GCE MARKING SCHEME

SUMMER 2019

A LEVEL
ECONOMICS - UNIT 3
1520U30-1

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INTRODUCTION

This marking scheme was used by WJEC for the 2019 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

Positive Marking

It should be remembered that candidates are writing under examination conditions and credit should be given for what the candidate writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good candidate to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme, nor should marks be added as a consolation where they are not merited.

Below are the assessment objectives for this specification. Candidates must demonstrate their ability 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

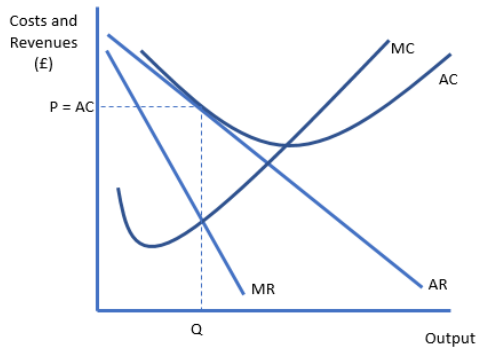
AO2 Apply knowledge and understanding to various economic contexts to show how economic agents are affected by and respond to economic issues

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.

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Section A

Question	Mark Scheme	Total
1	**Explain, with the aid of a diagram, what will happen to the level of output produced by this firm in the long run.** **AO2 – 2 marks** Diagram illustrating the long-run equilibrium position of a firm in monopolistic competition, i.e. the profit maximising level of output determined where MC = MR also corresponds to the normal profit level of output where AC = AR, as in the expected diagram below. 1 mark for the correct left shift of the AR/MR curves such that AC=AR where MC=MR. 1 mark for identifying the correct level of output at MC=MR and AC=AR (Q in the diagram below) – N.B. This mark can only be awarded if the remainder of the diagram is correct.  **AO3 – 2 marks** New firms are attracted by the abnormal profit and the low barriers to entry allow them to enter the market to appropriate the profit [1] which, in turn, reduces the demand for existing firms, causing AR to decrease to the point where the profit max level of output equates to normal profit, and so **output falls** (this can be explicit or implicit) [1]. N.B. award 1 mark for reference to output falling.	4

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Question	Mark Scheme	Total
2		

Output	Market price per bowl (£)	Total cost (£)	*AC (= TC / Q)*	*TR (P x Q)*	
0	-	50	-		
1	45	75	*75*	*45*	
2	40	84	*42*	*80*	
3	35	92	*30.67*	*105*	
4	30	97	*24.25*	*120*	
5	25	100	*20*	*125*	
6	20	103	*17.17*	*120*	
7	15	105	*15*	*105*	

2 (a) **At what level of output does the firm earn normal profit? Justify your answer.** **2**

AO2 – 2 marks
Normal profit is earned where AR = AC, and P = AR.
Therefore, output is 7 when AR = AC (or where TR = TC).

(*N.B. 1 mark for correct answer, 1 mark for justification which can be done using/adapting the table.)*

2 (b) **At what level of output does the firm maximise its revenue? Justify your answer.** **2**

AO2 – 2 marks
Total revenue is maximised when MR = 0, or when TR is at its highest value
From the table, revenue is maximised at output level 5.

(*N.B. 1 mark for correct answer, 1 mark for justification which can be done using/adapting the table.)*

2 (c) **State and explain one possible social or community objective that Bowled Over may choose to pursue.** **2**

AO1 – 1 mark
Identification of a possible social or community objective, e.g. train local youth, donate profits to local charities or community groups, support ex-addicts into work, find raw material from sustainable sources, etc.

AO3 – 1 mark
Explanation of the objective in terms of either benefits to the business or benefits to the community/society, e.g. donating profits to local charities may encourage people to buy from Bowled Over rather than an alternative provider, sourcing material from sustainable sources may allow Bowled Over to charge a higher price.

