# Mark Scheme (Results)

## Summer 2022

Pearson Edexcel GCSE

In Geography Spec B (1GB0) Paper 01

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**General Marking Guidance**

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

| Question number | Answer | Marks |
|---|---|---|
| 1(a)(i) | A Cairo has the lowest mean annual temperature. All other responses are incorrect. | 1 |
| 1(a)(ii) | 2865mm<br><br>Maximum value is Libreville (2883mm). Minimum value is Cairo (18mm). The range is 2883mm-18mm = 2865mm | 1 |
| 1(b) | Award 1 mark for identifying a factor contributing to high rainfall totals and further marks for explanation. There must be explanation/extension covering the movement of air to gain 3 marks.<br><br>● Low pressure areas have high rainfall totals (1) here, warm air rises (1), cools and water vapour condenses forming clouds. (1)<br>● For clouds to form, air must be rising (1) and cooling (1) this occurs in low pressure areas (1).<br>● Moist prevailing winds can result high rainfall totals (1). Winds which have travelled over the sea (1) pick up moisture. This can cause coastal areas to have high rainfall totals (1).<br>● Locations close to the boundary of the Hadley and Polar cells experience high rainfall totals (1), here, warm air rises (1) and cools and condenses forming clouds (1).<br>● Convection can cause high rainfall totals (1). The energy of the sun causes warm air to rise (1) cool and condense (1).<br>● Mountainous areas / areas of high relief can have high amounts of rainfall (1). Mountains cause the air to rise (1) causing it to cool and condense (1).<br><br>**Accept any other appropriate response.** | 3 |
| 1(c)(i) | Conservative or transform boundary. | 1 |
| 1(c)(ii) | Award one mark for the idea of plates sliding past each other and a further mark for the idea of friction/pressure building up between the plates.<br><br>● Earthquakes occur as the plates attempt to slide past each other (1) this causes friction to occur (1).<br>● Stress is built up (1) as the plates try to move past each other (1).<br>● When the build-up of stress overcomes friction (1) the plates suddenly move past each other (1).<br><br>**Accept any other appropriate response.** | 2 |

| 1(c)(iii) | Award a maximum of one mark for identifying a cause of plate movement and further marks for the explanation of that cause of movement.<br><br>● Convection currents (1) generated by radioactive decay in the core generates heat (1) with the currents being able to pull the tectonic plates causing them to move (1).<br>● Convection currents (1) result in less dense magma rising (1) pushing the tectonic plates causing movement (1).<br>● Magma rises in the mantle (1) due to the decay of radioactive elements in the core (1). This causes convection currents (1).<br>● Convection currents (1) cause rising and falling magma (1) in a continuous cycle / circular motion (1). | 3 |
|---|---|---|
| | ● Slab pull (1) occurs when dense ocean crust subducts (1) pulling the rest of the plate along with it (1).<br>● Ridge-push (1) occurs where newly formed crust acts under gravity (1) causing plates to push away from another (1).<br><br>**Accept any other appropriate response.** | |
| 1(d)(i) | C Tehran<br><br>has the greatest forecasted increase in average temperate of 6.2°C. All other answers are incorrect. | 1 |
| 1 (d) (ii) | Allow one mark for the candidate demonstrating how to work out percentage decrease and then another mark for the correct answer.<br><br>Difference between original 2019 and forecast 2050 figure = 268mm<br>Difference / original 2019 figure = 268/1554 x 100<br><br>Percentage decrease = 17.2% | 2 |

| 1(d)(iii) | Allow 1 mark for each correctly identified reason why climate change is causing sea levels to rise and a further mark for explanation of that point.<br>● Rising temperatures (land/air temperatures) (1) are causing ice sheets / glaciers to melt (1) **OR** Glacial melt (1) which is adding water to the oceans (1).<br>● Warming ocean temperatures (1) causes the water to expand / thermal expansion (1).<br>● Sea water expands (1) taking up more space in ocean basins (1).<br>● Isostatic adjustment (1) can lead to land sinking leading to relative sea level rise. (1)<br><br>**Accept any other appropriate response.** | 4 |
|---|---|---|

