] Both the unemployment rate and the CPI inflation rate are shown at the beginning of the trend to be fairly close at 7% and 5.7% respectively in 1990. But, at the end of the period shown, the unemployment rate has risen to 8% and the CPI inflation rate has fallen to 2.8%.

The LFS unemployment rate peaks in 1993 at 10.5% which is two years after the peak of the CPI inflation rate of 1991. But this value is 2% lower at 8.8%. Similarly to this, the trough in the period shown for the CPI inflation rate occurs in 2000 at 0.5%. This is five years before the trough in the rate of unemployment in 2005 at 4.5% — 4% higher.

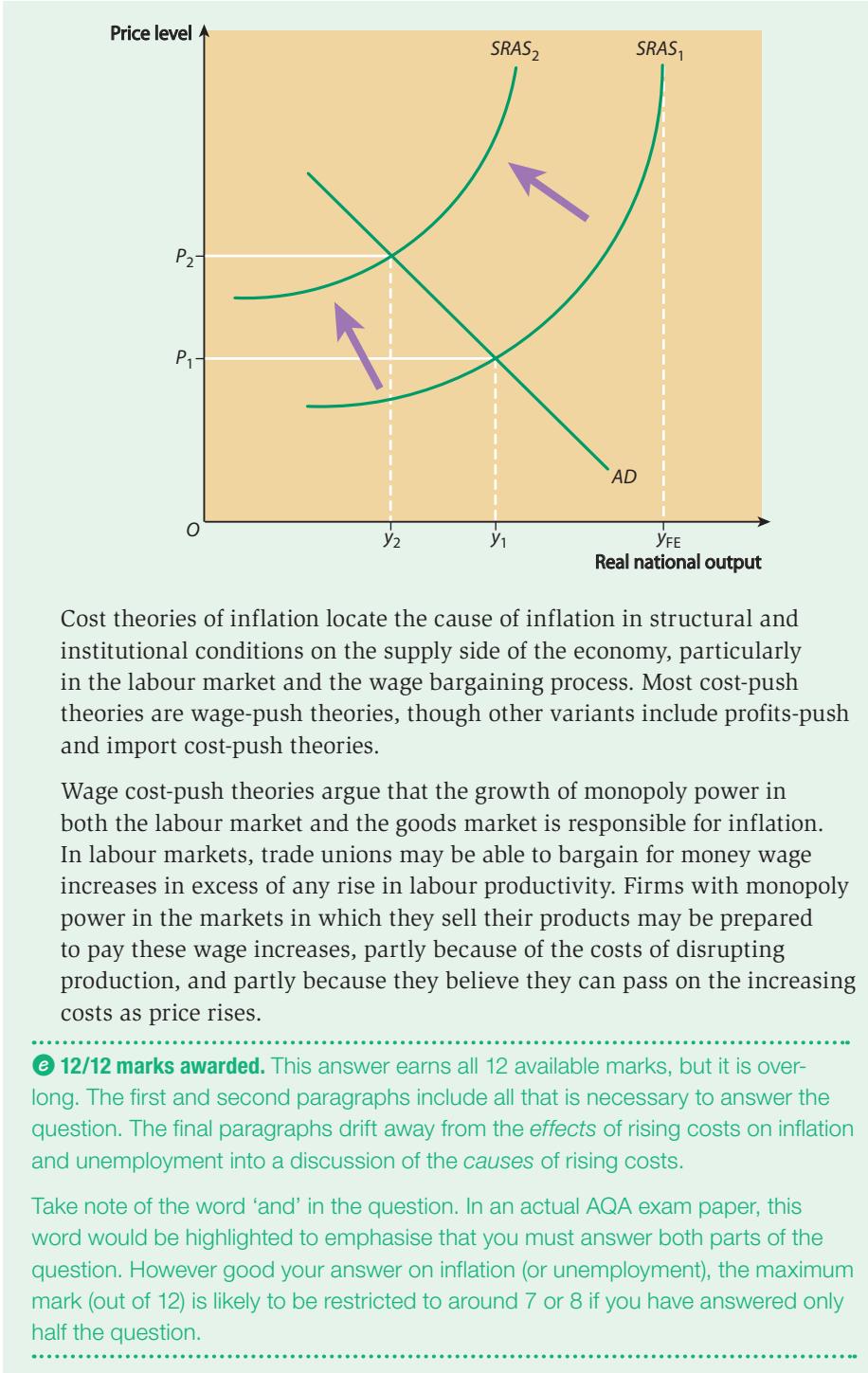
e 8/8 marks awarded. Sound advice when answering a part [02] or [06] question is to do the following:

- Make sure the points of comparison/features are significant.
- You can earn 2 marks for identifying a significant point of comparison/feature and 2 marks for statistical back-up or evidence from the data.
- Make sure you always quote units of measurement: %, index points, prices in £s, tonnes of output, etc.
- Compare/identify:
 - peaks and troughs (highest and lowest points in the data)
 - observations at the beginning and end of the data series
 - positive or negative correlations through all or significant sections of the data
 - trends and/or significant exceptions to a trend.
- Make sure you don't select a random event in the data.
- If you choose a particular event, make sure you relate it to the changes taking place over the whole of the data series.
- Make sure you compare *between* the two data series, rather than *along* a single data series, taken in isolation.
- Don't 'trawl' along the data.

This answer obeys my advice, identifying and comparing observations at the beginning and end of both data series, followed by peaks (and troughs) in the two data series. In fact, the candidate has identified three significant points of comparison, since peaks and troughs count as separate points of comparison. In this situation, the examiner is instructed to mark the 'best two' of the three.

