OXFORD AQA
INTERNATIONAL QUALIFICATIONS

INTERNATIONAL A-LEVEL

ECONOMICS

EC03

Unit 3 The Economics of Business Behaviour and the Distribution of Income

Mark scheme

January 2026

Version: 1.0 Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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International A-level Economics mark scheme

How to mark

Aims

When you are marking your allocation of scripts your main aims should be to:

- recognise and identify the achievements of students
- place students in the appropriate mark band and in the appropriate part of that mark band (high, low, middle)
- record your judgements with brief notes, annotations and comments that are relevant to the mark scheme and make it clear to other examiners how you have arrived at the numerical mark awarded
- put into a rank order the achievements of students (not to grade them – that is done later using the rank order that your marking has produced)
- ensure comparability of assessment for all students, regardless of question or examiner.

Approach

It is important to be **open-minded** and **positive** when marking scripts.

The specification recognises the variety of experiences and knowledge that students will have. It encourages them to study Economics in a way that is relevant to them. The questions have been designed to give them opportunities to discuss what they have found out about Economics. It is important to assess the quality of **what the student offers**.

Assessment Objectives

This component requires students to:

AO1	Demonstrate knowledge of terms/concepts and theories/models to show an understanding of the behaviour of economic agents and how they are affected by and respond to economic issues.
AO2	Apply knowledge and understanding to various economic contexts to show how economic agents are affected by and respond to economic issues.
AO3	Analyse issues within economics, showing an understanding of their impact on economic agents.
AO4	Evaluate economic arguments and use qualitative and quantitative evidence to support informed judgements relating to economic issues.

The marking grids

The marking grids cover all the Assessment Objectives indicated as being assessed in each question, followed by indicative content for individual tasks. These have been designed to allow assessment of the range of knowledge, understanding and skills that the specification demands.

The indicative content gives examples of the kind of things students might cover in their responses. They are neither exhaustive nor required – they are simply indicative of what could appear. Other valid content presented in student responses should always be credited.

Using the grids

These levels of response mark schemes are broken down into levels, each of which has descriptors. The descriptors for the level show the performance characteristics of the level. There is the same number of marks in each level. The number of marks per level varies depending upon the total number of marks allocated to the question.

Having familiarised yourself with the descriptors and indicative content, read through the answer and annotate it to identify the qualities that are being looked for and that it shows. You can now check the levels and award a mark.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptors for that level. The descriptors for the level indicate the different qualities that might be seen in the student's answer for that level.

When assigning a level, you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best-fit approach for defining the level and then use the variability of the response to help decide the mark within the level; ie if the response fulfils most but not all of level 3 with a small amount of level 4 material, it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark.

It is often best to start in the middle of the level's mark range and then check and adjust.

The exemplar materials used during standardisation should be referred to. There will be an answer in the standardising materials that will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is of the same standard, better or worse. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

An answer that contains nothing of relevance to the question must be awarded no marks.

Examiners are required to assign each of the students' responses to the most appropriate level according to its overall quality, then allocate a single mark within the level. When deciding upon a mark in a level, examiners should bear in mind the relative weightings of the Assessment Objectives and be careful not to over/under-credit a particular skill. For example, in question 13 more weight should be given to AO3 than to AO1 and AO2. This will be exemplified and reinforced as part of examiner training.

Annotating scripts

Annotating scripts will help you with making accurate judgements and it will help any subsequent markers to identify how you are thinking. Please do not write negative comments about students' work; this is unprofessional and it impedes a positive marking approach.

Section A **Total for this section: 10 marks**

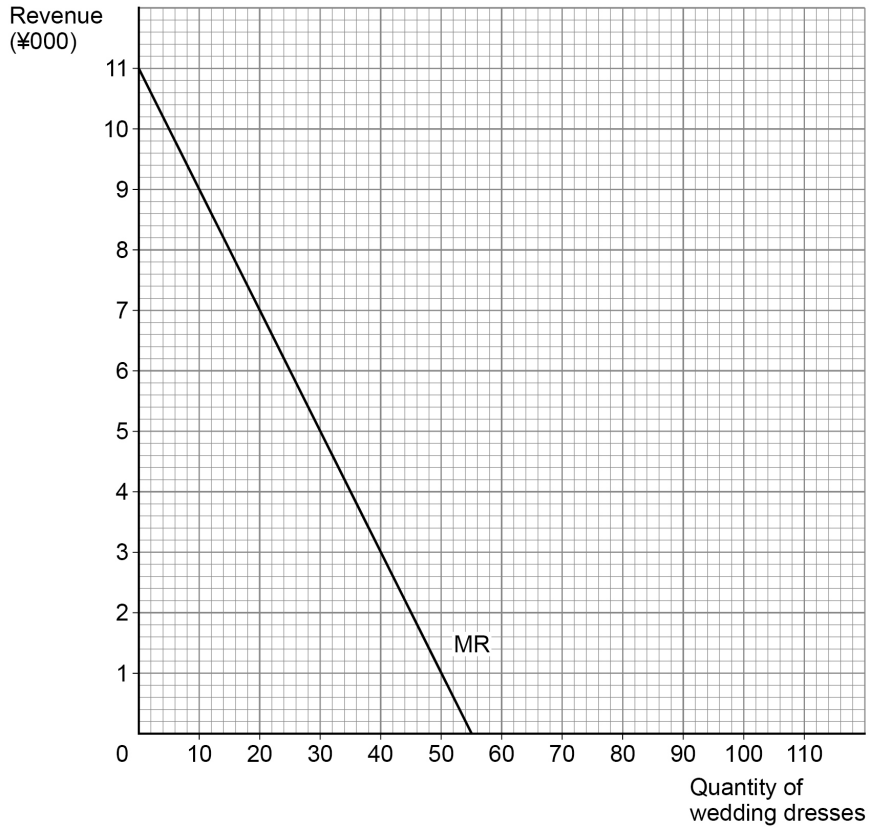
Question	Part	Marking guidance	Total marks
01		Which one of the following is the best description of profit-satisficing behaviour? Answer: **B** (When firms aim to make sufficient profit but not the most that could be obtained)	**1** **AO1 = 1**