| 1(e) | Award 1 mark for identifying a natural cause of climate change and a further mark for explanation.<br><br>● Volcanic eruptions (1) can lead to a reduction in temperature as ash clouds reduce the amount of incoming solar energy (1).<br>● Sunspot activity / solar flares (1) result in more energy being emitted from the sun increasing temperatures (1).<br>● Asteroid collisions (1) can cause huge amounts of dust to block incoming sunlight reducing temperature (1).<br>● Orbital theory / Milankovitch Cycles (1) affect the amount of sun's energy the earth receives (1).<br>● The Earth's orbit is sometimes more circular/more oval (1). This influences the amount of sun's energy on earth (1).<br><br>**Accept any other appropriate response.** | 4 |

| 1(f) | **AO2 (4 marks) / AO3 (4 marks)** | 8 |
|---|---|---|
| | **AO2 content will vary depending on the chosen tropical cyclones and physical hazard examples used.** | |

**AO2 (4 marks)**

● In 2019, intense strong winds from Hurricane Dorian reaching 185mph devastated Grand Bahama with most wooden structures totally destroyed.
● Coastal flooding can result as a result of strong on-shore winds causing water to 'pile up' against the coastline.
● Coastal flooding can be caused by storm surges where a low pressure system can cause sea levels to be considerably higher than normal. ● Storm surges result in the flooding of coastal areas, devastating farmland and leading to salt-water intrusion of freshwater sources. ● Storm surges can cause rapid coastal erosion and large waves caused by tropical cyclones can cause the sedimentation of tropical coral. ● Coastal flooding is largely a natural event, however human influences in coastal areas can exacerbate problems.
● A storm surge of over 7 metres devastated New Orleans causing extensive flooding in the Lower Ninth Ward.
● It is likely coastal flooding will become increasingly problematic as a result of rising sea levels caused by climate change.
● In more developed economies, the construction of various storm defences can reduce the overall impact of the tropical cyclone.
● Physical hazards can combine to intensify the overall impact for instance, heavy rainfall from tropical cyclones increases the likelihood of devastating landslides in the Philippines, much of which has steep topography and has experienced deforestation.
● Other physical hazards such as heavy rainfall can lead to serious flooding causing the overflow of sewerage and leading to the spread of mosquito-borne diseases.
● Increased surface runoff caused by heavy rainfall can flow into coastal estuaries, damaging marine environments.
● Strong winds can damage power infrastructure preventing communication and causing problems for the relief operation.
● Strong winds can devastate heavily forested regions causing tree falls and leaving debris to facilitate the spread of subsequent wildfires.

**Expect students to make the distinction between the different physical hazards caused by tropical cyclones to access 4 marks in AO2.**

**A03 4 marks**
● Judgement regarding the significance of impacts caused by coastal flooding.
● Judgement that the physical hazards caused by tropical cyclones are often more severe in poorer nations, often magnified by poor levels of preparation and the lack of finances to implement an effective disaster response.

● Judgement regarding the significance of other physical hazards (strong winds, heavy rainfall, landslides).
● Judgement as to how local physical geography can influence the severity of the physical hazard for instance the fact that much of New Orleans lies below sea level intensified the impacts of the storm surge during Hurricane Katrina.
● Judgement regarding the significance of human activities at the coastline exacerbating the impact of physical hazards for instance, ineffective levee construction in the New Orleans area.