[03] I have already explained in my answer to part [01] that rising costs of production lead to cost-push inflation.

The diagram below illustrates cost-push inflation. It shows that cost-push inflation happens when the SRAS curve shifts leftward or upward. The position of each SRAS curve is determined by *nominal* or *money* costs of production. If these costs rise, firms reduce the quantity of output they are prepared to produce and sell because it becomes unprofitable to sell as much as before at any given price level. In my diagram, the macroeconomic equilibrium level of output falls from y_1 to y_2 . (Note that y_1 was already well below the full employment level of output at y_{FE} .) If all or most firms in the economy reduce the amount they want to produce, they lay off workers because fewer workers are needed to produce lower levels of output. Cost-push inflation therefore leads to higher unemployment. It can create or worsen a recession, and cause 'stagflation', which is stagnant or flat-lining economic growth accompanied by an accelerating or unacceptable rate of inflation.



[04] Since the end of the period of ‘stagflation’ in the 1970s and 1980s, when accelerating cost-push inflation accompanied growing unemployment, the underlying assumption shared by UK governments and by the Bank of England has generally been, at least until 2006 or 2007, that modern inflation is caused by excess demand rather than by rising business costs.

There were a number of reasons for this. First, new employment legislation introduced in the 1980s and the early 1990s ‘tamed’ trade unions, whom governments blamed for the earlier cost-push inflation. Second, in the deindustrialisation process that decimated most of British manufacturing industry and activities such as coal-mining, jobs disappeared and unions found they had much less power. Third, the privatisation process transferred many activities from the public sector, where unions had been strong, into the private sector, where unions were much weaker.

Whatever the underlying reasons, cost-push inflationary pressures largely disappeared in the 1990s and early 2000s. During these years, governments believed that any inflation lurking in the system was of a demand-pull nature and caused by excess aggregate demand. As a result, monetary policy came to be used as the main policy for managing demand and controlling demand-pull inflationary pressures.

In UK monetary policy, the members of the Monetary Policy Committee (MPC) at the Bank of England estimate what the inflation rate is likely to be 18 months to 2 years ahead (the medium term) if policy (i.e. interest rates) remains unchanged. If the forecast rate of inflation is too far away from the target rate set by the government, in theory, the Bank is prepared to change interest rates immediately to prevent the forecast inflation rate becoming a reality. In theory also, the Bank is prepared to raise or lower interest rates to pre-empt or head off any likely adverse effects on the inflation rate of an ‘outside shock’ hitting the economy. (I have used the words ‘in theory’ because, since recession hit the economy in 2008, interest rates have been cut despite the fact that the inflation rate has been higher than the 2% CPI target!)

Monetary policy was implemented in this way from 1997, when the Bank of England was made operationally independent from central government, until the 2008 recession. At the time, the policy was judged to be remarkably successful. However, a problem with operating monetary policy in this way to control demand-pull inflation was the ‘one-club golfer problem’. The ‘one-club golfer’ takes as a metaphor the idea that a golfer, however great his talents, cannot hope to win a major championship by playing all his shots with a single golf club. So the government and the Bank of England cannot hope to manage the economy successfully with just a single policy instrument, namely monetary policy in general, and interest rates in particular.

Believers in the ‘one-club golfer’ critique of recent UK macro policy argue governments should be prepared to use fiscal policy in a more active way to manage demand. Nowadays, however, fiscal policy is used primarily to create the supply-side conditions in which the economy can grow, while monetary policy is used to manage aggregate demand and to control inflation. In modern fiscal policy, income tax rates are lowered, not to increase aggregate demand (though this will perhaps be an unintended side effect), but to create incentives for people to work harder and to be more entrepreneurial. Using fiscal policy to manage demand in order to control inflation would involve raising income tax rates, which would have undesirable supply-side consequences.

In any case, fiscal policy used in this way would, like monetary policy, be aimed at controlling demand-pull inflation. But the recent upsurge in UK inflation has been caused primarily by cost-push factors. These are not so much rising wage costs, but higher energy costs resulting from the rising prices of imported crude oil and natural gas. The current problem is that UK governments are unable to exert much control over rising imported energy and raw material costs.

Should there, therefore, be a return to price controls and income controls of the type last used in the UK in the 1970s? The answer is probably ‘no’. In the past, price and income controls targeted cost-push pressures caused by UK trade unions, or domestically induced cost-push inflation. But as I have explained, recent cost-push inflation is caused by factors outside the UK, over which UK governments cannot exercise control, particularly those emanating from China. In any case, the price and income controls used in the 1960s and 1970s didn’t work; they merely distorted the economy and stored up problems for the future when the controls were eventually removed. The controls suppressed cost-push inflation, but they didn’t *get rid* of its underlying causes.

e 21/25 marks awarded. Like all the best answers to a part [04] or [08] question, this answer evaluates as it goes along. The main argument is that UK governments and the Bank of England may be almost powerless in dealing with current UK inflation, which is largely of an externally induced cost-push nature. However, because of the absence of a concluding paragraph which would provide an overview of the various arguments introduced earlier in the answer, this answer would be placed at the top of Level 4 (17–21 marks) rather than in Level 5.