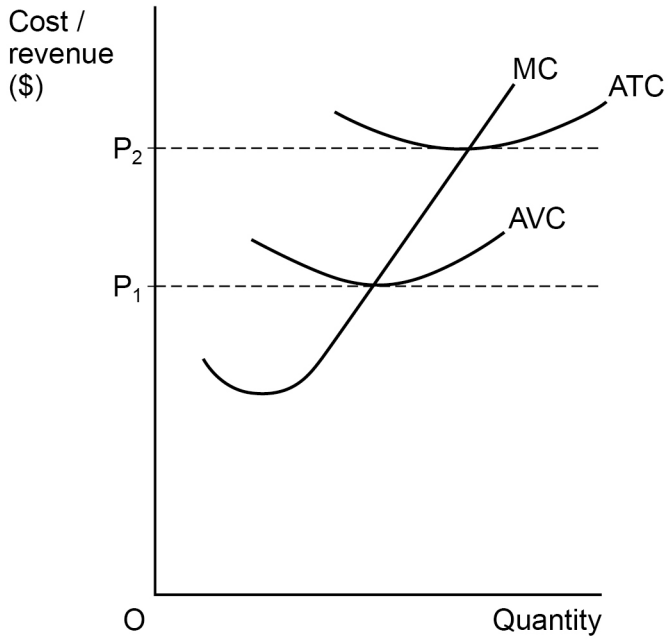
Question	Part	Marking guidance	Total marks
02		<table><tr><th>Firm</th><th>Sales revenue (£ million), 2023</th><th>Sales revenue (£ million), 2025</th></tr><tr><td>**W**</td><td>26</td><td>33</td></tr><tr><td>**X**</td><td>12</td><td>18</td></tr><tr><td>**Y**</td><td>7</td><td>10</td></tr><tr><td>**Z**</td><td>3</td><td>0</td></tr></table> Which one of the following statements can be concluded from **Table 1**? Answer: **B** (**Firm X**'s market share rose by a greater percentage than firms' **W** or **Y**.)	**1** **AO2 = 1**

Question	Part	Marking guidance	Total marks
03		Which one of the following is most likely to be a feature of a contestable market? Answer: **A** (Firms do not advertise their products.)	**1** **AO1 = 1**

Question	Part	Marking guidance	Total marks
04		The wage rate paid to workers in an industry increases significantly. Which one of the following is the most likely reason for this? Answer: **C** (New rules prevent people entering the country to work.)	**1** **AO1 = 1**

Question	Part	Marking guidance	Total marks
05		All other things being equal, what is the most likely effect on the wage and employment of female doctors in private-sector hospitals? Answer: **B** (Falls, Rises)	**1** **AO2 = 1**

Question	Part	Marking guidance	Total marks
06		 If Jing sells 100 wedding dresses in a week, what is her total revenue? Answer: **A** (¥100 000)	**1** **AO2 = 1**

Question	Part	Marking guidance	Total marks
07		 Which one of the following is most likely to be true at a price of P_2? Answer: **D** (The firm will make normal profit in the long run.)	**1** **AO2 = 1**

