## AS <br> ECONOMICS

7135/1 The operation of markets and market failure Report on the Examination

Specification 7135
June 2018

## General Comments

## Section A (multiple choice questions)

The level of difficulty for the Paper 1 multiple choice questions (MCQ) was similar to last year. The percentage of students choosing the correct key (answer) is known as the facility index. The average facility index for all twenty questions in 2018 was $63 \%$, slightly lower than the average of 64.8\% in 2017.

Note: the percentage in brackets is the facility or the percentage of students choosing the correct answer.

## Questions students found less demanding

Question 5 (94\%)
This was the easiest and students clearly know the definition of profit and can do a simple calculation correctly.

Questions 2 (88\%) and Question 4 (84\%)
This showed that most students are confident with basic demand and supply analysis.

## Questions that students found more demanding

Question 15 (24\%)
This tested the ability to identify the joint supply of two goods from shifts in supply and demand curves in both markets. Students often find it difficult to link a change in one market to a change in another one. In this question $37 \%$ chose key B (derived demand) and $27 \%$ chose key A (composite demand).

Question 11 (32\%)
This question tested a new part of the AS specification on market structure and barriers to entry. The question required students to know that increased product differentiation by a firm can raise barriers to entry as it makes it harder for a new firm to find a gap in the market. 34\% of students incorrectly chose key $D$ but there is no reason why expanding the range of products made should increase productivity.

Question 6 (40\%)
This required students to know that trade is needed to take advantage of specialisation, and that bartering makes trade very difficult. $40 \%$ of students chose key B but there is no reason for competition to limit the benefits of lower costs brought about by specialisation.

Question 10 (42\%)
This question involved a calculation using an income elasticity of demand. Students often find it harder to deal with negative numbers, and $43 \%$ incorrectly chose key $B$ as they calculated that sales had fallen by $2 \%$ instead of rising by $2 \%$.

## Questions with prominent 'distractors'

These are questions where a relatively high percentage of students chose one particular incorrect key (other than those among the hardest questions above). These show some common misconceptions held by students.

## Question 1

$30 \%$ of students chose key C, incorrectly believing that the main purpose of economic activity is to maximise profits rather than to satisfy consumer wants.

## Question 3

$28 \%$ of students chose key A, incorrectly believing that a higher petrol tax would reduce the PED for petrol (whereas a move up the demand curve increases PED). Students needed to have a good understanding of the determinants of PED to answer this question.

## Question 7

$23 \%$ of students chose key C which may illustrate the common belief that an externality is the same as a social benefit or social cost. It would be possible for the negative externality from smoking to outweigh the private benefit, thus resulting in a negative social benefit (key C). However, the question states, 'This means that' and so excludes this possibility. Students need to interpret carefully the logic of the question.

## Question 19

$29 \%$ of students chose key A. Concentration ratios are a new topic on the AS specification and students often incorrectly think that a high concentration ratio means a large number of firms in a market rather than a small number.

## Section B

There was a split between the two context questions with $61 \%$ of students opting for Context 1 and $39 \%$ opting for Context 2. Although there were some pleasing answers to Context 1, on average, students performed better on Context 2. This may well be that the libraries context and related 25 mark essay was seen, perhaps by students as a more accessible.

The overall level of responses suggests that students still lack confidence with and struggle somewhat with the economics of market failure and the finer nuances of how markets work.

It is pleasing, however, to be able to report that many of the students entered for this third examination sitting of the new AS level Economics specification performed well. Good knowledge and understanding of economic terminology, concepts and principles was often demonstrated but analysis was not always as well developed, despite good (on occasions rather extensive) use of the context material. The analysis attempted by some of the weaker students was often unconvincing, particularly in respect of explaining the economics of a market failure and the dynamic nature of the price mechanism.

Students would benefit from being provided with as many opportunities as possible to demonstrate a fuller analytical understanding of economics in a wide variety of real world situations. This could be through discussion as well as by way of written responses to questions set by the teacher. Embedding logical chains of reasoning into the analysis, using the full economist's toolkit when referencing real world contexts is crucial.

Some key concepts were not fully understood. For example, the terms 'public goods' and 'merit goods' were often used incorrectly or their use was suspect; weaker students also confused their knowledge and understanding of minimum and maximum prices, as well as their application. Other economic concepts were not used with sufficient precision and accuracy, some of which are indicated below. To communicate clearly and to avoid mistakes that lead to invalid conclusions, it is important that students acquire a firm grasp of basic economic principles.

Many students made extensive use of diagrams in their answers. However, some of these diagrams were not explicitly used or were inaccurate or not labelled correctly; students should be aware that credit is unlikely to be given for a poor diagram. Where appropriate, the use of suitable, fully-labelled diagrams should be encouraged. However, they should only include a diagram when it is relevant to the question and adds value to the response.