Scored 46/50 marks

92% = high A grade

GRADE D ANSWER

[01] Cost-push inflation is when inflation, the increase in the average price level, is caused by a rise in the cost of the factors of production. For example, if trade union activities push the price of wages up, companies can try and transfer this increase in prices onto the consumer and if this is the case across a massive industry such as mining in the northeast was for example in the 1980s this can affect the average price level.

e 5/5 marks awarded. The candidate is awarded the full 5 marks for a part [01] or [05] answer, although what the candidate writes becomes very unclear towards the end of the answer. An accurate definition was provided in the first sentence and a half, which justifies awarding all 5 marks.

[02] One significant point of comparison is that whilst the unemployment rate, as measured by the Labour Force Survey, as a percentage of the labour force increased over the period shown, inflation, as measured by consumer prices index CPI as a percentage of GDP, decreased over the period shown. Indeed, whilst unemployment, which was 7% of GDP in 1990 increased to 9% in 2013, inflation decreased from 6% of GDP in 1990, to 2.5% in 2013.

Likewise, whilst LFS unemployment rate peaked in 1993 at 10.5% of GDP, CPI inflation rate peaked mid-way through 1991 at 8.4%.

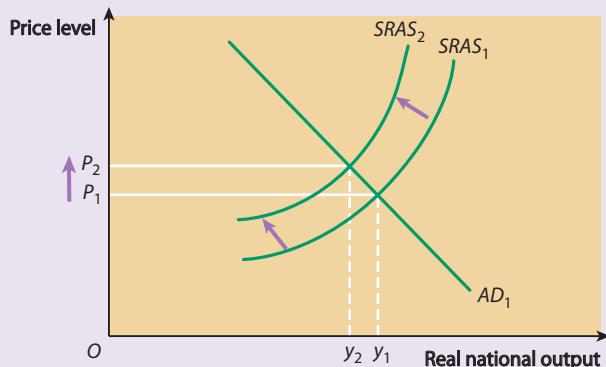
e 6/8 marks awarded. The first point of comparison contains significant confusion, which means that the marks for statistical evidence are not earned. The candidate makes reference to the inflation rate and the unemployment rate as percentages of GDP, which is simply nonsense. By contrast, the ‘short-and-sweet’ second point of comparison earns all the available 4 marks.

[03] Increased costs of the factors of the production, whether these be costs of raw materials and energy — the main source of problems today — or, as was 40 years ago the fact that trade union action particularly in mining meant that ‘wages were rising faster than labour productivity’, forces firms to transfer some of these extra costs of production onto the consumer. Thus increased costs, when they affect either a major industry such as that of coal in the 1980s, or a number of industries, affect the average price level and therefore can increase the rate of inflation. Thus, ‘increases in global energy and raw material prices’ imported into the UK since 2008 are one explanation for why, as seen in Extract A, from 2002 inflation has consistently been above the government target of 2%.

Moreover, increased costs affect unemployment, as if costs are higher, and profit margins are smaller, companies are going to be less able to, or less willing to, take on new staff. Indeed, if struggling whilst the

equilibrium rebalances itself as a result of cost-push inflation, firms are actually likely to lay people off — something we saw in 2008 when the unemployment rate rocketed from 5.5% to 8% in the space of 2 quarters. Another explanation for this is that there was an increase in frictional unemployment. When costs dramatically increased in 2008, and profits fell significantly due to deficient aggregate demand in the aftermath of the 2008 crisis, many people were made redundant, and were probably reluctant to accept jobs that offered lower pay.

e 6/12 marks awarded. Although the answer addresses the effect of costs on both the price level and unemployment, the analysis lacks sufficient rigor to earn full marks. Also, the candidate ignores the advice always to start a part [03] or [07] answer with two relevant definitions, a sure-fire way of picking up 2 marks. The answer is all too superficial. It would have benefited from the use of appropriate AD/AS analysis to explain how cost-push inflation can arise and about how the economy is likely to move into recession, which would increase unemployment. Here is an example of an appropriate diagram:



The diagram shows the SRAS curve shifting to the left from $SRAS_1$ to $SRAS_2$, following the increase in costs of production. This causes the price level to increase from P_1 to P_2 , which illustrates cost-push inflation, and the level of real output to fall from y_1 to y_2 . Although employment and unemployment cannot be shown explicitly on an AD/AS diagram, when output falls, in this case from y_1 to y_2 , employers reduce their demand for labour. Cyclical, or demand-deficient, unemployment results.

[04] Monetary policy, illustrated by ‘primarily the raising or lowering of interest rates’ by the Bank of England in order to prevent aggregate demand from either under- or ‘over-heating’ the economy, proved hugely successful at controlling inflation in the late 1990s/early 2000s as we can see in Extract A, which depicts how between 1994 and 2008 inflation

never rose above 3%, and stayed, for the most part consistently close to the government's target of 2%. This is not to say that they didn't use other policies such as price controls, subsidies and tax cuts. However, this was the only major change in policy that seems to be valid in terms of changing this novel period of stability. Indeed, whilst many commentators have linked the monetary policy used during these years to the crash of 2008, the fact remains that, whilst catastrophic with regards to many other aspects of the economy, and inflation started to fluctuate much more again after 2008, rocketing up to 4% and then down to 1% all in 2008, its fluctuations are still less wild than before monetary policy was introduced in the form we know today. In fact, we can see this in Extract A which demonstrates in 1990, which was before the government set the Bank of England the task of controlling aggregate demand and thus maintaining the aim for inflation in the early 1990s through interest rates, that the inflation rate reached 8.5%.