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Question	Mark Scheme	Total
3 (a)	**Define the term 'interdependence'.** **AO1 – 1 mark** 1 mark for understanding of interdependence, e.g. firms take into account the reactions of their rivals to any pricing or output decision.	1
3 (b)	**Using the data and your own knowledge, explain two conditions under which collusion is more likely to occur.** **AO1 – 2 marks** Knowledge of two conditions in which collusion is likely to occur, e.g. oligopoly market structure, small number of firms, relatively homogeneous product, price-making power, easy to detect if a firm breaks the agreement, adequate deterrent for firms breaking the agreement, likely inelastic PED. **AO2 – 1 mark** Use of relevant data from the case study, e.g. supermarkets are often in highly concentrated markets (Lidl and Netto), homogeneous products that likely have inelastic PED (beer, sweets, coffee), easy to coordinate with InBev managing all retailers and monitoring their compliance. **AO3 – 2 marks** At least one condition explained and clearly linked to how it helps to support collusion.	5

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Question	Mark Scheme	Total
4 (a)	**Using Chart 1, compare and contrast the data on output gaps for the UK and the US.** **AO2 – 4 marks** Up to 2 marks available for each point of comparison (1 mark for identification of point of comparison, 1 mark for use of supporting data), for example: • At the start of the period shown, i.e. 2011, both the UK and US were experiencing a negative output gap – the UK's equivalent to around 2.6% of GDP and the US's equivalent to around 3.1% of GDP. • At the end of the period shown, i.e. 2018, the US was experiencing a small positive output gap equivalent to 0.7% of GDP, whereas the UK was experiencing a small negative output gap equivalent to 0.2% of GDP. • Both the UK and US experienced changes in their output gaps that were broadly similar to that of advanced economies as a whole, although the negative output gaps in advanced economies as a whole were smaller as a % of GDP (approx. 1.9%) than both the US and UK. • The US has experienced a positive output gap sine 2016, whereas the UK has not experienced a positive output gap at all in the period shown. Accept any correct/sensible comparison. N.B. Direct comparisons are needed, not just a description of the data or the shape/direction of movement of the line. Candidates must interpret the data correctly as positive/negative output gaps.	4
4 (b)	**With reference to all the information provided, assess the view that a negative output gap in an economy will always result in a fall in the rate of inflation.** **AO2 – 2 marks** Possible data references (from more than one source) include: • The UK has been running a negative output gap for the entire period shown • Advanced economies were running negative output gaps from 2011 to the end of 2017 • Low inflation has been experienced by many countries since the mid-1990s • China's significant spare capacity • Chart 2 shows some (weak) correlation between global output gaps and global inflation, e.g. low in both in 2003, peaks in 2007/2008, largest trough in both in 2009 **AO3 – 2 marks** Explanation of why a negative output gap in an economy is likely to lead to falling inflationary pressure, i.e. the existence of spare capacity leads to a fall in the market price of factors of production (e.g. labour, capital, land, raw materials) as workers lose bargaining power and scarcity falls, and this in turn reduces costs of production for firms which feeds through into lower general prices. Candidates are likely to refer to cost-push inflation/disinflation. Candidates may include AD/AS diagrams.	7

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Question	Mark Scheme	Total
	AO4 – 3 marks Possible evaluation points could include: • Global output gaps may matter more than national output gaps in an increasingly globalised economy with more sourcing of materials from around the world, e.g. excess capacity in China (steel, container ships, etc.) can reduce the prices of significant factor inputs. • Link to evidence from own knowledge, e.g. reference to 'stagflation' of the 1970s, the fact that inflation was relatively high in the UK for much of the recession immediately following the financial crisis. • Role of policymakers, e.g. central banks such as the Bank of England can use lower interest rates, forward guidance, QE to boost inflation despite negative output gaps. • Problems with measuring inflation and output gaps means that we cannot be sure of the relationship between the two. • Correlation does not imply causality – it could work the other way, i.e. low inflation could lead to a negative output gap as consumers delay spending owing to falling price expectations. • Negative output gaps may be caused by a decrease in SRAS, which raises inflationary pressure. • The price level may not fall as a result of a negative output gap, due to, for example, sticky wages. *N.B. This answer is reversible.*	

