Unit 3: Global Systems and Global Governance

Mark Scheme

Guidance for Examiners

Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, as opposed to adopting an approach of penalising him/her for any omissions. It should be possible for a very good response 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.

The mark scheme for this unit includes both point-based mark schemes and banded mark schemes.

Point-based mark schemes

For questions that are objective or points-based the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision should be made. Each creditworthy response should be ticked in red ink. Do not use crosses to indicate answers that are incorrect. The targeted assessment objective (AO) is also indicated.

Banded mark schemes

For questions with mark bands the mark scheme is in two parts.

The first part is advice on the indicative content that suggests the range of concepts, processes, scales and environments that may be included in the learner's answers. These can be used to assess the quality of the learner's response.

The second part is an assessment grid advising on bands and the associated marks that should be given in responses that demonstrate the qualities needed in the three AOs, AO1, AO2 and AO3, relevant to this unit. The targeted AO(s) are also indicated, for example AO2.1c.

Assessment Objective	Strands	Elements
AO1 Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.	N/A	This AO is a single element.
AO2 Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.	N/A	1a - Apply knowledge and understanding in different contexts to analyse geographical information and issues.
		1b - Apply knowledge and understanding in different contexts to interpret geographical information and issues.
		1c - Apply knowledge and understanding in different contexts to evaluate geographical information and issues
AO3 Use a variety of relevant quantitative, qualitative and fieldwork skills to: • investigate geographical questions and issues • interpret, analyse and evaluate data and evidence • construct arguments and draw conclusions.	1 - investigate geographical questions and issues	N/A
	2 - interpret, analyse and evaluate data and evidence	
	3 - construct arguments and draw conclusions	

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains marks. Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. Once the annotation is complete, the mark scheme can be applied. This is done as a two stage process.

Banded mark schemes Stage 1 – Deciding on the band

When deciding on a band, the answer should be viewed holistically. Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the learner's answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Banded mark schemes Stage 2 – Deciding on the mark

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is also provided for banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

The specialised concepts from the specification that apply in the indicative content are underlined.

The mark scheme reflects the layout of the examination paper. Mark questions 1 and 2 and either 3 or 4 in Section A plus questions 5 and 6 and either 7 or 8 in Section B. In Section C, mark either question 9 or 10. If the candidate has responded to all questions in either Section A, B or B, mark all these responses. Award higher marks attained; further possible rubric infringements will be discussed at the marking conference.

Be prepared to reward answers that give **valid and creditworthy** responses, especially if these do not fully reflect the 'indicative content' of the mark scheme.

Section A: Global Systems – Water and Carbon Cycles

Mark all questions in this section.

1. (a) Use Figure 1 to describe changes in the water content of the Sierra Nevada snowpack between 2005 and 2015.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
Award 1 mark for any of the following changes, up to a maximum of 3 marks						3	**3**

Indicative content
The question requires description of changes and comments need to be focused on this aspect of the resource and not on single points:
- overall decline from 2005 to 2015 (1 mark)
- fluctuation from 2005 to 2015 (1 mark)
- steepest decline from 2011 to 2012 (1 mark)
- constant decline from 2011 to 2015 significantly below average 2012–2015 compared to previous years (1 mark)
- increase from 2007 to 2008 / 2011 (1 mark)
- award 1 mark for quantification

Accept other valid descriptions of change.

1. (b) Outline how convection can lead to the formation of clouds.	AO1	AO2.1	AO2.1	AO2.1	AO3.1	AO3.2	Total
Award 1 mark for any of the following changes, up to a maximum of 4 marks	4						**4**

Indicative content
The question requires a brief summary of the main characteristics of cloud formation that results from convection:
- sun begins to heat up the earth
- a thermal can form
- warm air has a tendency to rise
- as it rises, it will begin to expand and cool
- reaches the saturation point where the relative humidity is 100 percent and condensation starts to occur.
- when water condenses, it goes from a gas to a liquid forming cloud.

Accept other valid descriptions of change.

