

Economic activity and energy- 1

Name: _____

Class: _____

Date: _____

Time:

Total Marks Available:

Total Marks Archived:

Level: IGCSE Mathematics A

Subject: Geography

Exam Board: Edexcel IGCSE Geography- it is however suitable for use by mathematics student of other boards

Topic: Economic activity and energy -1

Type: Mark Scheme

To be used by all students preparing for Edexcel IGCSE Geography- Students of other Boards may also find this useful



Mark Scheme

Q1.

Question Number	Indicative content
	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p>

	<p>A03</p> <ul style="list-style-type: none">• The relative size of secondary sector employment is a good indicator of economic development.• As a country becomes more developed, typically there will be a shift from primary sector employment to more secondary sector employment.• Countries which previously have been dominated by primary sector employment develop the capacity to process raw materials so they can gain more money from their sale and exports, than they would through the sale of raw materials.• In developed countries, as their economy advances there can also be a shift from secondary employment to more tertiary and quaternary employment.• In many developed countries there has been a decline in secondary sector employment as many of these jobs are now outsourced to countries with lower costs.
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AO4

- Figure 1c shows that different countries have different trends for employment in the secondary sector.
- Figure 1c shows that for developed countries such as the UK and the US, there has been a steady decline in the percentage employed in the secondary sector.
- Figure 1c shows that Cambodia has experienced a steady rise in secondary sector employment.
- Figure 1c shows how Ghana has only more recently experienced a rise in secondary sector employment compared to other countries shown, from around 2013.
- Figure 1c shows how China has experienced different rates of growth in the percentage of the secondary sector, with more rapid rise from around 2001-2012.



Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none">Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none">Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	<ul style="list-style-type: none">Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)



Q2.

Question number	Indicative content
	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none">• The primary sector is working with natural resources which includes farming, fishing, forestry mining and quarrying.• The quaternary sector is involved in information and communications as well as R&D and development. Universities are an important part of this sector.



- The relative importance of primary and quaternary sectors (together with secondary and tertiary) is a good indicator of the level of economic development.
- In general terms a LHD / developing economy relies heavily on the primary sector, whereas a county with VHHD has a recently, but rapidly growing quaternary sector.
- Sectoral shifts are wedded to the development process (pathway) and it is a result of several other factors that come into play, including rural-urban migration, increasing wealth as well as wider considerations such as globalisation and developments in ICT.

AO4

- Figure 1c shows the decrease in primary from the pre-industrial, to industrial to post-industrial stages.
- On Figure 1c, it can be seen that the most dramatic (steepest) drop in employment occurs for the primary sector during the industrial phase.
- Figure 1c shows that absolute decline in numbers employed in primary sector, post-industrial, are relatively low.
- Figure 1c shows that in the post-industrial phase there is a growth of quaternary, starting from a 0 base.
- Overall the percentage employed in quaternary remains low in the post-industrial, peaking at about 5%

Note only credit information and discussions around primary and quaternary employment.



Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none">Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none">Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	<ul style="list-style-type: none">Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises

		<ul style="list-style-type: none">relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)
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Q3.



Question number	Indicative content
	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none">• Secondary sector shifts create both winners and losers at a range of scales and for different individuals, stakeholders etc.• In many places deindustrialisation (secondary sector shift) has created very big problems; few see many opportunities.• Land-space has been used for other activities, e.g. brownfield housing development so impacts may be positive since less greenfield land is needed.• Secondary sector shifts have become politically charged in some places, e.g. USA where there is a move to re-shore secondary activity as losses from manufacturing are seen as overall very negative.• In general terms a LHD / developing economy relies heavily on the primary sector, whereas a county with VHHD has a recently, but rapidly growing quaternary sector.• Sectoral shifts are wedded to the development process (pathway) and it is a result of several other factors that come into play, including rural-urban migration, increasing wealth as well as wider considerations such as globalisation and developments in ICT.



	<p>AO4</p> <ul style="list-style-type: none">• Figure 1c shows a range of positive and negative effects as a result of secondary sector shifts.• On Figure 1c, it is possible to identify social, economic, environmental and political effects.• Figure 1c shows that many effects are linked to each other.• Figure 1c shows that there is not even "balance" between the effects secondary sector shifts.
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none">• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
		<ul style="list-style-type: none">• Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none">• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)• Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	<ul style="list-style-type: none">• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)• Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)



Q4.