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Question	Mark Scheme	Total
5	**With reference to the data, evaluate the likely relationship between a government's budget balance and its national debt.** **AO2 – 2 marks** 1 mark for reference to budget balance data and government debt data for one country. • The UK's budget deficit as a % of GDP has shrunk from about 7.8% to around 2.2%. • The UK's government debt as a % of GDP has increased slightly over the period shown from around 81% to around 88%; it is by far the largest of the countries shown. • Russia moved from running a budget surplus in 2011 to running a deficit in 2012, reaching peak deficit of 3.8% in 2016 and then reaching a deficit equivalent to around 1.5% of GDP in 2018. • Russia's government debt as a % of GDP has increased over the period shown from around 10% to around 18%; it is the lowest of the countries shown. • South Africa's budget deficit has remained roughly constant over the period shown. • South Africa's government debt as a % of GDP appears to have increased the most out of the countries shown although is not as large as the UK's, rising from around 32% to around 56%. **AO3 – 2 marks** Explanation of why there is likely to be a correlation between a government's budget balance and its government/national debt, e.g. if a government runs a budget deficit then it means that, in a given fiscal year, it is spending more than it earns in tax revenue and so must borrow the shortfall; the amount borrowed gets added to the total national/government debt which is the accumulation of annual budget deficits (or *vice versa* that a budget surplus is likely to lead to a shrinking government debt as loans get repaid). **AO4 – 3 marks** Possible evaluative comments include: • Use of the data, e.g. UK's national debt as a % of GDP has been rising despite a reduction in the budget deficit as a % of GDP (although the budget deficit could actually be larger in real terms); despite no change in South Africa's budget deficit its national debt has been rising; the data from Russia is perhaps closer to what we might expect. (N.B. A simple use of the data as an evaluative statement can only be awarded 1 mark – this would need to be developed using theory/further explanation to be awarded more evaluation marks.) • We should consider the view that the budget balance/national debt can change as a % of GDP if GDP itself changes rather than the budget balance or debt. • The national debt can rise as a result of other factors, not just the annual budget deficit, e.g. changes in the interest rate being paid by governments, compound interest can easily accumulate, significant one-off costs (e.g. buying large share stakes in banks or other organisations), the style of structuring payments over a long period (e.g. PFI and PPP deals can lead to future debt although minimal budget deficits in the short-term).	7

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Question	Mark Scheme	Total
6	**To what extent does the data provide evidence to support the quantity theory of money?** **AO1 – 1 mark** Knowledge of the quantity theory of money, e.g. • The idea that changes in the money supply lead to changes in the price level • Possible use of the Fisher equation MV = PT (or MV = PY) **AO2 – 1 mark** Application of the data in Table 1, e.g. • The money supply in China continues to grow but its annual rate of growth has slowed down from 14.8% to 9.2% • Prices have continued to rise in China but there is a rough overall downwards trend in the rate of growth from 1.9% annual increase in 2012 to 1.6% in 2017 • Peak money supply growth occurred in 2012 at 14.8% and inflation peaked slightly afterwards in 2013 at 3.1% • Money supply growth increased slightly between 2014 and 2015, and with a small delay inflation rates rose from 1.6% to 1.9% **AO3 – 2 marks** Analysis to support the view that there is evidence of the quantity theory of money; for example, there appears to be some correlation between the changes in the money supply and the rate of inflation in China. The data is developed is some way. Possible use of the Fisher equation, noting that V (velocity of money) and T (transactions, or Y for output) are assumed to be constant, and so therefore a change in M leads to a change in P. Explanation of how a rise in the money supply leads to a rise in the price level, perhaps using AD/AS analysis. **AO4 – 2 marks** Possible evaluative points could include: • 1 mark available for using data to argue against the view • Other factors clearly affect the rate of inflation, not just the money supply, e.g. 2017's inflation rate is the same as 2015 despite a slowdown in the rate of increase of the money supply • The money supply growth rate has declined much more quickly than the inflation rate, suggesting that it is not a significant contributing factor to inflation • Evaluation of the quantity theory assumptions, i.e. V and T cannot be assumed to be constant, certainly in the short term – the money supply may actually directly influence V, for example • Measurement issues such as: ▪ difficult in practice to measure the money supply in the economy and there are many different ways ▪ inflation is just an average and may not reflect producer price inflation or the cost of living for all households ▪ some knowledge of Chinese macro performance indicators, e.g. inflation is likely to just be measured in urban areas not rural areas *N.B. This is a reversible answer*	6