2. (a) Describe *two* carbon pathways between land and atmosphere.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
Award 1 mark for each correct pathway and up to 2 marks for development, up to a maximum of 5 marks	5						**5**

Indicative content
Allow 1 mark for identification of each correct pathway:
- main pathways are photosynthesis, respiration, decomposition, erupting volcanoes, weathering, natural burning, burning fossil fuels

Allow up to 2 marks for further description of the pathway which could include elements of:
- process, form of carbon, relative amounts

The response needs to address two pathways for maximum marks.
Credit other valid points.

2. (b) To what extent does deforestation cause changes to the size of carbon stores in *one* selected biome.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
				5			5

Indicative content

Answers can examine the increase or decrease of carbon stores in different elements of the selected biome and evaluate the extent to which deforestation causes changes.

- vegetation store is decreased
- depletion of soil store as less carbon is passed from vegetation
- increase in atmospheric store
- as timber is burnt, it increases the release of carbon dioxide
- Tree roots exposed and decompose leading to further carbon dioxide being released into the atmosphere
- Soil store reduced as top soil washed away due to soil erosion following deforestation

Answers need to give explanation of the changes in the context of sequestration, decomposition and other processes operating in the carbon cycle.

Credit other valid approaches.

3. Describe and evaluate how changes to stores within the drainage basin, such as snowpacks, have an impact on patterns of discharge.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
	10			8			**18**

Indicative content
- Recognition of stores within the drainage basin – cyrospheric, vegetation, soil and groundwater, lakes
- Description of how and why stores change – seasonal changes, deforestation / afforestation, dams, changes to infiltration from human interventions
- Description of changes in patterns of discharge that result from changes in stores within the drainage basin – changes in volume of water, changes to pattern of flood hydrograph (flashy / steady responses), changes to regimes
- Explanation of how changes within drainage basin stores cause alterations in discharge patterns
- Description of changes that take place to drainage basin stores (systems)
- Exemplification of changes to stores and patterns of discharge
- Some explanation of how changes to stores result in impacts on patterns of discharge (causality)

Marking guidance
Near the upper end, answers that score well in interpretation AO2.1c (evaluate) will have developed linkage in terms of the processes operating in the drainage basin system. Answers may develop the concept of causality in relation to changes within drainage basin stores and their subsequent impacts on the elements of pattern with respect to discharge. Answers may reflect on how changes to vegetation impacts on the speed and volume of water passing through the drainage basin and the production of more flashy responses to the hydrograph. Changes in the water stored in snowpacks may impact on the volume of water in streams fed by snowmelt. At the lower end, there will be limited evaluation of changes within stores and limited comment on how these influence process and pattern.

Credit other valid approaches.

Award the marks as follows:

	AO1 [10 marks]	AO2.1c [8 marks]
	Knowledge and understanding of stores, and changes within stores in the drainage basin. Knowledge and understanding of patterns of discharge	*Applies AO2.1c to evaluate through suggesting how changes within stores can have an impact upon processes operating in the drainage basin and patterns of discharge*
Band		
3	7-10 marks Mostly accurate knowledge and understanding of stores and patterns of discharge Developed exemplification Well-annotated sketches / diagrams may be used Spelling, punctuation and grammar used with a high degree of accuracy	6-8 marks Well-developed and structured suggestions of how the identified changes in stores can lead to changes in process and discharge patterns
2	4-6 marks Partial knowledge and understanding of stores and patterns of discharge Generalised exemplification Simple sketches / diagrams may be used Spelling, punctuation and grammar used with a reasonable degree of accuracy	4-5 marks Partial or unbalanced suggestions of how the identified changes in stores can lead to changes in process and discharge patterns
1	1-3 marks Limited knowledge and understanding of stores and patterns of discharge Limited exemplification Basic sketches / diagrams may be used Spelling, punctuation and grammar used with limited accuracy	1-3 marks Limited suggestions of the how the identified changes in stores can lead to changes in process and discharge patterns
	0 marks Response not creditworthy or not attempted	0 marks Response not creditworthy or not attempted

4. Describe and evaluate the impacts of recent increases in the atmospheric carbon store on the oceans.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
	10			8			18