Question number	Answer	Mark
(i)	<p>AO1 (1 mark)</p> <p>Award 1 mark for any of the following:</p> <ul style="list-style-type: none">• Availability of suitable land (1).• Good transport connections (1)• Availability of labour (1).• Reliable power source (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
(ii)	<p>AO2 (2 + 2 marks)</p> <p>Award 1 mark for a suitable reason and a further mark for a development of this point, up to maximum of 2 marks per explanation.</p> <ul style="list-style-type: none">• Shift to tertiary sector industries (1) and a service based economy (1).• Global shift where secondary sector industries have moved (1) to countries where the labour and other costs are cheaper (1).• Reduced government support for secondary industries (1) which makes them less financially viable (1). <p>Ideas around automation or reduced employment due to mechanization can be credited for 1 mark unless linked to developed idea of declining secondary sector.</p> <p>Accept any other appropriate response.</p>	(4)



Q5.

Question number	Answer	Mark
(i)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none">• A classification system for types of employment (1)• A classification according to how the workforce is divided up between the three main employment sectors (primary, secondary and tertiary). (1). <p>Accept any other appropriate response.</p>	(1)
(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>A involves information technology and knowledge sharing E involves research and development</p>	(2)

EXAM PAPERS PRACTICE

Q6.



Question number	Answer	Mark
	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for any of the following.</p> <ul style="list-style-type: none">• the basic material from which a product is made (1).• natural resources which are unprocessed (1).• an unrefined material straight from source / in its natural state (1).• natural resources for use / processing by the secondary sector (1).• naturally occurring (resource) used to make another product (1). <p>Accept any other appropriate response, including forms of energy e.g. crude oil, coal etc.</p> <p>Response must include and idea of it being unprocessed, raw, unfinished or going to be used by the secondary sector for credit.</p>	(1)



Q7.

Question Number	Answer	Mark
	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none">• Good transport connections (1) as companies need good access to road and rail connections to allow a skilled workforce to reach them.• Reliable internet access (1) as many companies rely on this to operate their business (1).• Proximity to a university (1) as they can provide a skilled workforce suitable for the sector (1).• Large area of land available (1) to allow room for growth (1). <p>Accept any other appropriate response.</p>	(4)

Q8.

Question number	Answer	Mark
	<p style="text-align: center;">AO1 (1 mark)</p> <p>D primary</p> <p>D is the correct answer since the other options exclude agriculture as part of their activity mix.</p>	(1)



Q9.

Question number	Answer	Mark
	AO1 (1 mark)	
	C Quaternary	(1)

Q10.

Question number	Indicative content
(i)	AO3 (4 marks)/AO4 (4 marks) Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Candidates don't need to cover all energy types to reach level 3, but do need to include both renewable and non-renewable energy. Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:



A03

- The energy mix of a country / globally is the specific combination of different energy sources it uses to meet its energy consumption needs.
- The change in the energy mix is a result of several separate and interrelated factors including energy / resource price, local availability, national and international government agreements, public attitudes, level of development and local geographies.
- An important factor is how energy is used in transport, in the future oil will decrease due to a switch towards more efficient and electric cars. This may also be driven by higher energy prices.
- Government attitudes and policies towards renewable energy (especially large countries and populous such as China and India) will be very important in determining the future energy mix.
- Energy efficient and public attitudes in some places (e.g. California) will affect the future energy mix through political pressure in countries such as USA.
- Future prices of different energy sources e.g. natural gas and oil, as well as energy security of supplies and geopolitical concerns will also be important.

A04

- Figure 1c shows that coal historically has been a main component of the global energy mix.
- On Figure 1c, it can be seen that in the future coal will decline to around 30% of global energy mix by 2040.
- Figure 1c shows that renewable will be very important in the future, expected to be approaching 25% of total energy mix by 2040.
- Figure 1c shows that gas will remain constant from 2010 to 2040 whilst nuclear will drop from high levels in the 1990s to around 10% in 2040.
- Figure 1c shows oil will have the biggest relative drop in use from a high of around 20% in 1970 to just 1-2% in 2040.



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	0	No rewardable material.
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Level 3	7-8	<ul style="list-style-type: none">Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)



Q11.

Question number	Answer	Mark
	AO1 (1 mark)	
	<p>C a classification system for types of employment</p> <p>C is the correct answer as the other options do not related to economic sectors.</p>	(1)

Q12.