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Question	Mark Scheme	Total
7	**Using the data in paragraphs 1 and 2, calculate:**	
7 (a)	**The number of people employed in digital industries in the UK in 2016.** **AO2 – 2 marks** 5% of 32.1m people = 1.605m people (i.e. 1 605 000 people).	2
7 (b)	**The number of digital businesses in London in 2015.** **AO2 – 2 marks** "The number of digital businesses in London rose by 11.6% to 41,940". Therefore, the number of digital businesses in 2015 = 41 940 x 100/111.6 = 37 581. Accept 37 850 businesses, as some candidates have rounded down (normally incorrectly) but it is not possible to have a 'fraction' of a business.	2
7 (c)	**The total size of the Welsh workforce.** **AO2 – 2 marks** 30,000 people equates to 3.5% of the Welsh workforce. Therefore, the Welsh workforce = 30 000 x 100/3.5 = 857,143 workers. *N.B. For each of the question parts in Question 7, award full marks if the correct answer is given but with no working shown. Award 1 mark if the correct working/method is shown but the answer is incorrect.*	2

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8	**Using a cost and revenue diagram, evaluate the likely impact of ICT investment on a small firm's costs (lines 10-14).** **[10]**			
Band	AO1	AO2	AO3	AO4
	2 marks	2 marks	2 marks	4 marks
3				**4 marks** Answers in this band reach a clear and supported judgement about the likely impact of ICT investment on a small firm's costs, based on at least two excellent evaluative points. There is some evaluation in the context of small firms.
2	**2 marks** Good knowledge and understanding of costs supported by good understanding of cost/revenue diagrams	**2 marks** There is good data use throughout the answer and in support of an accurate diagram with few errors/omissions, clearly applying the impact of ICT investment to a small firm's costs	**2 marks** Good analysis of at least one impact on a small firm's costs as a result of ICT investment.	**2-3 marks** Good evaluation, making at least two evaluative points of which one will be well developed
1	**1 mark** Limited understanding of cost/revenue diagrams, and the impact of ICT investment on a small firms' costs	**1 mark** Limited reference to the data. Diagram likely to be incorrect or incomplete, with significant errors	**1 mark** Limited analysis	**1 mark** Limited evaluation
0	**0 marks** No relevant understanding shown	**0 marks** No relevant use of the data or application	**0 marks** No relevant analysis	**0 marks** No relevant evaluation

Indicative content:

AO1

- ICT can lead to lower fixed and variable costs, therefore lowering AC and MC at every level of output
- ICT can help a business to expand and move along its AC curve as investment rises

AO2

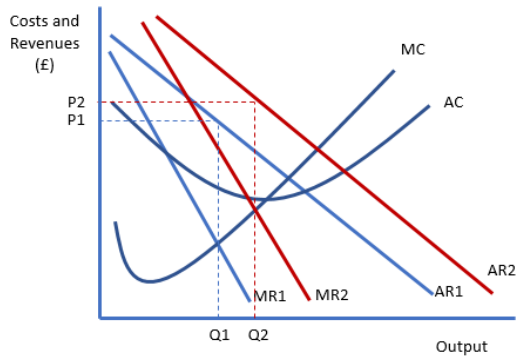
Possible data references could include:

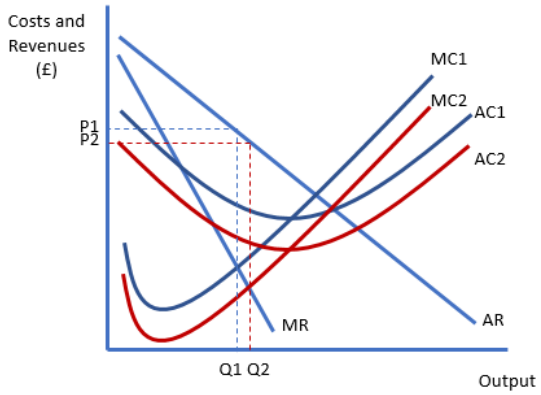
- Businesses are "more able to share departments, such as accounting and marketing, with other small businesses through effective use of ICT which also reduces costs and makes existing factors of production more effective"
- LoveCraft's owner reported that, in 2015, selling just in the UK, his revenue was £6.5m and, after using more ICT, his revenue in 2016 rose to £10.9m as a result of overseas customers
- Businesses can access better real-time information

Possible applications to a diagram:

Falling AC/MC at each level of output, leading to rising output and falling prices, and rising profits

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Other possible diagrammatic routes should be accepted if correct, e.g. use of perfect competition diagrams as result of the reference to small firms in the question, or movement along an LRAC curve due to rising investment and therefore increased output, etc.