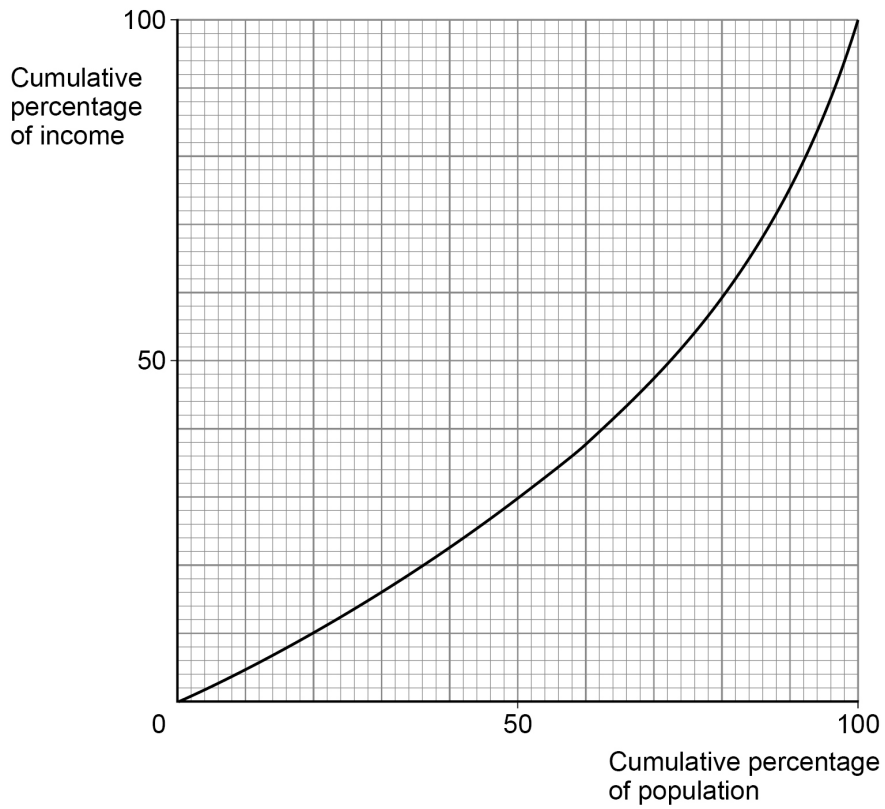
Question	Part	Marking guidance	Total marks
08			**1** **AO3 = 1**

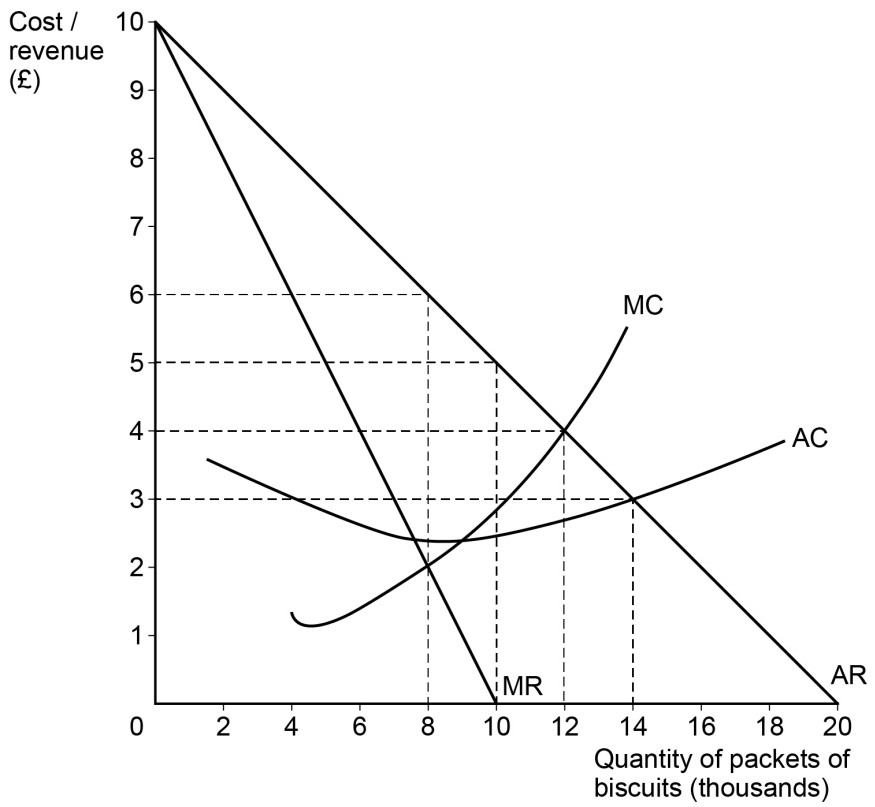
Number of workers	Average cost of labour ($/hour)	Marginal cost of labour ($/hour)	Marginal revenue product of labour ($/hour)
3	11	15	28
4	14	23	23
5	18	34	18
6	22	42	13

Following an agreement with a trade union, the firm now employs and pays workers at the levels that would apply in a perfectly competitive labour market.

What is the increase in the firm's total wage costs per hour?

Answer: **B** ($34)

Question	Part	Marking guidance	Total marks
09		 Each person will receive an equal share of the total amount. How much will each person receive? Answer: **C** ($7200)	**1** **AO2 = 1**

Question	Part	Marking guidance	Total marks
10		 Which one of the following prices will maximise the firm's total revenue? Answer: **C** (£5)	**1** **AO1 = 1**

Section B **Total for this section: 10 marks**

Question	Part	Marking guidance	Total marks
11	**1**	Define 'the law of diminishing returns'. **A full and precise definition is given (2 marks)** Examples of acceptable definitions worth 2 marks: • as more units of the variable factor are added to a fixed factor of production, both the marginal and average returns (product) to the variable factor will eventually fall • in the short run, after a certain point, adding a unit of the variable input adds less to output than the previous unit. **The substantive content of the definition is correct, but there may be some imprecision or inaccuracy (1 mark)** Examples of definitions worth 1 mark: • after a certain point, employing further resources will create reduced returns • total returns will increase more slowly when additional factors are added.	**2** **AO1 = 2**