At least 15 per cent of the marks at AS level depend on a student's ability to demonstrate quantitative skills. When asked to perform a calculation, students would be well advised to show their working as part-marks can be awarded for the correct method even if the final answer is incorrect.

Selective use of the extracts should also be encouraged. The extracts are there to help the student respond to the questions and can be used to help support judgements. When answering the last part of each context, the quality of the evaluation is a key determinant of the mark awarded. Good quality evaluation requires that judgements are supported by sound analysis and/or evidence. The evidence used to support judgements may be qualitative or quantitative. Some evidence is included in the extracts but it must be used appropriately. Combining evidence from different extracts is one way of strengthening the quality of evaluation. Sound, fully developed analysis should be an essential element of students' responses to the last two parts of each context question. In the last part, good analysis is the foundation for good evaluation; they go together. Some of the weaker answers to the last part of Context 1, used the extracts extensively but were weak because the underlying economic analysis was missing.

Good students evaluated as they worked their way through their answers to the last part of the context questions but only the very best students provided a convincing, well-developed, supported conclusion. It is a difficult skill that students need to practise. The teacher could provide their students with a good answer to a question which has had the conclusion removed. Students could then be asked to write their own conclusion to help them develop the skill of producing a supported final judgement.

## Context 1: Libraries

## Question 21

The majority of students were able to provide an accurate definition of public goods, recognising the two elements that it is a product that is both non-excludable and non-rival. Some students chose to explain these terms without specifically stating that a product was non-excludable and non-rival. However, a minority provided a definition that showed some understanding but was incomplete in some respect; for example, by only stating that it was a product provided by the government or the state.

## Question 22

Given the increased emphasis on quantitative skills, a large proportion of students achieved full marks on this question. Several students wrongly suggested that the amount spent on libraries per person in England could be as high as $£ 14$ million. Many students also came up with the correct value but omitted the units ( $£$ ). Some students clearly misread the question and did not express
their answer to the nearest pound. Some reward (1 mark) was given for a correct calculation with an incorrect answer even when the units were missing.

## Question 23

The important principle for this question is that students need to identify and clearly state a significant comparison which must be supported by accurate use of the data. For students who have been taught the correct technique for this question, it posed few difficulties. The most common response was to highlight in the first point the highest percentage in each age category, followed by the lowest percentage in each age category for the second point. Quoting the data without either a significant point of comparison or a significant feature of one data series will not gain any marks. The majority of students were able to identify two significant points of comparison and support their comparisons by accurate use of the data, but one third of students achieved only 2 marks or less for this question. As in previous years for this type of question, marks were lost due to the failure to use the correct units (\%) and/or the relevant dates. Some students misread the question, quoting figures from the 25-44 age range column. Another error included not recognising that the data covered split years (2008-2009, 2009-2010 etc.), rather than one specific calendar year. Accurate use of the data is crucial in this question to achieve full marks.

## Question 24

This question produced a very interesting range of responses. Most students drew the more 'conventional' PPC that bowed outwards; many also drew the straight line or linear variation. Some more interesting shapes perhaps reflect the difficulty and pressure of drawing free hand in a public examination. The exact shape of the PPC did not matter, but it needed to touch both axes. Many students scored full marks on this question with the majority of students scoring either 3 or 4 marks. Although tolerance was factored into the mark scheme, an incorrectly positioned 'point $X$ ' some students were very imprecise and did not clearly mark it on the relevant axis - constrained students to a maximum of 2 marks. Some students incorrectly positioned 'point $X$ ' where no resources are used for 'Other local government services'. Many students also failed to label the PPC appropriately - given the context of the question, it was essential to have 'other' and 'local' as well as 'government' as one of the labels.

## Question 25

This question is marked using a level of response mark scheme that assesses knowledge and understanding, application and analysis. When awarding the mark, a judgement is made regarding the overall quality of the response. Only a small minority of students wrote a Level 3 answer with the vast majority of responses falling into Level 2.

Stronger students generally started their answers by identifying two relevant factors taken from the clear signposting in the extract material and explained with good logical chains of reasoning, how they have influenced the demand for library services. Good application was demonstrated by drawing on information provided in the extracts; for example, the statement that "Changes in technology and lifestyles have caused many to question the purpose of the local library". Good answers to this question focused on how changes in technology, both the availability of, as well as the price of, has strongly influenced the patterns of how we read and where we read or seek out and gather information. Best responses were able to draw the link behind the greater availability of a substitute good or lower costs of production and greater supply of e-Books contributing to a fall in demand for library services, whilst recognising they might have a positive cross price elasticity of demand. When this was backed up by relevant diagrams students were able to achieve full marks.