| Level | Mark | Descriptor |
|-------|------|------------|
|  | 0 | ● No acceptable response |
| Level 1 | 1-3 | ● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2)<br>● Attempts to apply understanding to deconstruct information but understanding and connections are flawed.<br>An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) |
| Level 2 | 4-6 | ● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)<br>● Applies understanding to deconstruct information and provide some logical connections between concepts.<br>An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) |
| Level 3 | 7-8 | ● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)<br>● Applies understanding to deconstruct information and provides logical connections between concepts throughout.<br>A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3) |

| Performance | Marks | Descriptor |
|---|---|---|
| SPaG 0 | 0 | *No marks awarded*<br>● Learners write nothing.<br>● Learner's response does not relate to the question.<br>● Learner's achievement in SPaG does not reach the threshold performance level, for example severe errors in spelling, punctuation and grammar severely hinder meaning. |
| SPaG 1 | 1 | *Threshold performance*<br>● Learners spell and punctuate with reasonable accuracy.<br>● Learners use rules of grammar with general control of maning overall.<br>● Learners use a limited range of specialist terms as appropriate. |
| SpaG 2 | 2-3 | *Intermediate performance*<br>● Learners spell and punctuate with considerable accuracy.<br>● Learners use rules of grammar with general control of meaning overall.<br>● Learners use a good range of specialist terms as appropriate. |
| SpaG 3 | 4 | *High performance*<br>● Learners spell and punctuate with considerable accuracy. ● Learners use rules of grammar with effective control of meaning overall.<br>● Learners use a wide range of specialist terms as appropriate. |

| Question number | Answer | Marks |
|---|---|---|
| 2(a)(i) | B Life expectancy is a social measure of development. <br><br> A Gross Domestic Product is an economic measure. <br> C type of government is a political measure of development. <br> D Gross National Income is an economic measure of development. | 1 |
| 2(a)(ii) | Award 1 mark for correctly identifying how maternal mortality rates differ between countries and a further mark for explanation. <br><br> ● Maternal mortality rates are higher in developing countries (1). This is because of a lack of health facilities to assist mothers with birth (1). <br> ● Maternal mortality is lower in developed countries (1). Easy access to hospitals can assist with difficulties in pregnancy (1). <br> ● Lower levels of development (1) often mean lower levels of health care (1). <br> ● Access to healthcare differs between countries (1). Better healthcare reduces levels of maternal mortality (1). <br><br> Allow credit for the indirect causes of maternal mortality such as the prevalence of HIV/AIDS or malaria related diseases which can lead to the death of mothers in the first year of a child's life. <br><br> **Accept any other appropriate response.** | 2 |
| 2(b)(i) | Allow one mark for demonstrating an understanding of the mean calculation. <br> Total for Indian cities = 884 / 7 = 126.28 (1) <br> Correct answer to one decimal place = 126.3 (1) | 2 |
| 2(b)(ii) | There are a variety of possible correct answers here with no expectation that the candidates express their answer as 1:n <br><br> Accept any answer from: <br><br> 1:6 <br><br> 2:12 <br><br> 4:24 <br><br> 20:120 | 1 |

| 2(c) | Award one mark for identifying a positive consequence of economic development and a further mark for explanation.<br><br>● Reduced levels of pollution (1) as countries introduce environmental laws (1).<br>● Reduced levels of air pollution (1) as there is less reliance on fossil fuels (1).<br>● Reduction in levels of pollution (1) due to greater environmental awareness (1).<br>● <mark>     </mark>The country is better off financially (1) therefore they invest in cleaning up the environment (1).<br>● Increased environmental awareness (1) mean more people can afford electric vehicles (1). | 2 |
|---|---|---|
| | ● Decline of polluting industries (1) as a result of globalisation/ outsourcing due to a growth in tertiary / quaternary industries (1).<br>● Increasing levels of environmental protection (1) due to the growth of environmental awareness / green politics (1).<br><br>**Accept any other appropriate response.** | |
| 2(d)(i) | 13.81<br><br>US $ 14.21 – US$ 0.4 = US$ 13.81 | 1 |
| 2(d)(ii) | Award one mark for a suitable data presentation technique and a further mark for a description of how the technique would be drawn.<br><br>● A line graph could be drawn (1) with years on the x-axis and trillions of US$ on the y-axis (1).<br>● A line graph (1) with a line representing each country could show changes between 1990 and 2019 (1).<br>● A bar graph (1) could be drawn with years on the x axis and trillions of US$ on the y-axis. (1).<br><br>**Accept any other appropriate response.** | 2 |