AO3

Possible analysis includes:

- Sharing of departments can lower AC and MC by reducing both fixed and variable costs
- Global payments systems can allow more consumers to access a particular niche market, which raises demand/AR, shifting it to the right (i.e. an increase at each and every price, as a result of lower transaction costs)
- Access to better information may reduce the market failure of information failure/gaps/asymmetry, and therefore encourage firms to use their resources more efficiently – again, this could lower production costs

AO4

Possible evaluative points include:

- Benefits appear likely to accrue to businesses in developed and developing countries
- The impact depends on whether businesses are large enough to cover the costs and there will inevitably be other significant costs associated with technology as well, e.g. website design, broadband fee, etc
- Trade-off with loss of privacy (as referenced in the case study); also risk of hacking, lack of knowledge about ICT, etc
- Some businesses will benefit more than others, e.g. tourism in Wales
- ICT lowers the barriers to entry for many markets and so could reduce the chances of small businesses succeeding if they face more competition; larger companies are getting very large, e.g. Amazon, Facebook, and this could further reduce the chances of success of small businesses
- Impact depends on the skill level of employees – the Welsh government is committed to improving these skills but it could be too late/not enough/targeted in the wrong area
- Falling productivity of employees (e.g. distracted by email, struggling to sleep because of screens, etc.) could in fact raise AC, not lower them
- Note – answers must be in the context of COSTS

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9	**Evaluate the likely impact of ICT investment on the Welsh labour market.** **[10]**			
Band	AO1	AO2	AO3	AO4
	2 marks	2 marks	2 marks	4 marks
3				**4 marks** Answers in this band reach a clear and supported judgement about the likely impact of ICT investment on the Welsh labour market, based on at least two excellent evaluative points
2	**2 marks** Good knowledge and understanding of impacts of ICT investment on the Welsh labour market	**2 marks** Good data use throughout the answer, i.e. the answer is focused on the **Welsh** labour market	**2 marks** Good analysis of at least one impact on the Welsh labour market	**2-3 marks** Good evaluation, making at least two evaluative points, of which one will be well developed
1	**1 mark** Limited understanding of the impact of ICT investment on the Welsh labour market	**1 mark** Limited reference to the data/minimal consideration of the impact on the Welsh labour market	**1 mark** Limited analysis	**1 mark** Limited evaluation
0	**0 marks** No relevant understanding shown	**0 marks** No relevant use of the data or application	**0 marks** No relevant analysis	**0 marks** No relevant evaluation

Indicative content:

AO1

- Investment is a component of AD
- Investment refers to increasing the amount of capital in an economy
- ICT investment also reduces business costs
- ICT investment can increase labour market flexibility

AO2

Possible data references include:

- The number of digital enterprises in Wales rose by 9.2% between 2015 and 2016
- Wales is further aided by improving transport links and lower rents, as well as the ‘Internet Coast’ around Swansea
- “The surge in new business creation in the tech sector in Cardiff is fuelling a jobs boom, which is "rippling out" to the wider south Wales region”, i.e. there is a multiplier effect as a result of ICT investment
- The Welsh Government estimates there are currently more than 600 firms in the IT sector alone, employing an estimated 30,000 people – around 3.5% of the Welsh workforce. These numbers are likely to increase to over 60,000 jobs, which indicates an increase in employment and probably rising AD and LRAS
- ICT and digital investment can boost productivity by 30%
- Lower production costs due to improved supply-chain management

