

Unit 4 – Mark scheme

Indicative content for questions 1 – 4 is below.

The generic mark scheme, which can be found after the indicative content, will be applied to these questions.

Question 1 – ‘Prediction and forecasting are the most successful ways of limiting the impact of tectonic hazards’. Discuss.

- Research a range of methods used in the management of tectonic hazards before, during and after the events.
- Research contrasting examples of a range of tectonic hazards to assess how successfully they have been managed.

Indicative content

The focus of this title is the success of the various methods of management of hazardous events in order to prevent loss of life and damage to property – their ‘impact’. The key is to address ‘most successful’ so comparison with other methods is a requirement.

The framework chosen may be by the following.

1. Types of management – ‘do nothing’, ‘adjust’ including prediction and forecasting - (this can lead to an ‘it is more successful if you manage than if you don’t manage’).
2. Type of tectonic hazard – there are three main types – earthquakes, volcanoes and (secondary) tsunami – best approach would probably be case-study led.
3. Impact of disaster – the size of the event from overwhelming events that challenge any management system to mid-scale and minor events that pose fewer challenges to management systems.
4. By level of economic development – there is a clear relationship between the affordability of various management technique and the damage that disasters inflict.

Key analytical points

- The success of management needs to be a focus – how does one measure success? Should this be in terms of property/personal injury and death or both?
- Most thoughtful appraisal would be a comparison of the relative success of prediction and forecasting as opposed to mitigation strategies and vulnerability modification.
- This might be in terms of loss of life or damage to property.
- Success/failure is likely to be based on the following.
 1. Size and frequency of event – management may be ineffective if event is very large – Japanese tsunami.
 2. Location of event – remoteness, difficulty of access.
 3. Timing of event – time of day/year.
 4. Development/wealth issues, including:
 - quality of warning/prediction techniques
 - quality of prior planning, e.g. building design
 - quality of rescue services.

Question 1 (continued) – ‘Prediction and forecasting are the most successful ways of limiting the impact of tectonic hazards’. Discuss.

In summary

- Prediction and forecasting are limited because they are not universally available and not always reliable especially in terms of the type and scale of the event.
- Hazard fatigue significant in areas with large magnitude but infrequent events impacting on willingness to pay for mitigation methods.

Case studies used are likely to include:

1. California – Loma Prieta
2. Iceland – Eyjafjallajökull
3. Hawaii
4. Asian, Japanese and Chilean tsunami events.

Question 2 – Evaluate the view that food insecurity is largely a result of physical factors.

- Research the varied physical and human causes of food insecurity.
- Research a range of locations to illustrate different causes of food insecurity.

Indicative content

The focus of this title is the **relative** role of physical factors in causing food insecurity which needs to be very carefully defined.

The framework chosen may be by the following.

1. Different causes of food insecurity across a range of physical and human factors including climatic (rainfall trends and global warming), soil quality, population growth and the growth of commercial agriculture, especially in developing countries today.
2. A 'case-study' approach by area/region with different example illustrating a variation in the significance of physical factors.
3. Theoretically driven – Malthus/Boserupian debate.
4. Global Hunger Index (GHI) and/or Food and Agricultural Organisation (FAO) four pillars model.

Key analytical points

- There is clearly a role for physical processes – short term hazardous events will cause food insecurity more or less whatever the human contingency plans might be.
- Long-term insecurity might also be exacerbated by climate change and other hazards with net primary productivity changes affecting yields.
- In the medium term human factors are probably more significant especially changing diets, governance, rising population and uneven access to land.
- Food insecurity is significantly affected by access, utilisation, stability of supply as well as availability.
- Evaluation might include the view that without human ingenuity food output would be significantly lower – 1st and 2nd agricultural revolutions, green revolution and genetic modification.
- Students should recognise that food production is now global with very few parts of the world sitting outside a global supply chain – this has implications for food security – this might be illustrated by land deals made in Africa, e.g. with China/Saudi Arabia etc.

In summary

- It depends on the timescale but, by and large, the title can be rejected.

Case studies are likely to include:

1. Sahel and drylands changing environment
2. South Asian population increase
3. Food shortages and food deserts in developed countries, e.g. USA
4. Land purchases in North-East Africa – Somalia, Ethiopia.

Question 3 – ‘Migration is the most important cause of variations in cultural diversity’. Discuss.

- Research the varied reasons why cultural diversity varies spatially.
- Research a range of locations which have variations in cultural diversity.