| 2(e) | Award one mark for correctly naming an advance in communication and further marks for how this has led to development in emerging countries.<br><br>● Containerisation (1) enables goods to be transported cheaply all around the world (1) which means goods can be produced in emerging countries (1)<br>● Global shipping has increased (1) goods can be produced cheaply in emerging countries (1) which provides an income for local people (1).<br>● Mobile phone technology (1) enables people to establish businesses (1) which creates jobs (1).<br>● Investment in the road network (1) enables goods to be transported more easily (1) and encourages foreign direct investment (1).<br>● Investment in transport infrastructure (1) encourages foreign direct investment (1) which creates jobs in emerging countries (1).<br>● Increasing global air connectivity (1) makes emerging countries desirable locations for business (1) as management can easily travel to overseas factories/offices (1).<br>● Improved broadband/internet provision (1) attracts business to the area (1) enabling them to communicate with offices/customers around the world (1).<br><br>**Max 2 if no advance in communications is mentioned.**<br>**Accept any other appropriate response.** | 3 |

| 2(f)(i) | D 0-4<br><br>This is clearly the widest bar.<br><br>All other answers are incorrect. | 1 |

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|---|---|---|
| 2(f)(ii) | Award one mark for identifying a characteristic of the South Sudan pyramid which is representative of that of a developing country and a further two marks for a suggested explanation of the identified characteristic.<br><br>● South Sudan has a low percentage of elderly people (1). This could be because of a poor health care system (1) contributing to a shorter life expectancy (1).<br>● South Sudan has a higher percentage of people in the 0-4 age group (1). This could be because birth rates are high (1) due to limited use of contraception (1).<br>● There is a youthful population (1) as a consequence of a low life expectancy (1) caused by a poor health care (1).<br>● There is a low expectancy (1) because of poor healthcare (1) due to a lack of investment in healthcare (1).<br>● South Sudan has a high percentage of people in the young age groups (1). This could be due to the need for children to work on farms (1) or to look after family in their old age (1).<br>● South Sudan has a lower percentage of people in their 30s (1). This could be due to emigration of people (1) due to a shortage of work (1)<br>● South Sudan's pyramid rapidly narrows (1). This may be due to people dying relatively young (1) as a consequence of inadequate health care (1).<br>● South Sudan's pyramid has a wide base (1). This suggest there is a high birth rate (1) which could be due to the lower levels of female education (1).<br>● The pyramid shows there is a low life expectancy (1) and therefore a youthful population (1) as a consequence of poor healthcare (1).<br><br>**Accept any other appropriate response.** | 3 |