Nevertheless, whilst monetary policy is undoubtedly important in controlling inflation, it is by no means a good idea to rely 'solely' on its results to control inflation. Price controls are not only often extremely efficient at eliminating positive and negative externalities, but excellent assurances that the price level won't soar, too high too quickly, devaluing money as we see for example in Germany in the early 1930s. Likewise, the use of subsidies to offset cost-push inflation can, when thoroughly analysed using a cost to benefit scheme, be extremely effective. The government for instance has attempted to promote British farming, through the use of subsidies, both in an attempt to balance the economy, but also in anticipation of what we are already seeing in rising costs of imports and how this will affect overall inflation in later years. Likewise, tax cuts for small business, such as the one recently announced by George Osborne, can be used as a very useful incentive for entrepreneurship, in order to keep the market competitive, preventing the development of monopolies once again controlling price levels.

Thus whilst monetary policy is undoubtedly an extremely useful tool in controlling inflation, by no means should it be the only instrument of government policy. Whilst free market economists are often reluctant for the use of any government policies to control inflation, the question has an in-built assumption that this is the government's aim: to keep inflation as consistently possible around 2% due to the adverse effect fluctuating price levels have on unemployment and the value of money. Indeed, price controls in particular are a fundamental last resort that help to prevent not only confidence bubbles, which inevitably crash, but as stated earlier, the devaluation of money which can have a devastating impact both long and short term on the very fabric of society. To use an example cited earlier,

the devaluation of money in the German hyperinflation of the early 1920s, essentially eradicated the middle classes' savings, and was arguably one of the major factors for their subsequent support of Hitler's regime and the economic stability it offered.

e 7/25 marks awarded. This is a 'rag-bag' answer, which drifts all over the place and shows some shaky knowledge of history — a subject that the candidate was also studying — but, as with the answer to part [03], no application of the economic analysis that is expected at AS. There is, however, sufficient analysis to reach Level 2 (4 to 9 marks) and the answer has been placed at the mid-point in that Level. There is some evaluation of the issues posed by the question, but because of the poor analysis, it is weak evaluation.

This candidate's use of sentence structure and punctuation is erratic, making it difficult to follow the arguments presented.

AQA's advice on what candidates must do to display the four required skills of *knowledge and understanding, application, analysis and evaluation*, is given below. Look carefully at the section on evaluation, which outlines the difference between *weak evaluation* and *strong evaluation*.

Skills descriptors	
Knowledge and understanding	Candidates show an awareness of economic terminology, concepts and theories, together with real world issues, especially real world issues relevant to the UK.
Application	Candidates apply economic terminology, concepts and theories to those issues discussed, in an appropriate way. In those questions providing candidates with data, examples from the data or from their own knowledge of the real world will be presented to support arguments.
Analysis	Candidates develop an economic argument in a clear and logical way with the help of diagrams where appropriate. The more complex the analysis, the more stages will be included in the chain of reasoning.
Evaluation	Candidates weigh up evidence, judge the relative importance of factors relevant to an issue and arrive at reasoned conclusions. Strong evaluation will be supported by arguments from economic theory and by evidence from the real world. Weak evaluation will only consist of assertions unsupported both by evidence and by any analysis which accompanies it.

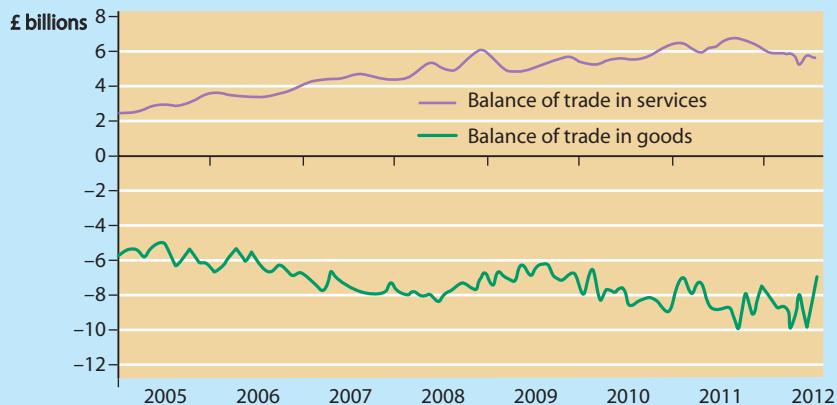
Scored 24/50 marks

48% = D grade

Question 4 The balance of payments

Study Extracts A, B and C, and then answer all parts of the question which follows.

EXTRACT A **The UK balances of trade in goods and services, January 2005 to July 2012**



EXTRACT B **The current account deficit worsens**

The statistics for the balance of payments on current account were once a hot political issue, which has faded away in recent decades. This is because the liberalisation of financial markets, which is a part of globalisation processes, has allowed developed countries to finance current account deficits quite easily by borrowing on world financial markets.

5

But in 2013, the government's goal of building an economy that can pay its way in the world began to look more distant than ever as official statistics showed Britain running up a huge current account deficit.

'Efforts to rebalance the UK economy towards export-led growth, which could draw the economy out of recession, may be foundering because of the worsening economic position of the UK's principal European trading partners,' said a spokesman for Barclays Bank.

10

The Bank of England continues to hold Bank Rate at 0.5%, where it has remained since 2009. The Bank hopes that the extremely low Bank Rate will increase aggregate demand through its effects on domestic consumption and investment. It also hopes that recovery and growth will be stimulated by the effect of the low Bank Rate on the exchange rate, and thence on exports, imports and the current account of the balance of payments.