Question number	Answer	Mark																		
(i)	AO3 (1 marks)																			
	<p>Award 1 mark for an X in the box above The Gambia (1).</p> <table border="1"> <caption>Percentage (%) employment in primary sector</caption> <thead> <tr> <th>Country</th> <th>1991 (%)</th> <th>2018 (%)</th> </tr> </thead> <tbody> <tr> <td>United Kingdom</td> <td>~2.0</td> <td>~1.0</td> </tr> <tr> <td>Japan</td> <td>~6.0</td> <td>~3.0</td> </tr> <tr> <td>Ukraine Country</td> <td>~15.0</td> <td>~12.0</td> </tr> <tr> <td>The Gambia</td> <td>~35.0</td> <td>~25.0</td> </tr> <tr> <td>Vietnam</td> <td>~75.0</td> <td>~40.0</td> </tr> </tbody> </table>	Country	1991 (%)	2018 (%)	United Kingdom	~2.0	~1.0	Japan	~6.0	~3.0	Ukraine Country	~15.0	~12.0	The Gambia	~35.0	~25.0	Vietnam	~75.0	~40.0	(1)
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Vietnam	~75.0	~40.0																		

Question number	Answer	Mark
(ii)	AO1 (1 mark)	
	<p>D Vietnam</p> <p>A, B, C are all incorrect as the changes in employment are much smaller than in Vietnam.</p>	(1)



Question number	Answer	Mark
1(d)(iii)	<p style="text-align: center;">AO2 (1 mark)</p> <ul style="list-style-type: none">• Mechanisation (1)• Industrialisation (1)• Rural-urban migration (1)• Increased education (1). <p>Accept any other appropriate response.</p>	(1)

Q13.

Question number	Answer	Mark
	<p style="text-align: center;">AO2 (1 mark) / AO3 (1 mark)</p> <p>Award 1 mark (AO3) for evidence further mark (AO2) for extension through explanation, up to a maximum of 2 marks:</p> <ul style="list-style-type: none">• There is a gradual decrease 1978-2010 (1) as less people are working in agriculture (1)• There is a decrease from 701% to below 40% (1) because of urbanisation as people seek work in towns and cities (1) <p>Accept any other appropriate response.</p>	(2)



Q14.

Question number	Answer	Mark
	<p style="text-align: center;">AO2 (2 marks)/AO3 (1 mark)</p> <p>Award 1 mark (AO3) for a basic reason for an increase in the tertiary and quaternary sectors and a further 2 marks (AO2) for extension through explanation or description, up to a maximum of 3 marks.</p> <ul style="list-style-type: none">• The rise in levels of disposable incomes (1) due to people receiving higher wages/paid holidays (1), which has increased the demand for leisure services (1).• Advances in technology have created a whole new range of products (1), which has stimulated the growth of new jobs in this industry (1), such as software designers/ICT technicians (1).• The growth in the tertiary/quaternary sector is partially the result of a fall in the primary and secondary sectors (1) as people are developing different skills/receiving a better education (1) and they are attracted by better paid jobs in the tertiary sector (1).• People are spending more money on services (1) because they have more leisure time/disposable income (1) as they are generally marrying later nowadays (1). <p>Accept any other appropriate response.</p>	(3)

Q15.



Question number	Answer	Mark
(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for any of the following.</p> <ul style="list-style-type: none">• Forestry (1)• Farming (1)• Fishing (1)• Mining (1)• Quarrying (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
(ii)	<p style="text-align: center;">AO2 (2 + 2 marks)</p> <p>Award 1 mark for a point about why there has been a decline in the primary sector and a further 1 mark for a development of this point, up to maximum of 2 marks per explanation.</p> <ul style="list-style-type: none">• A depletion of raw materials (1) due to increased demand as countries become more industrialised (1).• Increased mechanisation so fewer workers are needed (1) due to advances in agricultural/harvesting technology (1).• It is cheaper to import raw materials (1) because they are less accessible in the home country (1).• Ideas linked to social change, e.g. perception that coal mining is dangerous/dirty/low-paid (1), with further detail or explanation (1).• The rise in numbers employed in the tertiary sector (1) due to perceptions of higher pay/safer working environments (1). <p>Accept any other appropriate response.</p>	(4)



Q16.

Question number	Answer	Mark
	<p style="text-align: center;">AO2 (1 mark)/AO3 (1 mark)</p> <p>Award 1 mark for a basic locational factor evident from the photograph (AO3) and a further 1 mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none">• Flat land (1), which is easy to build the factory on (1).• Near to housing (estates) (1) for workers/customers (1).• Near (main) road (1) for access/providing good transport links (1).• Large area (of open space) (1) for further expansion (1). <p>Accept any other appropriate response.</p>	(2)