<table>
<tr><th>Question</th><th>Part</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>11</td><td>2</td><td>
Use Table 3 to calculate the percentage change in average returns when the firm increases the number of workers it employs from 5 to 6.
<table>
<tr><th>Number of workers</th><th>Total returns (tonnes)</th><th>Average returns (tonnes)</th><th>Marginal returns (tonnes)</th></tr>
<tr><td>3</td><td>131</td><td>43.7</td><td>60</td></tr>
<tr><td>4</td><td>188</td><td>47</td><td>57</td></tr>
<tr><td>5</td><td>226</td><td>45.2</td><td>38</td></tr>
<tr><td>6</td><td>252</td><td>42</td><td>26</td></tr>
</table>
Calculation:

Average returns of 5 workers = $\frac{226}{5}$ = 45.2

Average returns of 6 workers = $\frac{(226+26)}{6}$ = 42

$\frac{42-45.2}{45.2} \times 100 = -7.0796 = -7.08\%$ (2dp)
<table>
<tr><th>Response</th><th>Max 2 marks</th></tr>
<tr><td>For the correct answer: –7.08%
(with or without working shown)</td><td>2 marks</td></tr>
<tr><td>For the correct answer but not rounded to 2dp: eg –7.0796%
OR
For the correct answer but rounded the wrong way: –7.07%
OR
For the correct answer but with missing/incorrect units: eg –7.08
OR
For the correct calculation of the percentage change but without the minus sign or reference to the fall: 7.08%
OR
For the correct method but the wrong answer, with the % sign and rounded to 2dp</td><td>1 mark</td></tr>
</table>
</td><td>2

AO1 = 1
AO2 = 1</td></tr>
</table>

<table>
<tr><th>Question</th><th>Part</th><th>Marking guidance</th><th>Total marks</th></tr>
<tr><td>11</td><td>3</td><td>Use Table 3 to calculate how many tonnes were produced by the 4th worker for each tonne produced by the 5th worker.

Give your answer as a ratio.

Calculation:

Output of 4th worker = (47 × 4) – 131 = 57

Output of 5th worker = 226 – (47 × 4) = 38

Ratio is 57:38 = 1.5:1 (or 1.5 to 1)

<table>
<tr><th>Response</th><th>Max 2 marks</th></tr>
<tr><td>For the correct answer: 1.5:1 or 1.5 tonne:1 tonne (with or without working shown)</td><td>2 marks</td></tr>
<tr><td>For the correct answer but not shown as a ratio: 1.5
OR
For the correct answer but not shown to one tonne of returns: eg 57:38
OR
For the correct answer but with incorrect units: eg $1.5:$1
OR
For the correct calculation of the output for both the 4th and 5th workers: 57 and 38
OR
For the correct method throughout but the wrong answer, with no incorrect units and the final answer expressed as a ratio to 1</td><td>1 mark</td></tr>
</table>
</td><td>2

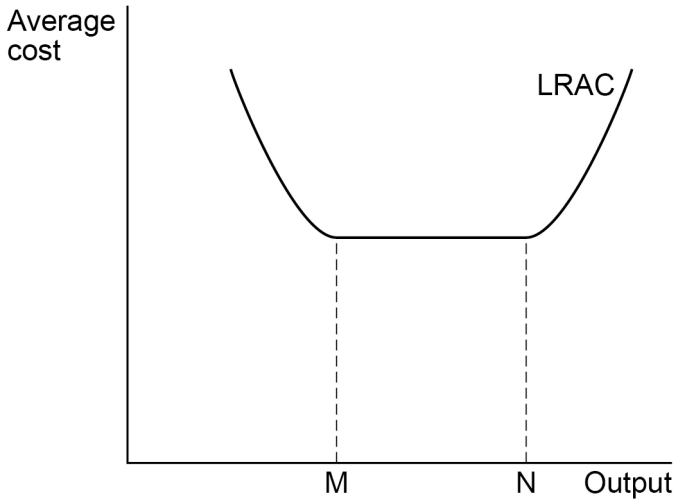
AO1 = 1
AO2 = 1</td></tr>
</table>

Question	Part	Marking guidance	Total marks
11	**4**	Explain, using a diagram, what is meant by the minimum efficient scale of production for a firm operating in an industry where there are both economies and diseconomies of scale.	**4** **AO1 = 2** **AO2 = 2**

Level	Marks	Descriptor
2	3–4	• Shows good knowledge and understanding of the minimum efficient scale of production for a firm operating in an industry where there are both economies and diseconomies of scale. • Includes a relevant diagram that will, at the top of this level, be accurate and used appropriately.
1	1–2	• Shows some limited knowledge and understanding of the minimum efficient scale of production for a firm operating in an industry where there are both economies and diseconomies of scale. • May include a relevant diagram but the diagram is not used and/or is inaccurate in some respects.
	0	No creditworthy material

Indicative content

The expected diagram shows a downward-sloping LRAC curve followed by an upward-sloping section. The minimum efficient scale (MES) should be indicated at the output where LRAC is first minimised. Diagrams that identify a MES point at the low point of a 'U-shaped' LRAC curve are acceptable and do not need to include a horizontal section of the LRAC curve.