| 2(g) | Award one mark for identifying a location factor which has influenced the development of the named emerging country and a further mark for explanation up to a maximum of 2 marks for each factor given.<br><br>● India's close proximity to the Middle East (1) enables it to easily import oil / gives it a growing market for its exports (1).<br>● India's location puts it 5 hours 30 ahead of UK time (1) this has made it an attractive location for company outsourcing aiming for a 24 - hour operation (1).<br>● India's coastal location (1), enables it to import / export goods (1).<br>● Some areas of India are landlocked / isolated (1) creating disparities within the country (1).<br>● China has a huge Pacific coastline (1) which enables easy trade with the USA (1).<br>● Whereas coastal areas in China have developed at a rapid rate (1) inland areas have lagged behind creating inequalities (1)<br>● Nigeria has rich oil deposits (1) the export of which has created a huge amount of revenue (1).<br>● Fertile soils close to major rivers (1) are excellent locations for crop production (1).<br>● Nigeria has a long coastline (1) enabling it to trade easily with many countries around the world (1).<br>● Northern India is mountainous (1) making it unappealing to investment by industry (1).<br>● China has several desert areas (1). Development in these areas has been restricted due to a lack of fertile soils / shortage of water (1). | 4 |
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| | **NB both positive and restrictive factors relating to a country's development should be credited.**<br><br>**NB only allow the country's geographic location (e.g. coastal) and ease of trade, perhaps with a named trading partner once.**<br><br>**Accept any other appropriate response.** | |
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| 2(h) | **AO2 4 marks / AO3 4 marks** | 8 |
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| | **A02 4 marks**
● Colonialism involved developed nations taking control over a dependent country.
● Neo-colonialism involves modern day methods of indirect control by developed nations on former colonies.
● Under colonial rule, many developing nations exported low-cost primary products to colonial powers, importing more expensive manufactured goods.
● This contributed to the underdevelopment of many nations.
● The idea that colonialism leads to global inequality was developed by Frank with his dependency theory. He believed that historical trade patterns have made countries poor with international trade rules established by the colonial powers.
● Post-independence, neo-colonialism has continued to widen global inequalities. For example, TNCs from developed nations operate in emerging countries with the majority of profits going back to the developed nation.
● Trade agreements often heavily favour developed nations and are restricting the growth of developing nations.
● Other factors have also contributed to global inequalities.
● Environmental factors also contribute to global inequalities for instance, harsh climates and difficult topography restrict a country's ability to develop.
● Systems of governance contribute to global inequalities, for instance corrupt governments may misuse government money.
● International relations may contribute to global inequalities, for instance international sanctions placed against the Iranian government, restricting their development.


**AO3 4 marks**
● Judgement regarding the importance of colonialism and neo-colonialism as a means of creating global inequalities.
● Judgement regarding the relative significance of colonial rule versus neo-colonial policies in creating global inequalities.
● Judgements that whereas countries may now be independent, neo-colonialism continues to widen global inequality. For instance, China's investments in Africa may be reinforcing a dependency on commodity exports.
● Judgements regarding the relative importance of other factors which have influenced a countries development such as environmental factors and systems of governance.
● Overall evaluation regarding the extent to which colonialism and neo-colonialism have created global inequalities. | |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | ● No acceptable response |
| Level 1 | 1-3 | ● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2)<br>● Attempts to apply understanding to deconstruct information but understanding and connections are flawed.<br>An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) |
| Level 2 | 4-6 | ● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)<br>● Applies understanding to deconstruct information and provide some logical connections between concepts.<br>An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) |
| Level 3 | 7-8 | ● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)<br>● Applies understanding to deconstruct information and provides logical connections between concepts throughout.<br>A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3) |

| Question number | Answer | Marks |
|---|---|---|
| 3(a)(i) | Asia. | 1 |
| 3(a)(ii) | The answer is 29%. Also accept -29%.<br><br>Europe's % share of the world's urban population in 1950 is 38%. In 2050 its projected share decreases to 9%. | 1 |
| 3(a)(iii) | Award one mark for correctly demonstrating how to work out 20% of 6.5 billion.<br>Award a further mark for the answer expressed in billions.<br><br>6.5 x 0.2(1) = 1.3 (1).<br><br>**OR**<br><br>20 x 6.5/100 (1) = 1.3 (1).<br><br>**OR**<br><br>6.5 x 20 = 130 (1). 130/100= 1.3 (1)<br><br>OR<br><br>20/100 x 6.5 (1) = 1.3 (1)<br><br>OR<br><br>6,500,000,000 x 20 = 130,000,000,000 (1). 130,000,000,000 / 100 = 1,300,000,000 (1)<br><br>OR<br><br>10% of 6.5 = 0.65 (1). 0.65 x 2 = 1.3 (1)<br><br>**Accept any other appropriate method showing how to work out 20% of 6.5 billion.** | 2 |