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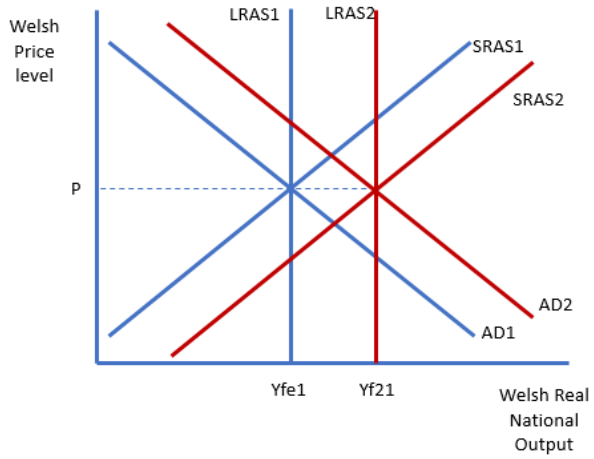
AO3

Possible analytical points include:

- ICT investment will increase AD, because I is a component of AD – rising AD, *ceteris paribus*, leads to an increased demand for factors of production including labour (derived demand), as the economy moves closer to full employment – there may also be further multiplier/accelerator effects
- ICT investment increases capital, which should lead to rising productivity of existing factors of production, which have access to better quality capital/more able to work flexibly and efficiently, etc.
- ICT investment could reduce business costs, which can shift an SRAS (the elastic section of a Keynesian AS curve) downwards, leading to rising GDP and possibly increased demand for labour; labour may be able to be paid more (i.e. a higher wage rate) if other business costs are lower
- ICT investment could improve labour market flexibility, e.g. more use of the so-called Gig Economy (Uber, Deliveroo) which means that people who could not fit in a full-time or regular part-time job can enter the labour force, small businesses able to easily sell through platforms such as Amazon or Etsy can stimulate the creation of micro-businesses, less need to commute and more able to work from home, etc, which can also raise participation rates

Candidates may include diagrams as part of their analysis, e.g. possible Neoclassical AD/AS diagrams applying ICT investment to the Welsh economy, showing an increase in AD, SRAS and LRAS leading to rising employment (as referred to in the case study), rising Welsh real GDP and no change in the price level. Note that the analysis must focus on the impact on the Welsh labour market, not the broader economy.

(*N.B. Accept variations, e.g. Keynesian AD/AS diagrams.)*



Other diagrams could include labour market diagrams showing rising (or falling) demand for labour, changing elasticities of labour supply/demand, changing wage rates, etc.

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AO4

Possible evaluative comments include:

- Impact depends on the success of the Digital Wales strategy, i.e. the investment will only lead to rising employment in Wales if enough people in Wales have the right skills to work in this industry
- Not everyone is able or willing to access ICT services that have moved online, e.g. the elderly, unskilled, the poor, etc, so there may be issues around inequality/inequity, etc
- The impact depends on whether small businesses are able to fully take advantage of sharing departments and knowledge, and the subsequent impact on demand for labour
- Will the multiplier effect lead to greater growth in Wales, or will it spill over to other areas such as London, which is already growing quickly in the tech sector? There may be little impact on the Welsh labour market
- The impact may be different in different regions and industry sectors, e.g. tourism and Cardiff/Swansea area, may be different from the Welsh valleys, etc
- Can apps developed for farmers in LEDCs also be useful for farmers in Wales?
- Employment levels in Wales may not rise if potential employers use social media to research potential new employees and do not like what they find
- The extent of the impact depends on whether businesses survive, or whether they become part of larger firms such as Amazon, i.e. the extent to which the market remains competitive or becomes concentrated – this could impact on the number of jobs created
- Impact depends on other factors, e.g. decline of other industries such as manufacturing may offset the gains from the tech industry
- Quality of jobs may change – flexibility is not always beneficial to workers who may be under-employed
- The number of jobs may fall as capital is substituted for labour

N.B. This answer is reversible

N.B. The answer must be in the context of the Welsh LABOUR MARKET

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Question	Mark Scheme	Total
10 (a)	**With reference to the data, describe two possible indicators of development, other than the HDI, that could be used in response to the increasingly digital global economy.** **AO1 – 2 marks** Understanding of alternative measures from the data and relating to digitisation include: access to smartphones (e.g. number of smartphones per person), price of smartphones, internet connectivity speeds or costs, gender literacy rates, environmental measures (e.g. number of cars on the road), stress/life satisfaction, privacy, speed of learning about infectious diseases, number of digital firms, access to mobile networks/4G **AO2 – 2 marks** Possible data references include: • Proportion of people working in the digital economy, e.g. 3.5% of the Welsh workforce • Digital skills, e.g. Digital Wales Programme • Plantix app requires smartphones with built-in cameras • Falling prices of smartphones • In Karlapalem 500 farmers share 20 smartphones • Kenya's malaria identification programme through mobile data • Apps only benefit those who are literate – many women in LEDCs cannot read • More digital firms in London than Wales	4