Many students seemed to view 'libraries' only as a place where books can be read or borrowed rather than the other 'services' they might offer. Students that saw this opportunity were able to develop their analysis along more sophisticated lines.

Many level 2 responses took the reason from the extract but did not adequately develop the analysis and/or failed to include reasonable application of economic principles or really made use of the data. Weaker responses tended to focus on lifestyle changes and less free time but were unable to support this with relevant economic analysis and instead applied a very general approach, which while correct in terms of rationale, often prevented them from going much beyond mid-level 2.

## Question 26

This question was less well answered than question 32. However, there were some strong responses to this question with many students were able to access Level 3 or higher and provide some economic rationale for the provision, or otherwise, of library services. That said, it was not uncommon for a number of students to incorrectly claim that library services were public goods and this weakened their analysis to some degree.

Whilst many students explained why and how local authorities provide library services, many did not assess a case for why local authorities might not 'continue' their support. Given the nature of the question, this was a significant weakness.

Most students were able to recognise the prompt that library services might be classed as a merit good and went down the route of explaining that library services have positive externalities in consumption; some were able to provide appropriate diagrammatic analysis in this regard. That said, relatively fewer students were able to make genuine use of the diagram as part of their analysis.

Weaker students failed to make good use of the data and overall there was a lack of knowledge amongst these students as to how to assess the question in technical economic terms; many answers lacked depth of economic analysis. Weak responses tended to overuse the point about volunteer workers by lifting directly from the text without developing the analysis further or offering additional points that would include more sophisticated economic principles.

A large portion of students were able to use the case study to draw out the salient information regarding the benefits of libraries, although relatively few were able to analyse in depth the alternative ways in which library services might be provided in the future if funding was withdrawn.

Strong students not only discussed whether local authorities should continue to provide library services but also discussed the alternatives, including closure or some sort of pricing strategy. The 'life satisfaction' of using libraries 'frequently' ( $£ 1,359$ per person) and the " $11 \%$ of the UK population that lacked internet access" would have been appropriate prompts.

The extracts were used well by some students but could have been used better by many more. For example, Extract A provided some useful quantitative data to evaluate whether continuing to provide library services might depend on which age group you consider. Similarly, students might have picked up the fact that libraries also offer "a venue for community events".

Few students picked up the nuances in the question about 'local authorities' and the issue of 'continue' to provide. Most students talked about 'government provision' in general terms and whether library services should be provided at all. The best answers included a well-developed conclusion that considered whether local authorities should continue to provide public libraries.

Only the strongest students recognised that if libraries were not provided by local authorities/government, there would likely be a partial missing market as the price mechanism might ration services to those that could afford them.

## Context 2: AGRICULTURE

## Question 27

This question provided a wide range of responses and therefore differentiated well. Many students were able to provide an accurate definition of minimum price, but a significant number of students struggled to effectively communicate the idea of "lowest" price, or that it was something set by the government/in law or was a legal requirement. A typical student response to articulate 'minimum' was to say that "it is a price that firms cannot charge lower than". Most students recognised that it was a 'price over the equilibrium', some even drew a diagram to demonstrate this. The strongest students recognised minimum price as a 'price floor set by government', whilst weaker students confused minimum prices with a 'price ceiling'.

## Question 28

The majority of students were able to calculate, to the nearest whole number, the percentage of dairy farms in January 2017. However, some made avoidable mistakes by, for example, not correcting their answer to the nearest farm. Many students rounded up the exact answer (7706.4) to 7707 , ignoring the correct quantitative method; perhaps assuming that once you have 0.4 of a farm, the nearest farm might therefore be 1 more. In some cases, students added $20 \%$ on, rather than deducting it. Students who got the correct reduction or used the correct calculation to calculate $20 \%$ were awarded 2 marks. Students who used the correct method but got the wrong answer were only awarded 1 mark.

## Question 29

This question posed some difficulties with only a few students awarded full marks for their answers to this question. As in the equivalent, question 23, the most common response was to highlight in the first point the highest employment and index figure, followed by the lowest employment and index figure for the second point. Large numbers of students often omitted 'index' as a unit of measurement for output in agriculture, forestry and fishing and/or thousands ( 000 's) for employment in agriculture, forestry and fishing. The units must be quoted for each comparison.

A small number of students quoted a significant feature of each data series rather than make a significant comparison. A common error included not recognising that the data showed split years of 12 months across 2 years (2008-2009, 2009-2010 etc.) rather than simply one specific calendar year. Some students did not read the question properly and included the 'milk price' data instead of either the 'employment' or 'output' data, or included comparisons across all three data series.