15

Source: news reports, 2013

EXTRACT C

Demand-side and supply-side policies and improving UK macroeconomic performance

The last 30 years have seen the emergence of monetary policy as the most important policy tool used to control the level of aggregate demand in the economy. Except for the short period of the ‘fiscal stimulus’ from 2008 to 2010, governments have relied on interest rates and other monetary policy instruments, rather than fiscal policy alternatives, for managing the level of aggregate demand in the economy.

5

The objective of demand-management policies is to control the level of demand for goods and services in the economy as a whole, with particular reference to achieving as high a level of employment as possible and sufficient exports to keep foreign trade close to balance, and keeping inflation under control.

But reducing aggregate demand in order to control inflation or reduce imports ‘punishes’ the domestic economy. Government ministers and Bank of England officials have sometimes justified this, arguing that ‘unemployment is a price well worth paying for controlling inflation and the balance of payments’.

10

However, the main effect of reducing aggregate demand in a ‘stop–go’ policy cycle is arguably a fall in investment spending by British industry, which in the long term reduces the competitiveness of UK exports. Partly for this reason, many economists now believe that control of both inflation and the current account of the balance of payments depends far more on the success of supply-side policies than on demand-side policies.

15

- [01] Define the term ‘balance of payments on current account’ (Extract B, line 1). (5 marks)
- [02] Using Extract A, identify *two significant points of comparison between the changes in the UK’s balance of trade in goods and the changes in the balance of trade in services over the period shown by the data.* (8 marks)
- [03] With the help of the information in Extract B, explain how a significant fall in Bank Rate might affect the UK balance of payments on current account. (12 marks)
- [04] Evaluate the view expressed in Extract C that a significant reduction in the size of Britain’s balance of payments deficit on current account will depend much more on the success of supply-side policies than on demand-side policy. (25 marks)

(Total: 50 marks)

Commentary

International economics appears in virtually every Unit 2 exam on the national economy. At AS, you don’t need to know much about international trade. However, some trade-related knowledge may be tested in the exam, particularly in relation to specialisation and exchange, and the division of labour in an international context, when different countries specialise in producing different goods and services.

Although trade theory is not in the AS specification, the balance of payments on current account is an important AS topic. You need to understand the main items in the current account, the balance of trade in goods and the balance of trade in

services. Note also that in exam questions, the balance of trade in goods may be disaggregated into items such as the balance of trade in manufactured goods and the balance of trade in oil. Likewise the balance of trade in services may be split into categories such as the balance of trade in financial services and the balance of trade in tourism.

Capital flows are an A2 topic and not an AS topic. Nevertheless, some knowledge of capital flows is useful in order to understand the linkage between interest rates (in monetary policy) and the exchange rate. An increase in interest rates (contractionary monetary policy) attracts capital flows into the pound, which increases the demand for pounds and then the exchange rate. A cut in interest rates has the opposite effect.

The relationship between interest rates and exchange rates is highly relevant for understanding important elements of circular flow and AD/AS theory. An increase in the exchange rate (resulting, for example, from the increase in interest rates mentioned above) makes imports cheaper in the UK and British exports more expensive. Other factors being equal, the current account will worsen, perhaps moving into deficit or increasing an already existing deficit. A fall in the exchange rate should have the opposite effect. Therefore it is important to understand the current account of the balance of payments and the way it affects, and is affected by, interest rate and exchange rate changes.

GRADE A ANSWER

[01] The balance of payments is the part of the National Accounts that measures all the currency *flows* into and out of the economy in a particular time period, e.g. a month, a quarter or a year. The current account measures income flows, whereas the other main part of the balance of payments measures capital flows. A capital flow out of the economy is likely to generate income inflows in future years. These appear in the current account. However, the main items in the current account are exports and imports (X and M). Exports of goods earn income which flows into the UK (a credit item in the current account). Conversely, when UK residents buy imports they are spending part of their incomes on goods and services produced in other countries (a debit item in the current account).

e 5/5 marks awarded. The answer earns full marks and shows a good understanding of the main items in the balance of payments on current account. However, the answer could be shorter and more focused on the set question.

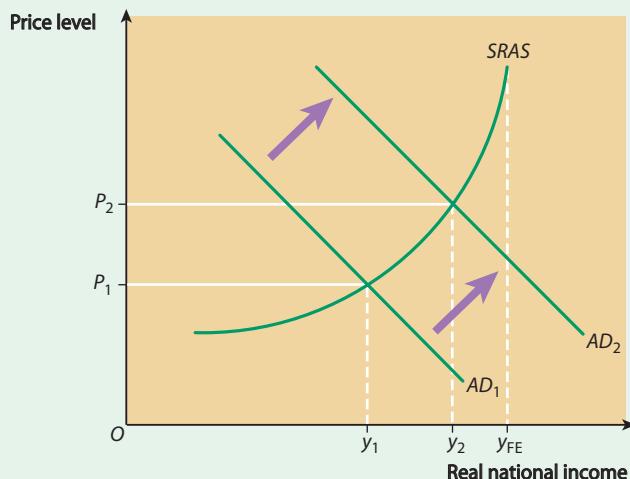
[02] Extract A shows the balance of trade in goods in deficit throughout the 7-year period, while the balance of trade in services is in surplus in all the years shown by the data. At the beginning of 2005, the services surplus was over £2 billion, while the goods deficit was just under £6 billion.

The balance of trade can be calculated by adding together the balance of trade in goods and the balance of trade in services. The balance of trade, which was in deficit to the tune of -£4 billion in 2004 (-£6 billion + £2 billion), had narrowed by 2012, the last year in the data series, to about £1.75 billion (-£7 billion + £5.25 billion).