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|---|---|---|---|
| 3(b) | Award one mark for identifying a reason why cities may experience population decline and a further mark for explanation of that reason has occurred.<br><br>● Counterurbanisation (1) occurs as people leave cities for reasons such as high levels of pollution / crime / the desire for a quieter way of life (1).<br>● Decentralisation (1) causes people to leave cities as businesses locate at the edge of cities (1).<br>● Deindustralisation (1) lead to mass unemployment causing people to leave cities looking for work (1).<br>● People are increasingly moving to rural areas (1) as the cost of housing in cities continues to rise rapidly (1)<br>● The growth in working from home / hybrid working (1) has led to decline as it is cheaper to live in rural areas / outside of cities. (1)<br>● Natural disasters (1) can lead to people seeking to leave vulnerable urban areas (1).<br><br><br>**Accept any other appropriate response.** | 2 | |
| 3(c) | Award one mark for each correctly drawn line up to a maximum of two marks. (2)<br>Award a further mark for correctly labelling the three additional sectors if the two lines have been correctly drawn. (1)<br><br>**Countries can be plotted in any order. It is not necessary to add the percentage figure.**<br><br>**Allow tolerance 1mm +/- either side of the correct position of the lines.**<br><br>**NB If no labelling but all segments correct then max 2.** | 3 | |
| 3 (d) | Award one mark for identifying an impact that regeneration has on the population numbers in an area and a further mark for explanation of the change.<br><br>● Regeneration causes the population to increase as jobs are created (1) which encourages migration into the area (1).<br>● Land use can change from residential to commercial (1) which leads to people moving out of the area (1)<br>● High density housing is replaced by lower density housing (1) leading to overall out migration (1).<br>● Old industrial buildings can be converted to residential use (1) which leads to in-migration and population growth (1).<br>● At first, the population of the area may decline as buildings are demolished (1) which sometimes force people to move out of an area (1).<br>● Regeneration can lead to an increase in house prices in an area (1) which encourages people to leave urban areas to move to cheaper locations (1).<br><br><br>NB: A simplistic comment such as 'it grows' or 'it declines' requires explanation of the growth for 1 mark as illustrated in the above examples.<br><br>**Accept any other appropriate response.** | 2 | |

| 3(e)(i) | B – Seoul. All other answers are incorrect.<br><br>Seoul contributes 49.4% to national GDP<br>Athens contributes 47.9% to national GDP<br>Ottawa contributes 39% to national GDP<br>Copenhagen contributes 40.3% to national GDP<br><br>**Accept any other appropriate response.** | 1 |
|---|---|---|
| 3(e)(ii) | Award 1 mark for identification of a broadly positive correlation and further marks for accurate use of data and identification of cities which either follow the general trend or are anomalous. The use of data may be non-numerical as in examples 1 and 2 below.<br><br>● Generally, as one variable goes up, so does the other (1). Ottawa does not fit the pattern (1). It has a low % of the national population but makes a large contribution to national GDP (1).<br>● There is a positive trend (1). Cities such as Washington DC have a low % of the national population and make a low contribution to national GDP (1). Whereas cities with a high % of the national population such as Seoul make a large contribution to national GDP (1).<br>● As the % of the national population living in the capital city goes up, so does the city's contribution to national GDP (1). For example, Athens has a high % of the national population living in the capital at around 28% (1) and makes a large percentage contribution to the country's GDP (1).<br><br>**Accept any other appropriate response.**<br><br>**Note: Award a maximum of 2 marks if there is no use of data.** | 3 |
| 3(f) | C  a city with very large economic and political influence<br><br>All other answers are incorrect. | 1 |
| 3(g) | Award one mark for identifying a difference between formal and informal employment and a further mark for explanation of the difference.<br><br>● Formal jobs require that workers pay tax on their earnings (1) as they work for regulated companies (1).<br>● Workers often pay no tax in informal employment (1) as people are self-employed (1).<br>● Informal jobs often involve irregular hours (1) as people are self-employed and can work when they choose (1).<br>● Formal jobs often have employment health and safety guidance in place (1) as it is a legal requirement for companies to do so (1).<br><br>**Accept any other appropriate response.** | 2 |