Indicative content

The focus of this title is whether or not migration, as opposed to other factors including physical isolation, levels of connectedness as a consequence of globalisation and government policies is the main reason for cultural diversity.

The framework chosen may be by the following.

1. Case studies of different societies/places with contrasting levels of migration and contrasting levels of cultural diversity.
2. By level of development.
3. Some might take a theoretical approach – hyperglobalisers both positive and negative, sceptics, transformationalists.

Key analytical points

- Both internal and international migration are likely to cause higher levels of cultural diversity with the diaspora of different cultures spreading.
- Political decisions are central to the level and direction of international migration in states and internal migration in some countries.
- Internal migration is most significant in countries with significant internal diversity, e.g. China but much less so in others with less diversity, e.g. Japan.
- This is especially true of global hub cities with high levels of flux in the population, e.g. London, Singapore.
- Some other causes of cultural diversity are closely connected to migration – specifically levels of interconnectedness (globalisation indices frequently include measures of migration).
- Ethnically mixed societies might create new cultural forms/hybrids (‘Singlish’) but can also impact negatively by reducing diversity.
- Similarly physical isolation is likely to limit migration although the concept of isolation is subject to change(s) over time.
- Mass tourism is a ‘part’ of migratory movements and tends to lead to the development of facilities that can replicate the domestic cultures of that mass market which can limit diversity.
- Globalisation of production chains and media is arguably a more significant set of processes but these are often closely associated with movements of labour.

In summary

- The impact of migration is highly significant with international migration playing a key role.
- There may be significant long-term variations that are less clearly related to migration – cultural diffusion.

Question 3 (continued) – ‘Migration is the most important cause of variations in cultural diversity’. Discuss.

Case studies used are likely to include:

1. Japan/UK/France
2. Iceland
3. London/Singapore
4. Tuvalu/Thailand
5. Amish communities.

Question 4 – Evaluate the view that poverty is the most significant cause of health risks.

- Research the causes of health risk and the varied pattern of diseases and human health.
- Research a range of locations with different health risks in both the developed and developing world.

Indicative content

The focus of this title is the degree to which poverty (socio-economic status), in a range of spheres, can be held accountable for variations in health risk from place to place and from time to time.

The framework chosen may be by the following.

1. Different causes of health risk including environmental factors, socio-economic status, poverty and geographic factors.
2. Models of health risk (ETM, Kuznets).
3. By health risk, e.g. malaria, TB, Ebola, obesity.
4. By level of development (GNI/GDP/HDI).

Key analytical points

- Health risk can be expressed in two dimensions – geographic extent and threat to individuals.
- The best, indirect, measures are probably life expectancy and DALY's.
- The impact of major health risks are largely determined by poverty and limited access to basics such as clean water and sanitation.
- Poverty is a term that needs deconstructing carefully (absolute and relative) – some students will include health risks associated with quality of built environment, sewage disposal and lack of access to freshwater.
- These latter causes are closely related to levels of development and the availability and costs of inoculation/treatment (e.g. AIDs/HIV).
- Poorer countries have lower life expectancy but within those countries poorer people have lower life expectancy.
- The role of inequalities is very significant – the higher the level of inequality the lower the life expectancy – an issue that relates to governance (postcode lottery).
- Some diseases (obesity and lung cancer) may be a product of development suggesting an inverse relationship between development and health risk.

In summary

- Poverty is a major factor in explaining spatial and temporal variations in health risks, especially **within** countries.
- Lifestyle choices are also significant.

Case studies used are likely to include:

1. Ebola and malaria impact in (West) Africa
2. Obesity in Europe/US
3. Poverty in the UK
4. AIDs global but especially in Africa.