8/8 marks awarded. As always, two points of comparison reinforced by accurate and relevant reference to the data (or statistical backup) are all that is needed for full marks on part [02] or [06].

[03] The rate of interest is the price of money. For savers it is the reward for saving. For borrowers the rate of interest is the cost of borrowing. The Bank of England's interest rate (called Bank Rate) is the rate at which the Bank, which is the UK's central bank, lends money to other financial institutions, which are mainly private enterprise banks such as Lloyds.

A significant fall in Bank Rate will cause international speculators to move their funds out of sterling bank deposits (which earn sterling interest rates) and into euro, dollar or yen bank deposits (which earn the higher interest rates on offer on those currencies). This increases the supply of pounds on foreign exchange markets which in turn causes the pound's exchange rate to fall. Imports now become more expensive in the UK while British exports become cheaper in overseas markets. The current account improves, perhaps reducing a deficit or moving the current account out of deficit and into surplus.



However, the process I have just explained may be countered by other changes that work in the opposite direction. As the diagram above shows, a cut in interest rates (expansionary monetary policy) shifts the AD curve rightward from AD_1 to AD_2 . This increases the level of real national income

from y_1 to y_2 (though it also increases the price level). At higher levels of income, people spend more on imports and the balance of payments on current account deteriorates. This latter effect may be reinforced by the rising price level, which reduces the competitiveness of UK exports in world markets.

e 12/12 marks awarded. In the first sentence the definition of the rate of interest earns 1 mark, as does the statement that Bank Rate is the Bank of England's interest rate. The analysis in the second paragraph teeters on the edge of A2 knowledge and theory. However, the explanation offered in the third and final paragraph is firmly in the AS specification. With the help of the definition provided in the first paragraph and the AD/AS diagram, the second paragraph on its own provides sufficient explanation to earn all 12 marks.

Finally, note that the word 'sterling' is used for the UK pound in an international context. Sterling interest rates are the rates that can be earned from holding funds in the UK pound rather than in another currency such as the US dollar.

[04] Fiscal policy and monetary policy are demand-side policies when they are used to manage the level of aggregate demand in the economy. By contrast, supply-side economic policies are the set of government policies that aim to change the underlying structure of the economy and improve the economic performance of markets and industries, and also of individual firms and workers within markets. For the most part, supply-side policies are also microeconomic rather than simply macroeconomic, since, by acting on the motivation and efficiency of individual economic agents within the economy, the policies aim to improve general economic performance and the economy's underlying production potential.

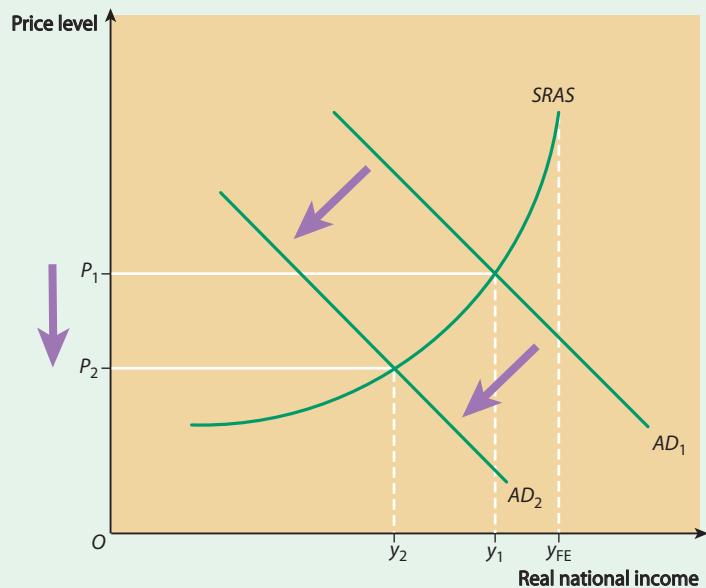
Before getting to grips with the question, I shall first define monetary policy and fiscal policy. Monetary policy is the part of the government's overall economic policy that aims to achieve one or more of the government's policy objectives, using monetary policy instruments such as the rate of interest and controls over bank lending. In recent years, Bank Rate has been the main monetary policy instrument. Controls over bank lending have fallen out of favour, though a new policy instrument called quantitative easing is sometimes also used.

In a similar way, fiscal policy is the part of the government's overall economic policy that aims to achieve one or more of the government's policy objectives, using the fiscal policy instruments of government spending, taxation and the government's budgetary position (deficit or surplus).

Fiscal policy can be used in a supply-side rather than in a demand-side way, as indeed it has been used in the UK in some recent years. However, for many years, particularly during the Keynesian era in the 1960s and 1970s,

both monetary policy and fiscal policy were used to manage aggregate demand. At this time, the UK economy was characterised by what ex-Labour Chancellor Gordon Brown called 'boom and bust' in the economic cycle. Successive governments engineered economic booms (particularly before general elections) by increasing aggregate demand. In fiscal policy this was achieved by cutting taxes and/or increasing government spending. Either way, the government increased its budget deficit, which served as an injection into the circular flow of income. Expansionary policies also shifted the AD curve rightward. However, this pulled up the price level in a 'demand-pull' inflation and sucked imports into the country. As a result, the balance of payments on current account deteriorated, with the payments deficit widening. Eventually the boom was brought to a halt, either by an inflation crisis, or a balance of payments crisis, or a combination of both.