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10 (b)	**With reference to the data, evaluate the view that the increasingly digital global economy will raise living standards in LEDCs.** **[10]**		
Band	AO2	AO3	AO4
	4 marks	2 marks	4 marks
3	**4 marks** Excellent and comprehensive use of the data, with focus throughout the answer on the global digital economy and living standards		**4 marks** Answers in this band reach a clear and supported judgement about the likely impact of increased activity in the global digital economy on living standards for all
2	**2-3 marks** Good use of the data throughout the answer	**2 marks** Good analysis of how the global digital economy can raise living standards	**2-3 marks** Good evaluation, making at least two evaluative points of which one will be well developed. Any judgements reached may not be fully supported.
1	**1 mark** Limited use of the data	**1 mark** Limited analysis of how the global digital economy can raise living standards	**1 mark** Limited evaluation, perhaps just focusing on why the global digital economy may not raise living standards, in a generic way. No judgements are made.
0	**0 marks** No relevant use of the data or application.	**0 marks** No relevant analysis	**0 marks** No relevant evaluation

Indicative content:

Relevant points could include:

- In the UK, the digital economy accounts for around 5% of the 32.1m jobs in the economy, 9% of businesses and 7% of actual growth, similar to the US but less than S Korea – this is a reasonable number
  - BUT, this suggests that not all countries are benefiting equally
- There can be multiplier effects from increased digital activity, e.g. 30,000 people are currently employed in Wales and this could increase to 60,000
  - BUT the impact on national living standards depends on whether the multiplier effects are local or regional or global
  - The extract notes that Wales may not be able to provide a suitable "funding environment" to hold onto start-ups once they reach a certain scale, which suggests that firms in the digital economy are footloose and liable to move – this is good for countries gaining digital investment and not beneficial to those countries losing them
- The impact of increased digital activity depends on whether governments are able to implement suitable supporting strategies, e.g. Digital Wales with a focus on skills and infrastructure
  - BUT farmers in LEDCs have benefitted without government intervention into infrastructure, instead relying on free market activity such as purchase of smartphones, and apps developed in MEDCs by scientists and researchers
- Online shopping generates £1.75tr globally – this will lead to increased employment/income and in turn higher living standards
  - BUT this is likely to be consumer goods, which can have negative impacts on lifestyle (e.g. not physically walking to shops therefore becoming more unhealthy), greater environmental costs (e.g. more packaging, more delivery trucks on the roads etc), although this could be offset by better logistics reducing wasted travel

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- Consumers worldwide are able to buy goods that they want as a result of improvements in the digital economy, e.g. Adyen making payments possible in a variety of countries to comply with local customs and laws
  - BUT may discourage consumers from buying more locally, and may raise prices as a result of delivery costs, transaction fees, etc
- Lives of farmers in LEDCs have been improved significantly, e.g. identification of crop issues, better planning of fertiliser use – this leads to steadier incomes and more ability to plan/invest
  - BUT tech can misdiagnose, possibly result in reduced farming skill, could lead to greater homogenisation of grains/crops
  - BUT trade-off with privacy issues
  - BUT farmers still having to share smartphones – this gives power to the owners of the tech
- Better information can lead to people being able to find better jobs, improve access to education and healthcare
  - BUT electronic devices may cause worsening health problems, lack of sleep, falling productivity, make it more difficult to get a job as a result of issues on social media profiles, etc
- Google, Facebook and Amazon have made information provision easier and cheaper, lowering costs and prices
  - BUT there is a trade off with privacy/data storage, and rising monopoly power of these firms which do not act in conventional ways – regulators do not yet know how to manage their behaviour

N.B. Tthis answer is reversible

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