Acceptable labels include:

Vertical axis: Average cost, AC, LRAC, $, cost
Horizontal axis: Quantity, output, Q

An example of an acceptable explanation:

The minimum efficient scale (MES) is the lowest level of output where a firm's LRAC is minimised. This occurs at point M where the firm's LRAC (curve) has stopped falling. Prior to point M, the firm is experiencing economies of scale as increasing output leads to falling LRAC. LRAC may remain

constant as more units of output are produced (M to N shows constant returns to scale), but after a certain point (N), diseconomies of scale begin to exceed any remaining economies of scale and so LRAC starts to rise.

Credit valid alternative content.

MAXIMUM FOR QUESTION 11: 10 MARKS

Section C **Total for this section: 45 marks**

Question	Part	Marking guidance	Total marks
12	**1**	**Extract A** shows labour productivity and the percentage of the population living in poverty in China. Explain how increases in labour productivity may affect the percentage of the population living in poverty in a country.	**4** **AO1 = 1** **AO2 = 1** **AO3 = 2**

Examiners are reminded that AO1, AO2 and AO3 are regarded as interdependent. When deciding on a mark all should be considered together using the best-fit approach. In doing so, examiners should bear in mind the relative weightings of the Assessment Objectives in this question.

Level	Marks	Descriptor
2	3–4	• Shows sound knowledge and understanding of relevant economic terminology, concepts and principles. • Includes reasonable application of relevant economic principles to support the response. • Includes well-focused analysis with a clear, logical chain of reasoning.
1	1–2	• Shows some limited knowledge and understanding of relevant economic terminology, concepts and principles. • May include some application of relevant economic principles to the question. • May include some attempted analysis but the analysis is not adequately developed and/or may be confused.
	0	No creditworthy material

Indicative content:

- meaning of labour productivity and poverty
- explanation of relative and absolute poverty and how they can be measured
- explanation that increases in labour productivity mean that more is produced per person and so more can be consumed, making it possible to improve everyone's standard of living and to reduce poverty
- explanation of how labour productivity can affect the output, average costs and profits of firms
- explanation of how rising labour productivity will affect MRP and its impact on a firm's demand for labour and therefore employment
- explanation of how higher MRP and profits can lead to higher wages and therefore a smaller percentage of the population living in poverty
- explanation of how higher labour productivity can encourage businesses to invest and so create more jobs
- the potential impact of rising profits on growth and the derived demand for labour and hence levels of unemployment
- the importance of employment as a source of income facilitating movement above the poverty line
- explanation of the impact of higher productivity on the price of goods and services and therefore the real purchasing power of consumers
- explanation of why rising incomes may reduce the percentage of the population living in poverty.

Credit valid alternative content.

Question	Part	Marking guidance	Total marks
12	**2**	To what extent do the data suggest that increases in labour productivity affected the percentage of the population living in poverty in China between 2008 and 2020? Use the data in **Extract A** to support your answer.	**4** **AO1 = 1** **AO2 = 1** **AO4 = 2**

Examiners are reminded that AO1, AO2 and AO4 are regarded as interdependent. When deciding on a mark all should be considered together using the best-fit approach. In doing so, examiners should bear in mind the relative weightings of the Assessment Objectives in this question.

Level	Marks	Descriptor
2	3–4	• Includes sound evidence that indicates the extent to which increases in labour productivity affected the percentage of the population living in poverty in China. • Includes a supported judgement concerning the extent to which increases in labour productivity affected the percentage of the population living in poverty in China.
1	1–2	• Includes some limited evidence that indicates the extent to which increases in labour productivity affected the percentage of the population living in poverty in China. • May attempt a judgement concerning the extent to which increases in labour productivity affected the percentage of the population living in poverty in China.
	0	No creditworthy material

Indicative content:

- labour productivity (US$/hour) increased in each of the time periods in the data while the percentage living in poverty fell each time, eg between 2008 and 2011, productivity rose from $5.05 to $6.38 and poverty fell from 18% to 10.2%
- labour productivity rose at a relatively stable rate over the time periods, but the rate of decrease in the percentage living in poverty fell significantly over time
- while the period-on-period rate of increase in labour productivity was relatively stable across the three-year periods shown (26.3% to 2011, 23.4% to 2014, 24.7% to 2017 and 24.3% to 2020), the percentage living in poverty fell by 0.6 percentage points in the most recent period, compared to 7.8 percentage points in the first period
- once the percentage living in poverty had fallen significantly (from 18% to 2.1% between 2008 and 2014), further improvements in labour productivity were associated with relatively small percentage point decreases in poverty, from 2.1% to 0.1% between 2014 and 2020
- data were only provided for certain years
- the data provided can support a judgement about absolute poverty, but do not provide information about other measures eg relative poverty
- the $2.15/day measure may not be an entirely reliable measure of absolute poverty as it is based on estimates and generalisations and so is subject to inaccuracies
- other factors not related to labour productivity may also affect poverty such as levels of government intervention, income from other sources, etc
- the likely conclusion is that there appears to be evidence that increases in labour productivity were strongly correlated with reductions in the percentage of people living in poverty in China between 2008 and 2020. However, the extent to which causation is responsible for this relationship is debatable.