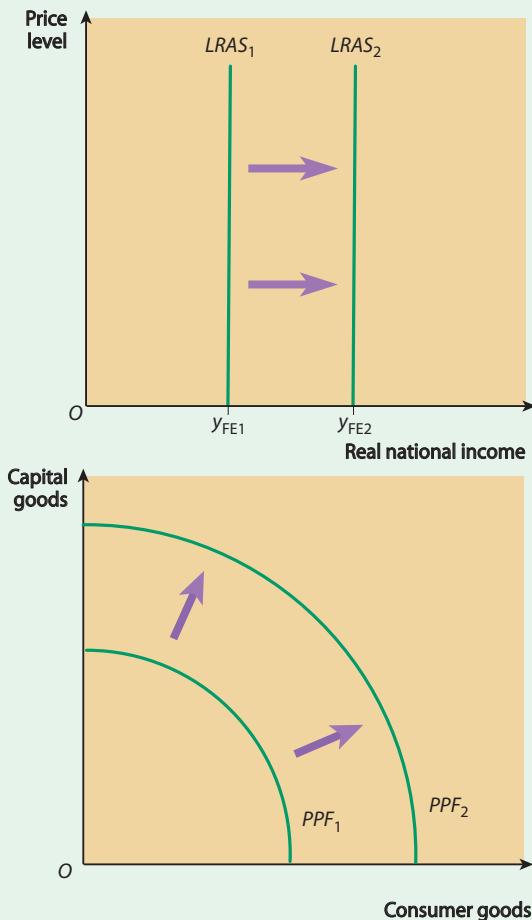
It was at this point that demand-side policies were thrown into reverse. The Bank of England, acting on behalf of the government, raised interest rates (contractionary monetary policy) and the Treasury (the government's finance ministry) raised taxes and/or cut public spending, thereby reducing the size of the budget deficit. These policies, the effect of which is illustrated in the AD/AS diagram below, took demand out of the economy, including the demand for imports. Used in this way, demand-side policies were 'expenditure-reducing' policies which improved the balance of payments by reducing aggregate demand in the economy.



On the downside, however, contractionary demand-side policies 'punished' the domestic economy by slowing growth (and possibly pushing the economy into recession) and by increasing unemployment. This was the 'bust' part of the 'boom and bust' cycle. The end result was that demand-side policies could

possibly reduce a payments deficit in the short run, but at a cost of long-term damage to the economy. In the boom and bust cycle, businessmen often argued that they could not make long-term investment decisions because they were uncertain whether the good times would last. An investment project undertaken in the boom would come on-stream just as the economy entered recession, with falling demand rendering the investment unprofitable.

Recent UK governments have lost faith in using demand-side policies to reduce a current account deficit. Monetary policy is still used to manage aggregate demand, but with control of inflation in mind and the stimulation of economic recovery, rather than to correct a balance of payments deficit. Certainly with regard to fiscal policy, recent governments have focused on the supply-side effects of tax changes, rather than on how they influence aggregate demand. The exception was in the short-run 'fiscal stimulus' when, between 2008 and 2010, the then Labour government used public spending and tax cuts to try to 'spend the economy out of recession'.



The main aim of supply-side fiscal policy is to promote macroeconomic stability and tax rates that encourage the owners of businesses to be entrepreneurial. By shifting the economy's *LRAS* curve rightward and by moving the economy's production possibility frontier outward (as shown in the diagrams above), supply-side policies equip the country with modern up-to-date industries, particularly the financial service industry, that are competitive in world markets. For supply-side economists, the way to reduce a current account deficit is to arm the economy with efficient competitive industries which produce goods and services that foreigners and UK residents both want. Personally, I have my doubts. Arguably supply-side policies have led to the decimation of manufacturing industry and to deindustrialisation. In my view, it is no good just relying on the export of services. As a socialist MP once said: 'Service industries need something to service, and that thing should be manufacturing industry.' In conclusion, it is a moot point as to whether Britain's growing payments deficit has been caused by demand-side policies reducing aggregate demand and creating fiscal uncertainty, or by supply-side policies destroying the UK manufacturing sector.

e 19/25 marks awarded. Although this answer becomes rather polemic at times and includes assertions that have not really been substantiated, there is enough quality to merit a Level 4 mark. A Level 5 mark was possible had the answer made explicit reference to the data, particularly to Extract C. Although the question is not prefaced with the words 'With the use of the data...', it does refer candidates to a view expressed in Extract C. This means that candidates should make at least some reference to the information in the extracts. Also, the final sentence is about causes of the deficit and not about *policies to reduce* the deficit.

Scored 44/50

88% = high A grade

GRADE C ANSWER

[01] The balance of payments on current account is the same as the balance of trade, i.e. exports minus imports.

e 2/5 marks awarded. The answer is incorrect, but illustrates a common error made by candidates. The balance of payments on current account, which measures all the income currency flows in and out of an economy over a particular period (e.g. a year), includes other income flows additional to income received and income paid for exports and imports. The other items in the current account, but not in the balance of trade, are income flows (mostly investment income flows) and current transfers. Here is an example of the current account structure for 2012:

Balance of trade in goods and services:	-£36.20 billion
Total income balance, including investment income:	£1.56 billion
Current transfers balance:	-£23.06 billion
Current account balance:	-£57.70 billion

The mark scheme for a [01] or [05] question allows some marks to be awarded, even though a complete definition has not been given. In this case, defining the balance of trade, but not the whole of the current account or the balance of payments, can earn 2 marks.

- [02] The data show the balance of payments on current account in deficit to the tune of about £4 billion in 2004 at the beginning of the data period, with the current account deficit falling to about £3 billion in 2012 at the end of the data period.