| 3(h) | Award a mark for correctly identifying a positive impact of a bottom-up development strategy and a further mark for explanation of this impact up to a maximum of two marks for each positive impact given.<br><br>● The local community are given a say in what is required (1) which leads to the most important problems being tackled (1). | 4 |
|---|---|---|

| | ●      Bottom-up strategies tend to have a low cost (1) this ensures that even the poorest societies / people can benefit from them (1).<br>●In Lagos, Edufood aims to improve food security for school students (1). This improves children's levels of concentration in class (1).<br>●      They use appropriate technology (1) which can easily be repaired / used/ maintained by local people (1).<br>●      They promote community cohesion (1) which make use of local expertise (1).<br>●      The LSS charity in Mumbai improves sanitation (1) which has led to the improved health of local people (1).<br><br>**Accept any other appropriate response.**<br><br>**Max 3 marks if the answer is generic and makes no specific reference to a bottom-up development strategy in a specific megacity.**<br><br>**Note: No mark for simply naming a strategy.** | |
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|---|---|---|
| 3(i) | **AO2 (4 marks) / AO3 (4 marks)**<br><br>**Answer depends on the megacity chosen but expect candidates to include references to rates of natural increase, national and international migration and economic investment)**<br><br>**AO2 (4 marks)**<br>● By developing large ports with associated industries, colonial powers began to stimulate the population growth of many modern megacities.<br>● Initially, population growth was comparatively slow.<br>● The population of Lagos grew by 3 million people between 1950-1980, this had risen to 7 million by 2000 and is believed to be over 20 million in 2022.<br>● Recent rapid population growth in Lagos has occurred due to large amounts of rural to urban migration fuelled by increased employment opportunities in the metropolitan area.<br>● Rural-urban migration has historically been important in the growth of Mumbai's population although in recent years there is evidence that the rate of this migration is slowing.<br>● Rural push factors such as poverty in areas such as Bihar have fuelled rural-urban migration to Mumbai.<br>● An increasing proportion of young people in Lagos has recently led to significant increases in the rate of natural increase.<br>● In 2010, it was estimated that 75% of Mumbai's migrant population were from rural area in India compared to 23% from urban areas with 2% having migrated internationally.<br>● By investing heavily in megacity infrastructure, governments make megacities more attractive destinations, attracting more people to them.<br>● Government investment in megacities can create a 'multiplier effect' leading to further subsequent investment and associated population growth.<br><br>**AO3 (4 marks)**<br>● Judgement regarding the relative significance of past and present factors for growth.<br>● Judgement regarding the significance of national v international migration on population growth.<br>● Judgement regarding the significance of regional and government policies in the growth of the megacity.<br>● Judgement regarding the significance of push and pull factors.<br>● Judgement regarding the relative significance of factors which contribute to the population growth of the megacity.<br><br><br>Accept any other appropriate response | 8 |

| Level | Mark | Descriptor |
|---|---|---|
| | 0 | ● No acceptable response |
| Level 1 | 1-3 | ● Demonstrates isolated elements of understanding of concepts and the interrelationships of places, environments and processes. (AO2)<br>● Attempts to apply understanding to deconstruct information but understanding and connections are flawed.<br>An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) |
| Level 2 | 4-6 | ● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)<br>● Applies understanding to deconstruct information and provide some logical connections between concepts.<br>An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) |
| Level 3 | 7-8 | ● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)<br>● Applies understanding to deconstruct information and provides logical connections between concepts throughout.<br>A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout (AO3) |