Credit valid alternative content.

MAXIMUM FOR QUESTION 12: 8 MARKS

Question	Part	Marking guidance	Total marks
13		**Extract B** (line 3–4) states: 'Most of the global makhana output is produced by small, family-run farms.' Explain how the characteristics of the market for makhana are likely to affect the profits of farmers producing makhana.	**12** **AO1 = 3** **AO2 = 3** **AO3 = 6**

Examiners are reminded that AO1, AO2 and AO3 are regarded as interdependent. When deciding on a mark all should be considered together using the best-fit approach. In doing so, examiners should bear in mind the relative weightings of the Assessment Objectives in this question. More weight should therefore be given to AO3 than AO1 and AO2.

Level	Marks	Descriptor
3	9–12	• Is well organised and develops one or more of the key issues that are relevant to the question. • Shows sound knowledge and understanding of relevant economic terminology, concepts and principles. • Includes good application of relevant economic principles and/or good use of data to support the response. • Includes well-focused analysis with a clear, logical chain of reasoning. • May include a relevant diagram that is accurate and used appropriately to support their explanation.
2	5–8	• Includes one or more issues that are relevant to the question. • Shows reasonable knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present. • Includes reasonable application of relevant economic principles and/or data to the question. • Includes some reasonable analysis but it might not be adequately developed and may be confused in places. • May include a relevant diagram to support their explanation.
1	1–4	• Is very brief and/or lacks coherence. • Shows some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely. • Demonstrates very limited ability to apply relevant economic principles and/or data to the question. • May include some very limited analysis but the analysis lacks focus and/or becomes confused. • May include a diagram but the diagram is likely to be inaccurate in some respects or is inappropriate.
	0	No creditworthy material

Indicative content:

- meaning of profit
- recognition that the market for makhana displays many of the characteristics of a very (perfectly) competitive market
- use of **Extract B** to identify characteristics of the market for makhana that indicate it is a very (perfectly) competitive market:
  - most of the global supply comes from small, family-run farms indicating many producers
  - households purchase makhana at local markets, suggesting many consumers

  - few barriers to entry as little equipment is required and many new producers have been able to join the market
  - innovations from the NRCM are shared with farmers, indicating good market knowledge
- analysis of how these characteristics might influence the level of profit that farmers can make
- in the short run there may be opportunities to earn supernormal profit due to rising demand increasing revenue
- short-run profits may also increase as innovations have increased productivity and reduced average costs
- explanation that the entry of 'new suppliers' is likely to reduce the market price in the long run
- analysis of why falling market prices/average revenue are likely to affect the level of long-run profit which can be earned by individual farmers
- analysis of why the nature of the market for makhana means that only normal profits are likely to be earned in the long run.

Credit valid alternative content.

Question	Part	Marking guidance	Total marks
14		**Extract C** (line 8–9) states: 'Improvements in communications technology, such as smartphones, have allowed farmers to stay informed about changes in market prices.' Assess the contribution that improvements in the availability of information can make to increasing efficiency in the makhana market.	**25** **AO1 = 4** **AO2 = 3** **AO3 = 9** **AO4 = 9**

Examiners are reminded that AO1, AO2, AO3 and AO4 are regarded as interdependent. When deciding on a mark all should be considered together using the best-fit approach. In doing so, examiners should bear in mind the relative weightings of the Assessment Objectives in this question. More weight should therefore be given to AO4 and AO3 than AO1 and AO2.

Level	Marks	Descriptor
5	21–25	**Sound, focused analysis and well-supported evaluation that:** • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning • includes supported evaluation throughout the response and in a final conclusion.
4	16–20	**Sound, focused analysis and some supported evaluation that:** • is organised, showing sound knowledge and understanding of economic terminology, concepts and principles but some minor errors may be present • includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response • includes some well-focused analysis with clear, logical chains of reasoning • includes some reasonable, supported evaluation.
3	11–15	**Some reasonable analysis but generally unsupported evaluation that:** • focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places • includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these aren't well-supported by arguments and/or data.
2	6–10	**A fairly weak response with some understanding that:** • includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • includes some limited application of relevant economic principles to the given context and/or data to the question • includes some limited analysis but it may lack focus and/or become confused • includes some evaluation which is weak and unsupported.
1	1–5	**A very weak response that:** • includes little relevant knowledge and understanding of economic terminology, concepts and principles • includes application to the given context which is, at best, very weak • includes attempted analysis which is weak and unsupported.
	0	No creditworthy material

Indicative content:

- meaning of efficiency and explanation of different forms of economic efficiency
- explanation of why information is important and how it may indicate whether a market is operating efficiently
- the role of accurate information in supporting the signalling function of the price mechanism
- examples of improvements in the availability of information
- analysis and evaluation of how improvements in the availability of information can increase productive and/or X-efficiency:
  - unit costs can be reduced if farmers know exactly when and how much fertiliser they need to add to optimise crop growth
  - understanding the optimal time to harvest crops can reduce wastage as less is lost to weather events, pests or disease (**Extract C**)
  - the extent to which information can ever be accurate enough for producers' decisions to optimise efficiency eg weather forecasts
  - improved information about soil content and growing conditions in certain areas can inform decisions about which crops to produce, improving efficiency
  - better understanding of ways to modify plants to increase yields (**Extract B**)
  - better information about current market conditions can inform decisions about when to take produce to market and so reduce waste or avoid the risk of unsold goods
- analysis and evaluation of how improvements in the availability of information can increase allocative efficiency:
  - farmers can understand exactly which types of crop customers will want to purchase and meet those needs if they have information about future demand
  - consumers can be provided with better product information, improving their welfare, if producers share their improved understanding about how much of different types of food to consume and why
- analysis and evaluation of how improvements in the availability of information can influence dynamic efficiency:
  - better understanding of future consumer requirements can inform farmers' decisions about which crops to produce on their land in the future
  - how improved information about future demand patterns can inform investment decisions, allowing farmers to develop capital equipment that will reduce production costs in the future improving dynamic efficiency
- analysis and evaluation of the role of developments in agricultural machinery, fertilisers, irrigation and other methods of improving efficiency that may make more important contributions to efficiency
- the extent to which improvements in information may reduce market imperfections and therefore long-run supernormal profits, reducing the scope to invest and experience dynamic efficiency
- too much information may prove burdensome and make decision-making more complicated
- consideration of the extent to which unequal information available to different producers may reduce efficiency if it leads to growing market power for some producers
- an overall assessment of the contribution that improvements in the availability of information can make to increasing efficiency in the makhana market.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the student's response to the question.

Credit valid alternative content.

Section D **Total for this section: 25 marks**

Question	Part	Marking guidance	Total marks
15		Artificial Intelligence (AI) involves computers learning to complete tasks that previously needed human intelligence. AI systems can do these tasks quickly and learn how to improve the results they produce. A recent report suggested that AI could replace 300 million jobs around the world by 2030. However, previous technological changes have led to long-term job creation in related industries and those created by the new technologies. Evaluate whether developments in technology, such as Artificial Intelligence (AI), are likely to reduce or increase employment in different labour markets.	**25** **AO1 = 4** **AO2 = 3** **AO3 = 9** **AO4 = 9**

Examiners are reminded that AO1, AO2, AO3 and AO4 are regarded as interdependent. When deciding on a mark all should be considered together using the best-fit approach. In doing so, examiners should bear in mind the relative weightings of the Assessment Objectives in this question. More weight should therefore be given to AO4 and AO3 than AO1 and AO2.

Level	Marks	Descriptor
5	21–25	**Sound, focused analysis and well-supported evaluation that:** • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning • includes supported evaluation throughout the response and in a final conclusion.
4	16–20	**Sound, focused analysis and some supported evaluation that:** • is organised, showing sound knowledge and understanding of economic terminology, concepts and principles but some minor errors may be present • includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response • includes some well-focused analysis with clear, logical chains of reasoning • includes some reasonable, supported evaluation.
3	11–15	**Some reasonable analysis but generally unsupported evaluation that:** • focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places • includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these aren't well-supported by arguments and/or data.
2	6–10	**A fairly weak response with some understanding that:** • includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely

		• includes some limited application of relevant economic principles to the given context and/or data to the question • includes some limited analysis but it may lack focus and/or become confused • includes some evaluation which is weak and unsupported.
1	1–5	**A very weak response that:** • includes little relevant knowledge and understanding of economic terminology, concepts and principles • includes application to the given context which is, at best, very weak • includes attempted analysis which is weak and unsupported.
	0	No creditworthy material

Indicative content:

- meanings of technological change, employment and different labour markets
- the features of different types of labour market
- analysis of the process by which technological developments, such as AI, can affect methods of production and therefore demand for labour
- examples of industries/labour markets where AI is likely to be used
- analysis of how technological developments, such as AI, are likely to be linked to creative destruction and so lead to the disappearance of existing markets, including labour markets, reducing the demand for labour where this occurs
- analysis and evaluation of the circumstances where employment may reduce:
  - repetitive and routine tasks in sectors such as manufacturing, data entry
  - industries where work involves predictable, rule-based tasks may be most at risk eg processing financial transactions such as payroll
- analysis and evaluation of the circumstances where employment may not reduce:
  - where interpersonal contact or skills are required eg nursing or physical therapy
  - where products are made by hand/individually differentiated eg craft workers
- analysis and evaluation of the employment impacts of technological developments such as AI in augmenting human capabilities eg by assisting healthcare professionals and improving or developing treatments or where human oversight or personal care is still required
- analysis of how technological developments could create opportunities to develop new products and markets and therefore create new employment opportunities
- consideration of the extent to which increasingly sophisticated technological systems may create new roles in ethics, compliance or regulation of technologies
- analysis and evaluation of whether AI and other new technologies will lead to improved productivity, creating economic growth and so facilitating increased consumption and associated derived demand for labour eg road traffic data being used to reduce journey times and improve efficiency
- evaluation of whether, or the extent to which, technological development could lead to improved labour productivity and potentially maintain employment levels while reducing working hours
- evaluation of the extent to which the presence of a trade union is likely to restrict the impact of new technologies on employment within a certain labour market
- assessment of winners and losers, eg which types of worker are likely to see increased or reduced employment opportunities
- knowledge of different situations or examples where technological developments have already, or are likely to, reduce or increase employment in certain markets
- an overall assessment of whether developments in technology, such as Artificial Intelligence (AI), are likely to reduce or increase employment in different labour markets.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the student's response to the question.