A second significant point of comparison is that the balance of trade in goods surplus increased over the whole data period, as did the balance of trade in services deficit.

e 2/8 marks awarded. Unfortunately, this answer earns only 2 marks, awarded for the second point of comparison. Although this point of comparison is correct, it is not backed up by evidence from the statistics, so cannot earn any more marks. There are no marks for the first point of comparison, which confuses the balances of trade in goods and services with the whole of the current account. There are insufficient data in Extract A to allow calculation of the overall balance of payments on current account and in any case the candidate has not explained how the incorrect figure of £3 billion has been arrived at.

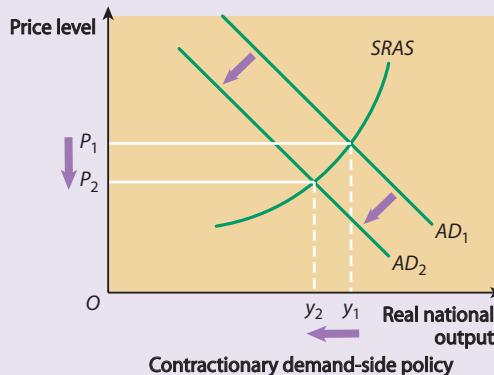
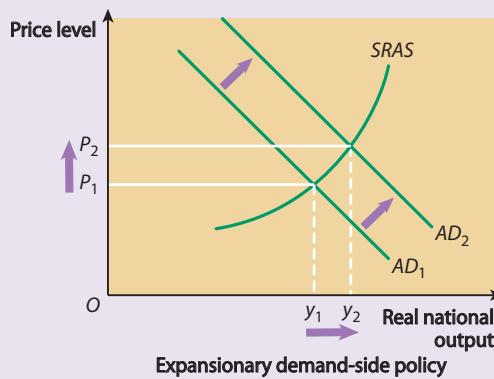
- [03] Interest rates are the reward for saving. A fall in Bank Rate generally is followed by a fall in other short-term interest rates. This is because the cost of borrowing by commercial banks such as Barclays falls when it becomes cheaper to borrow from the Bank of England, and because they have access to cheaper funds, the banks now pass on the cheaper cost of borrowing when they lend on the funds to their customers. However, at the same time, the commercial banks reduce the rates of interest they pay to customers who deposit funds with them.

This then causes movements of capital out of the pound, as the owners of these funds decide to deposit them in other currencies such as the US dollar. The mass selling of pounds on foreign exchange markets causes the value of the pound to fall. The next to last link in the logical chain of reasoning is exports becoming cheaper in overseas markets, and imports becoming more expensive in the domestic market. Finally, the balance of payments on current account improves. For example, if there is a small

current account deficit to start with, the deficit will get smaller and the current account may even move into surplus.

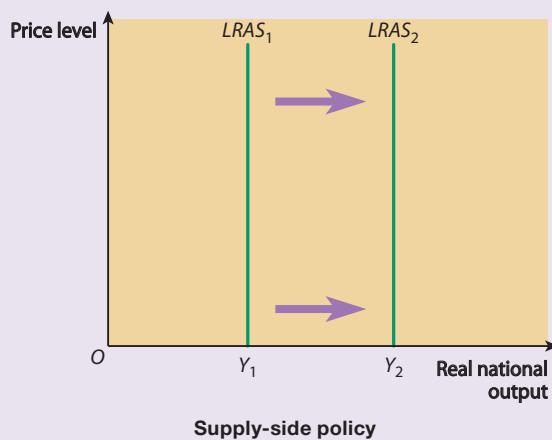
e 12/12 marks awarded. The definition at the beginning of the answer earns 1 mark, while each of the six valid links made by the candidate in the rest of the answer earns 2 marks. You will notice that this makes 13 marks in total, but the maximum that can be awarded is 12 marks.

[04] A demand-side policy is one which aims to shift the AD curve to the right or left. A shift to the right is called an increase in aggregate demand, whereas a shift to the left is a decrease in aggregate demand. Both are illustrated in the diagrams below:



Examples of demand-side policies are monetary policy and fiscal policy. For example, an increase in interest rates causes saving to rise, consumption to fall, and investment also to fall. As a result the AD curve shifts to the left as shown in the lower panel.

By contrast, a supply-side policy is one which, at the macroeconomic level, aims to shift the LRAS curve to the right, as shown in the diagram below:



Fiscal policy can also be used as a supply-side policy as an alternative to using it as a demand-side policy. The government uses fiscal policy as a supply-side policy when it cuts taxes to create incentives in the economy's labour markets. Cuts in government spending can also be used to free resources for the private sector to use.

Which type of policy should be used to reduce a balance of payments deficit on current account? My view is that both should be used to reinforce each other, rather than as alternatives to each other. Contractionary demand-side policies reduce people's incomes so they spend less on imports. At the same time, supply-side policies increase the economy's capacity to produce goods which are price competitive and quality competitive, and therefore attractive to foreigners.

e 10/25 marks awarded. The answer is strong on economic knowledge, which takes the answer into Level 2. The diagrams are relevant and have been accurately drawn. However, the diagrams and the knowledge displayed have not been used to address the issue posed by the question. The analysis in the final two sentences allows this answer to climb a little higher, which means it just reaches Level 3 (*reasonable answer, including some correct analysis but very limited evaluation*). This may be a slightly generous award, as it is difficult to find any evaluation in the answer. The answer certainly climbs no higher than borderline Level 3.

Scored 26/50 marks

52% = low C grade