Indicative content
- Detailed description of how increased carbon has an impact on processes operating within the ocean – increased absorption of CO_2 results in decline in pH and ocean acidification
- Possible impacts on calcareous organisms, such as coral (organisms that have low tolerance to changes in pH) are less able to build shells
- Possible impacts on the food chain within oceans – biodiversity
- Possible positive impacts as some organisms (some phytoplankton and seagrasses) may benefit – this changes composition of ocean communities
- Possible socio-economic impacts – impacts on fishing and tourism
- description of changes to oceans due to increased carbon in atmosphere (<u>causality</u>)
- exemplification of impacts (<u>equilibrium</u>)
- some explanation of how increased carbon can lead to impacts on environment and / or people (risk)

Near the upper end, answers that score well in AO2.1c will have an evaluation of the impacts of increased carbon – magnitude of impact, positive / negative, relative impact on different aspects of oceans and should have developed linkage in terms of the processes operating and the impacts with comment on relative impact or magnitude. At the lower end, there will be limited evaluation of a limited number of impacts with little reference to assessment.
Credit other valid approaches.

Award the marks as follows:

	AO1 [10 marks]	AO2.1c [8 marks]
	Knowledge and understanding of ways increased levels of CO_2 can impact on the oceans	*Applies AO2.1c to appraise / judge through evaluating how far increased levels of CO_2 can impact on the oceans*
Band		
3	7-10 marks Mostly accurate knowledge and understanding of how increased atmospheric carbon impacts on oceans and ocean systems Developed exemplification Well-annotated sketches / diagrams may be used Spelling, punctuation and grammar used with a high degree of accuracy	6-8 marks Well-developed and structured evaluation of how increased atmospheric carbon impacts on oceans and ocean systems
2	4-6 marks Partial knowledge and understanding of increased levels of how increased atmospheric carbon impacts on oceans and ocean systems Generalised exemplification Simple sketches / diagrams may be used Spelling, punctuation and grammar used with a reasonable degree of accuracy	4-5 marks Partial or unbalanced evaluation of how increased atmospheric carbon impacts on oceans and ocean systems; some structure
1	1-3 marks Limited knowledge and understanding of increased levels of how increased atmospheric carbon impacts on oceans and ocean systems Limited exemplification Basic sketches / diagrams may be used Spelling, punctuation and grammar used with limited accuracy	1-3 marks Limited evaluation of how increased atmospheric carbon impacts on oceans and ocean systems
	0 marks Response not creditworthy or not attempted	0 marks Response not creditworthy or not attempted

Section B: Global Change and Challenges

Mark all questions in this section.

5. (a) Use *Figure 2* to describe the distribution of Portuguese migrants in the selected regions of Wales. Include relevant figures in your answer.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
Award 1 mark for any of the following up to a maximum of 3 marks; reserve 1 mark for quantification						3	**3**

Indicative content
- Most of the regions are home to a small proportion/number of total migrants (1 mark)
- Merthyr stands out as an outlier / anomaly compared with the majority of the distribution (1 mark)
- Almost three-quarters of the population are in just two areas, Merthyr and Rhondda (1 mark)
- The values range from 293/53% in Merthyr to just 10/1.8% in Torfaen (1 mark) – quantification

Credit other valid points.

5. (b) Explain how international migration can magnify economic differences between the UK and other countries.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
Award 1 mark for any of the following up to a maximum of 5 mark	5						**5**

Indicative content
- Loss of large numbers of working age adults may reduce a source county's economic output (1 mark)
- In contrast the host country may see overall output increase, exacerbating differences (1 mark)
- The effect is pronounced when highly-skilled individuals leave / 'brain drain' (1 mark)
- Feedback effect of fewer consumers for services further affects source economy (1 mark)
- Feedback effect of supply chain / cluster disintegration in faltering sectors (1 mark)
- Remittances may partly offset losses but not enough to stop the gap from widening (1 mark)

Credit other valid points. Maximum 4 marks for responses that list costs and benefits but do not address the potential exacerbation of the difference / gap between nations.