Generic mark scheme	
I	Introduction; defining and focusing on the question
0	<ul style="list-style-type: none"> No attempt to introduce report.
1-2	<ul style="list-style-type: none"> Title referenced but not deconstructed, although topic addressed. Neither focus nor framework addressed. One or two key terms partially defined.
3-4	<ul style="list-style-type: none"> Some reference to title but limited deconstruction. Focus of report implied but unclear. Framework implicit but appropriate indication of framework, either by concepts and/or case studies. Some accurate definitions of key terms.
5	<ul style="list-style-type: none"> Clear deconstruction of title. Focus of report on geographical question/issue is both clear and rational. Framework is both explicit and appropriate, either by places, environment and/or concepts. Accurate definitions of all appropriate terms.
R	Research knowledge
0	<ul style="list-style-type: none"> No evidence of research.
1-5	<ul style="list-style-type: none"> Some case studies/concepts but lacks selection and range so significant gaps. Concepts and/or theories may be referenced/stated but neither explored nor applied to question. Very limited range of evidence presented with very limited use of numeric and qualitative data. Processes not addressed directly but simply asserted.
6-10	<ul style="list-style-type: none"> A range (scale/location) of all/mostly relevant case studies used. A limited set of concepts/theories used that assist in focusing on the question. Mostly accurate evidence used but with gaps in the numeric and qualitative data. Some relevant processes explained but with inaccuracies.
11-15	<ul style="list-style-type: none"> Wide range of relevant case studies used (by scale and or location). Relevant concepts and/or theories/models used to support focus. Factual, accurate and topical evidence used which includes both quantitative and qualitative data. Relevant processes, interactions and changes accurately explained.

A	Analysis, application and understanding
0	<ul style="list-style-type: none"> • No understanding or analysis.
1-5	<ul style="list-style-type: none"> • No obvious report. • A few simple statements related to topic as a whole but not to question asked. • Understanding stated in a few simple phrases but no development. • Statement that views/perspectives might vary but without evidence/support. • Any maps/diagrams are rarely used to support answer.
6-10	<ul style="list-style-type: none"> • Report is unclear and direction of argument is obscure. • Generalised material often weakly linked to question with focus unclear. • Some conceptual understanding delivered through basic unqualified statements. • Limited appreciation of how identifiable values/perspectives might vary with no support. • Any maps/diagrams are sometimes used to support answers.
11-15	<ul style="list-style-type: none"> • Report is clear but not always easy to follow with some hesitancy in the argument. • Most of the research is used to support the question which remains in focus. • Some conceptual understanding and argument although largely asserted/stated. • Some appreciation of how identifiable values/perspectives vary although limited support. • Any maps/diagrams are usually used to support answer.
16-20	<ul style="list-style-type: none"> • Report has a clear direction which is argued coherently. • All research interpreted and applied directly to the question set. • Strong conceptual understanding with coherent argument and counter argument. • Appreciation of different interactions/values/perspectives that are supported by evidence/examples. • Any maps/diagrams are accurate and used to support answer.

C	Conclusion and evaluation
0	<ul style="list-style-type: none"> • No conclusion or evaluation in report.
1-5	<ul style="list-style-type: none"> • Content of report weakly related to C and E. • Evaluation limited to statement of inadequate methods. • Conclusions made but much is unrelated to content. • No qualifications.
6-10	<ul style="list-style-type: none"> • Selective recall of content of report with some evidence ignored. • Some evaluation, either on-going or in final conclusion largely about methodological flaws. • Some conclusions although linkages with evidence occasionally tenuous. • One or two qualifications/exceptions stated but not explained.
11-15	<ul style="list-style-type: none"> • Clearly stated conclusion with explicit references to title. • Thorough use of content/case studies on places and environments used in report to inform conclusion. • Consistent return to the focus. • Evaluation offers a judgement, but also recognises the complexity of the question.

Q	Quality of written communication, methodology and sourcing
0	<ul style="list-style-type: none"> • Basic standards of quality of written communication not met.
1-2	<ul style="list-style-type: none"> • Disjointed organisation and sequencing although may have some subsections. • Many errors in punctuation and spelling that make report hard to follow. • Very limited use of appropriate geographical vocabulary. • Methodology unclear with no detail of rationale for selection of research evidence. • Almost no referencing evidencing/sourcing from very limited range of sources.
3-4	<ul style="list-style-type: none"> • Generally clearly written with some report style subsections. • Sound standard of punctuation and spelling but with errors although meaning remains clear. • Some good use of appropriate geographical vocabulary. • Sound methodology demonstrating some rationale for evidence selection with simple comments about possible partiality. • Occasional but patchy referencing from several different sources.
5	<ul style="list-style-type: none"> • Coherent structure and sequencing with obvious report style subsections. • Excellent standards of spelling and punctuation, including geographical vocabulary, with very few errors. • Clear methodology showing a rationale for evidence selection, including potential issues of partiality. • Accurate referencing of a wide range of sources.

Assessment objective mark distribution

	I	R	A	C	Q	Marks
AO1	1	15	0	0	0	16
AO2	2	0	16	6	0	24
AO3	2	0	4	9	5	20
Total	5	15	20	15	5	60