Credit valid alternative content.

Question	Part	Marking guidance	Total marks
16		In the early 2020s, costs of production rose following a sharp increase in energy and commodity prices. Many firms raised their prices to cover the increase in costs. However, some dominant firms were then accused of not reducing prices when their costs fell. Some economists argued that this behaviour was due to collusion between firms in oligopolistic markets. Discuss whether, in the long run, profits are likely to be higher for firms operating in collusive oligopolies or competitive oligopolies.	**25** **AO1 = 4** **AO2 = 3** **AO3 = 9** **AO4 = 9**

Examiners are reminded that AO1, AO2, AO3 and AO4 are regarded as interdependent. When deciding on a mark all should be considered together using the best-fit approach. In doing so, examiners should bear in mind the relative weightings of the Assessment Objectives in this question. More weight should therefore be given to AO4 and AO3 than AO1 and AO2.

Level	Marks	Descriptor
5	21–25	**Sound, focused analysis and well-supported evaluation that:** • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning • includes supported evaluation throughout the response and in a final conclusion.
4	16–20	**Sound, focused analysis and some supported evaluation that:** • is organised, showing sound knowledge and understanding of economic terminology, concepts and principles but some minor errors may be present • includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response • includes some well-focused analysis with clear, logical chains of reasoning • includes some reasonable, supported evaluation.
3	11–15	**Some reasonable analysis but generally unsupported evaluation that:** • focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places • includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these aren't well-supported by arguments and/or data.
2	6–10	**A fairly weak response with some understanding that:** • includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • includes some limited application of relevant economic principles to the given context and/or data to the question • includes some limited analysis but it may lack focus and/or become confused • includes some evaluation which is weak and unsupported.

1	1–5	**A very weak response that:** • includes little relevant knowledge and understanding of economic terminology, concepts and principles • includes application to the given context which is, at best, very weak • includes attempted analysis which is weak and unsupported.
	0	No creditworthy material

Indicative content:

- meanings of profits, collusive oligopoly and competitive oligopoly
- the distinction between the short and long run
- the distinction between and examples of tacit and overt collusion
- consideration of the nature and features of different types of oligopolistic market that would influence firms' behaviour and whether they compete or collude
- explanation of the different ways in which oligopolists can compete and the effects on the long-run profits they are able to earn
- analysis and evaluation of the impact of different forms of competition on profits:
  - price competition
  - spending on R&D and its impact on costs and revenues
  - the impact of marketing activity on market share, loyalty etc
  - product differentiation to affect price elasticity of demand
  - whether/how customer service can be an effective long-term strategy
- analysis and evaluation of the impact of different forms of collusion on profits:
  - agreements to set prices
  - dividing up markets to avoid competition
  - sharing information about strategies when bidding for contracts
  - sharing research
  - agreements to restrict marketing spending
- evaluation of the role of uncertainty and interdependence in both the short and long run and how this could influence levels of profit in the long run
- how the threat of regulatory intervention might affect firms' actions and therefore profits
- analysis and evaluation of the impact of fines and reputational damage on firms' long-run profits
- analysis and evaluation of whether tacit or overt collusion might lead to supernormal profits being higher or more sustainable in the long run
- analysis and evaluation of the significance of barriers to entry and exit, contestability and creative destruction in influencing decisions about whether to compete or collude
- analysis and evaluation of the effects of a lack of competitive pressure on efficiency and therefore average costs and long-run profits
- analysis and evaluation of how the risks and rewards of short-term collusive agreements might affect long-term decisions about how best to compete eg supernormal profits funding R&D investments to enhance future profitability
- evaluation of whether different incentives to innovate in different types of oligopoly may have an impact on the ability to generate or sustain long-run supernormal profits
- knowledge of specific examples where firms in collusive or competitive oligopolistic markets have earned particular levels of profit
- an overall assessment of whether, in the long run, profits are likely to be higher for a firm operating in a collusive or a competitive oligopoly.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the student's response to the question.

Credit valid alternative content.

Assessment Objectives Grid

	AO1	AO2	AO3	AO4	Total
Section A					
01	1				**1**
02		1			**1**
03	1				**1**
04	1				**1**
05		1			**1**
06		1			**1**
07		1			**1**
08			1		**1**
09		1			**1**
10	1				**1**
Section B					
11.1	2				**2**
11.2	1	1			**2**
11.3	1	1			**2**
11.4	2	2			**4**
Section C					
12.1	1	1	2		**4**
12.2	1	1		2	**4**
13	3	3	6		**12**
14	4	3	9	9	**25**
Section D					
15 and 16	4	3	9	9	**25**
Unit total	**23**	**20**	**27**	**20**	**90**