6. (a) Suggest how human factors may have affected the pattern of connectivity shown in *Figure 3*.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
Award 1 mark for any of the following up to a maximum of 5 marks			5				**5**

Indicative content
- Early economic development / developed country status of Japan / South Korea has resulted in a large communications market (1 mark)
- China has emerged as a market / superpower only recently and is less connected (1 mark)
- Political factors play a role in the isolation of North Korea and to some extent China (1 mark)
- Settlement of people in core areas / cities explains national network patterns (1 mark)
- Distribution patterns are sometimes affected by marine protected areas / ocean governance (1 mark)
- Geopolitical between countries e.g. Russia-Japan may affect cable provision (1 mark)

Credit other valid suggestions of human factors affecting network and hub growth in this region. Do not credit descriptions of *Figure 3* that lack and suggestion of human factors.

6. (b) Explain how physical factors influence the global distribution of seafloor cable data networks.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
Award 1 mark for any of the following up to a maximum of 4 marks	4						**4**

Indicative content
- Avoidance of areas with a significant tsunami or undersea landslides risk (1 mark)
- Problems associated with subduction zones (no cables north of Japan) (1 mark)
- Concentration of cabling through narrow straits / canals e.g. Suez (1 mark)
- Cables may not be present in extremely deep water (1 mark)

Credit other significant points focused on physical factors affecting the distribution.

7. Evaluate why some places are popular destinations for international migration flows.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
	10			8			**18**

Indicative content

Destinations may include entire states (UK, USA, Qatar) or specific cities (London, Paris) or even specific small towns and rural areas. Possible themes include:

- centrality of some countries to contemporary globalisation, or their past importance in the context of European Empires (thus Commonwealth English-speaking migrants may look to UK; French speakers migrate to Paris)
- economic opportunities of world cities (eg construction industry boom in Qatar; global entertainment hubs / cores eg Los Angeles and Hollywood, Mumbai and Bollywood)
- Presence of established diaspora communities that continue to attract / pull / interact with new migrants, even in some rural places and small towns (eg Portuguese community in Merthyr Tydfil)
- Real or perceived positive attitudes towards refugees and asylum seekers

Marking guidance

Near the upper end, answers that score well at AO2.1c will evaluate the statement by applying the concepts of <u>place</u> and <u>scale</u> (examining how a 'place' could be a country or a city), or may examine what the basis for 'popularity' is by adopting an economic, social, cultural and political <u>causal</u> framework. The UK / London's present-day role as a core for past and present global economic <u>systems</u> could be examined. Another approach might be to examine how core destinations have been <u>represented</u> or <u>perceived</u> (as opposed to reality) and how this could affect migration. Near the lower end, there will be limited evaluation as to why some places are popular destinations and unlikely to uncover assumptions in the question.

Credit other valid approaches

Award the marks as follows:

	AO1 [10 marks]	**AO2.1c [8 marks]**
	Demonstrates knowledge and understanding of global migration flows	*Applies (AO2.1c) to appraise / judge through evaluation of different places and contexts, and levels of popularity*
Band		
3	8-10 marks Mostly accurate knowledge and understanding of a range of global migration flows Detailed exemplification Spelling, punctuation and grammar used with a high degree of accuracy	7-8 marks Well-developed and structured evaluation of why some places are popular destinations; likely to apply scale or other concepts to provide structure
2	4-7 marks Partial knowledge and understanding of global migration flows Generalised exemplification Spelling, punctuation and grammar used with a reasonable degree of accuracy	4-6 marks Partial or unbalanced evaluation of why some places are popular destinations; some structure
1	1-3 marks Limited knowledge and understanding of global migration flows Limited exemplification Spelling, punctuation and grammar used with limited accuracy	1-3 mark Limited evaluation of why some places are popular destinations
	0 marks Response not creditworthy or not attempted	0 marks Response not creditworthy or not attempted

8. Describe and assess the effectiveness of strategies designed to tackle the problems caused by ocean pollution.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
	10			8			18

Indicative content

Ocean pollution may include oil spillages, solid / plastic wastes and chemical waste / run-off. These problems incorporate a range of harmful environmental impacts, against which effectiveness of governance strategies should be judged. Possible themes include:

- Regulations intended to prevent / minimise oil spills, especially in the wake of Gulf of Mexico spill
- Water quality controls, such as E.U. rules, to prevent solid / chemical waste entering oceans
- Global rules governing the disposal of radioactive waste
- Top-down attempts to tackle the volume of plastic pollution destined for oceans, such as reduced packaging (introduced by companies), recycling facilities (governments) etc.
- Local initiatives such as beach clean-ups, or attempts to raise awareness about the issues

Marking guidance

Near the upper end, answers that score highly at AO2.1c will systematically examine mitigation (less waste entering the oceans) and adaptation (clean-up operations) strategies. Concepts of <u>place</u> and <u>scale</u> could be applied when examining how the worst-affected places may not always be able to adopt effective mitigation measures because the pollution comes from other places. Equally, local actions will always be limited in scale. Another approach might be a <u>systems</u> examination which recognises that although future pollution inputs might be reduced, there is already an enormous store of non-bio-degradable plastic waste in the oceans that cannot easily be tackled. Near the lower end, there will be limited assessment of strategies and is unlikely to uncover any assumptions in the question.

Credit other valid approaches.

Award the marks as follows:

	AO1 [10 marks]	AO2.1c [8 marks]
	Knowledge and understanding of ocean pollution problems & strategies	*Applied examination of management effectiveness*
Band		
3	8-10 marks Mostly accurate knowledge and understanding of ocean pollution problems Detailed exemplification of management strategies Spelling, punctuation and grammar used with a high degree of accuracy	7-8 marks Well-developed and structured examination of the effectiveness of strategies (may examine different scales or perspectives)
2	4-7 marks Partial knowledge and understanding of ocean pollution problems Generalised exemplification of management strategies Spelling, punctuation and grammar used with a reasonable degree of accuracy	4-6 marks Partial or unbalanced examination of the effectiveness of strategies; some structure
1	1-3 marks Limited knowledge and understanding of ocean pollution problems Limited exemplification of management strategies. Spelling, punctuation and grammar used with limited accuracy	1-3 marks Limited examination of the effectiveness of strategies
	0 marks Response not creditworthy or not attempted	0 marks Response not creditworthy or not attempted

Section C – 21st Century Challenges (synoptic exercise)

Mark either question 9 or 10.

9. Describe and assess the severity of the different risks that cities increasingly face.	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
	10			10		6	**26**

Indicative Content

AO3 skills include:
- Analysis of Figures 5, 6, 7 and 8 in order to map varying physical risks and their geographies
- Analysis of existence of multiple risk 'hot spots' and varying magnitudes of risk in the Figures
- Exemplification of significant and/or anomalous risks / cities shown in the Figures

AO1 knowledge and understanding includes:
- Description of own examples of past hazard events and risks, such as earthquakes in Haiti
- Some explanation of the varying nature / severity of the risks shown, such as sea level rise
- Description and explanation of additional factors / risks not shown e. population growth, Ebola
- Exemplification using knowledge and understanding of individual case studies

AO2.1c assessment includes:
- the severity of different categories risks for different kinds of urban place
- takes into account varying projections for increasing physical risks
- takes into account different scenarios for future urban growth and resilience

Marking guidance

'Assess' requires candidates progress beyond explaining risks. At the upper end, answers that score highly at AO2.1c will show application of knowledge and understanding by assessing uncertain, interlinked risks, synthesising information, and coming to rational conclusions which highlight underlying assumptions of the statement (such as rate of change of sea-level rise, urban population growth, or both). Responses in the middle range should show some application of knowledge and understanding to provide some assessment and synthesis, prior to drawing partially supported conclusions. At the lower end responses provide very limited application of knowledge and understanding of risks to provide little assessment.

Credit other valid approaches.