## Question 30

About one third of students scored full marks on this question, with over half of students scoring either 3 or 4 marks. This second diagram question also produced an interesting range of responses and overall this proved to be more challenging than question 24 . The most common error being an incorrect $2^{\text {nd }}$ PPC which was shifted out in its entirety, rather than only for 'GM food'. A small proportion of students also failed to label which PPC was which. Although tolerance was factored into the mark scheme, some students failed to accurately draw a second curve which stemmed from the original curve with many splitting up to half way round the curve. Of those students that drew the correct two curves, some failed to label the PPC appropriately. The most common labelling error was not to include the word 'food'. As in the first diagram question, most students drew the more 'conventional' PPC that bowed outwards; a few also drew the straight lined or linear variation. The exact shape of the PPC did not matter but again it needed to touch both axes.

## Question 31

It is worth re-emphasising that this question and the equivalent question 25 are assessed using a level of response mark scheme; marks are not awarded for each point that is made. It is the overall quality of the response that determines the mark awarded.

Overall, there were some strong responses to this question and typically much more secure economic analysis that question $25.41 \%$ of students provided a good response to this question, achieving at least 8 marks. Strong responses were able to support their factors effectively with good use of relevant diagrams and had a good distinction between demand and supply side factors. Good students also made effective use of the extracts.

A typical approach was to develop a 'cost of production' based point with either an increase in 'population' or 'income'. Shifting either the demand or supply curve provided students with the opportunity to then develop logical chains of reasoning. It was not necessary to choose one supply and one demand factor, but more expansive and sophisticated responses tended to feature this approach. Most answers were clearly rooted in the case study with factors clearly linked to the source material and it was relatively rare to see students making little or no reference to milk. Weaker students tended to quote extensively from the extract material without really developing the discussion. Some students also used "increasing demand" or "falling supply" as their factors and then developed their analysis around these two broad factors. This made it difficult to apply the answer to the context and meant several students' responses were vague and generalised.

Although diagrams were a feature of most responses, many were drawn without explicit reference to them in the analysis; some were poorly drawn and often poorly labelled. Diagrams are an important part of an economist's toolkit and it is up to the student to decide when and how they might be usefully employed.

The very best answers combined extract material with sophisticated and robust economic analysis.

## Question 32

Although this question produced a wide range of responses, there were some very accomplished and thoughtful answers to this question.

The typical response to this question was for a student to discuss at length that government should intervene in the agricultural sector due to agriculture (food) being a merit good. Most students went on to explain and analyse the ways in which the government can intervene. Students that then offered a rather generalised view about whether markets should be left alone because they are more efficient due to the market mechanism were able to get at least high level 3 or 4 . Although this approach did not specifically address the nuances of the question, these responses did show a balance of understanding around intervention versus non-intervention and so these responses scored well.

Weaker answers usually expressed a very one-sided argument for intervention and then had a weak paragraph or so on why they shouldn't intervene, usually that it is costly for government. Many students explored the idea of government failure; however, many were rather vague on what this meant and typically suggested that if a policy had a limitation, that automatically constituted government failure. It would certainly be expected that if students explore government failure, they should recognise that the failure is deepened, or a new problem is created.

The best answers started by setting the scene, highlighting some of the recent changes in agriculture; many referenced the UK's decision to leave the EU. Students then explained the general case for the government to take an active role in agriculture. This was often supported by a
relevant diagram and quotes from the extracts identifying some of the stakeholders involved and the benefits generated by intervention.

The extract quote that accompanied the question alluded to whether the UK government should take an 'active' role in the agricultural sector, but few answers discussed the extent/degree of intervention or the issue of 'if at all'. Many answers were thus very policy focused rather than focusing on arguments for/against more government intervention. Good students assessed the relative merits of the alternative forms of government intervention; perhaps contrasting this with the benefits of a free market approach. Answers analysing and evaluating subsidies, minimum prices and regulation often fared well. Some students also clearly established the case for intervention to begin with.

Some students also struggled to fully appreciate the subtleties of minimum and maximum prices. In addressing the equity issue of ensuring that prices of agricultural products were kept affordable to lower income groups, some students argued that maximum prices on food should be maintained, whereas some then went on to say that to protect farmer's income, minimum prices on food should be introduced. Section 3.1.5.8 of the AS specification makes a clear distinction between various types of government intervention and students should understand the difference between them.

Relatively few students drew upon the environmental externalities that were referenced in the extracts and only the strongest students were able to provide a detailed assessment of the free market and associated price mechanism.

Diagrams were not used as much as they were in question 26, but students appeared to recognise that in this question the diagrams did not necessarily add a huge amount of value unless used effectively. Those that used diagrams such as subsidies to show the effect on prices and opportunity cost did so effectively.

The judgement here seemed to be more straightforward with most students deciding that intervention is needed. The application and use of context was very impressive overall with multiple direct quotes being used.

## Use of statistics

Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how students have performed for each question.

## Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.