Award the marks as follows:

	AO3 [6 marks]	AO1 [10 marks]	AO2.1c [10 marks]
	Applies AO3 to analyse the distribution of risks to cities shown in Figures 5-8	*Knowledge and understanding of risks to cities in Figures 5-8, and any additional risks*	*Applies AO2.1c to assess the increasing severity of risks for different cities*
Band			
3	5-6 marks Well-developed analysis of the risks shown in Figures 5-8

Detailed use of data

Well-annotated sketches / diagrams may be used

Spelling, punctuation and grammar used with a high degree of accuracy | 8-10 marks Mostly accurate knowledge and understanding of a wide range of risks for cities

Developed exemplification | 8-10 marks Well-developed and structured assessment of the increasing severity of different risks |

2	3-4 marks Partial or unbalanced analysis of the risks in Figures 5-8 Generalised use of data Simple sketches / diagrams may be used Spelling, punctuation and grammar used with a reasonable degree of accuracy	4-7 marks Partial knowledge and understanding of a range of risks for cities Generalised knowledge of examples	4-7 marks Partial or unbalanced assessment of the increasing severity of different risks; some structure
1	1-2 marks Limited analysis of the risks shown in Figures 5-8 Limited or no use of data Basic sketches / diagrams may be used Spelling, punctuation and grammar used with limited accuracy	1-3 marks Limited knowledge and understanding of some risks Limited exemplification	1-3 marks Limited assessment of the increasing severity of different risks
	0 marks Response not creditworthy or not attempted		

10. To what extent can large megacities be successfully managed to reduce their vulnerability to different risks?	AO1	AO2.1a	AO2.1b	AO2.1c	AO3.1	AO3.2	Total
	10			10		6	**26**

Indicative Content

AO3 skills include:
- Analysis of Figures 5, 6, 7 and 8 in order to map varying physical risks for megacities
- Analysis of existence of multiple risk 'hot spots' and varying magnitudes of risk in the Figures
- Exemplification of significant and / or anomalous megacities shown in the Figures

AO1 knowledge and understanding includes:
- Description of own examples of risk management in different urban contexts
- Some explanation of different risks and the management challenges they bring
- Description and explanation of additional factors / risks not shown eg population growth, Ebola
- Exemplification using knowledge and understanding of individual case studies

AO2.1c assessment includes:
- the likely success of different strategies eg reinforced buildings, passport controls
- takes into account varying population growth rates / escalation of vulnerability
- that takes into account different local contexts and global scenarios e.g. climate change

Marking guidance

'Assess' requires candidates progress beyond explaining management strategies. At the upper end, answers that score highly at AO2.1c should show application of knowledge and understanding by assessing uncertain, interlinked risks, synthesising information, and coming to rational conclusions which highlight underlying assumptions of the statement (such as the varied stages of growth of different megacities, or their varied geographical contexts). Responses in the middle range should show some application of knowledge and understanding to provide some assessment and synthesis, prior to drawing partially supported conclusions. Lower end responses provide very limited application of knowledge and understanding of risks and vulnerability to provide little or no assessment.

Credit other valid approaches.

Award the marks as follows:

	AO3 [6 marks]	AO1 [10 marks]	AO2.1c [10 marks]
	Applies AO3 to analyse the distribution of risks to megacities shown in Figures 5-8	*Knowledge and understanding of managing risks in Figures 5-8, and any additional risks*	*Applies AO2.1c to assess the likely success of risk management in different megacities*
Band			
3	5-6 marks Well-developed analysis of the risks and megacities in Figures 5-8 Detailed use of data Well-annotated sketches / diagrams may be used Spelling, punctuation and grammar used with a high degree of accuracy	8-10 marks Mostly accurate knowledge and understanding of managing a wide range of risks Developed exemplification	8-10 marks Well-developed and structured assessment of the likely success of managing different risks

2	3-4 marks Partial or unbalanced analysis of risks and megacities in Figures 5-8 Generalised use of data Simple sketches / diagrams may be used Spelling, punctuation and grammar used with a reasonable degree of accuracy	4-7 marks Partial knowledge and understanding of managing a range of risks Generalised knowledge of examples	4-7 marks Partial or unbalanced assessment of the likely success of managing different risks; some structure
1	1-2 marks Limited analysis of the risks and megacities in Figures 5-8 Limited or no use of data Basic sketches / diagrams may be used Spelling, punctuation and grammar used with limited accuracy	1-3 marks Limited knowledge and understanding of managing some risks Limited exemplification	1-3 marks Limited assessment of the likely success of managing different risks
	0 marks Response not creditworthy or not attempted		