GradeMax



Mark Scheme (Results)

Summer 2018

Pearson Edexcel International Advance Level (WGE04) 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 1 –'Predicting the locations at risk from tectonic hazards is much easier than predicting the magnitude of those hazards'. Discuss.

- Research the physical processes that determine the distribution and magnitude of earthquakes and volcanic eruptions.
- Research contrasting tectonic settings to explore the expected location and predicted magnitude of earthquakes and volcanic eruptions.

Indicative content

The focus of this title is the differences between predicting the distribution and magnitude of seismic and volcanic hazards.

The framework chosen may be by the following:

1. An overview of hazards treating volcanic hazards and seismic hazards separately, case study by case study.
2. Distribution and magnitude addressed separately by case study.
3. By plate boundary – different margins = different scale of event.

Key analytical points

- The distribution of tectonic hazards is quite well understood but the varied magnitude of those events is much less well understood.
- The distribution of volcanoes is well known although mapping of undersea volcanoes is less precise – however, activity level/magnitude of volcanos is not so well understood.
- Understanding comes from a range of increasingly sophisticated instrumentation, which is better at forecasting distribution/location but poor at forecasting magnitude.
- Earthquakes much more widely distributed but harder to define given constant movement of crust – 'significant' earthquakes distributed along plate boundaries but many exceptions (hot spots and intra-plate movements along fault lines)
- Earthquake magnitude variation extremely difficult to explain, although there are some attempts to do so by exploring focal depth and accumulated strain in rocks along transform faults.
- Volcanic and seismic events often part of the same set of processes reflecting movements of magma

In summary

- The statement is broadly correct but there are obvious exceptions.

Case studies used are likely to include:

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

Question 2 – 'Improved technology is the best way to increase food supply'. Discuss.

- Research a range of contrasting methods and technologies that can be used to increase food supply and food security.
- Research different locations where attempts have been made to increase food supply and food security.

Indicative content

The focus of this title is the **relative** importance of increasing food supply through the use of technology.

The framework chosen may be by the following:

- Different methods of increasing food supply and food security from new hybrid crops, the use of GM, expansion of cropland, improvements in irrigation etc.
- A 'case-study' approach by area/region with different examples illustrating how food supply has been increased and thus security has been improved.

Key analytical points

- Technology clearly has a central role in determining food supply although it is not the only route available – increased agricultural land being an alternative route.
- However, technology is not uncontroversial – there may be short-term increases in production from the use of, for example, GM, but the long-term implications are less certain.
- Low-tech methods can be important in dryland areas.
- Expanding cropped areas is an obvious alternative pathway to increasing supply, although there is little scope for further increases without compromising valuable ecosystems.
- Long-term insecurity might also be exacerbated by climate change and other hazards, with net primary productivity changes affecting yields; some of these might be addressed through technology.
- Food insecurity is significantly affected by access, utilisation, stability of supply as well as availability, which is perhaps less a matter of technology than it is political will.
- Evaluation might include the view that without human ingenuity and technology food output would be significantly lower – 1st and 2nd agricultural revolutions, Green Revolution and genetic modification.

In summary

- Technology is very important but more so for supply than for security.

Case studies are likely to include:

1. GM and Green Revolution
2. Low-tech/intermediate tech in dryland areas
3. Land purchases in North-East Africa – Somalia, Ethiopia
4. Improvements in food storage through applications of technology.

Question 3 – Evaluate the view that traditional and indigenous cultures should always be protected from the impacts of globalisation.

- Research the attitudes of different players to traditional and indigenous cultures and the consequences for them of a globalising world.
- Research a range of locations to illustrate the contrasting values attached to, and the treatment of, traditional and indigenous cultures being affected by globalisation.

Indicative content

The focus of this title is the socio-political attitudes to indigenous peoples within modern nation states and whether or not 'they' either need or desire protection from globalisation.

The framework chosen may be by the following:

1. Case studies of different societies/places with contrasting histories of their indigenous populations – a place by place approach.
2. Some might take a temporal approach, tracing changes over time across a range of examples, for example the attitude towards Native Americans from colonial times to the present day.

Key analytical points

- Historically, indigenous cultures have been held in little regard and systematically extinguished, which has continued in modern times in some societies – Indonesia.
- Distinctions were drawn between 'savages' and 'civilised' peoples, which were especially powerful during the scramble for Africa and have a legacy of attitudes to indigenous culture(s).
- The most powerful arguments today revolve around the economic exploitation of indigenous landscapes from the Oriente to the Arctic – in many cases indigenous peoples are either displaced or their culture impacted irreparably.
- Globalisation has led to a significant erosion of distinctive local cultures through the impact of trade, tourism and development.
- Protecting local cultures may preserve important aspects of the cultural heritage of modern nation states.
- Counterarguments might suppose this to be an inevitable process of globalisation.

In summary

- There is a whiff of colonial arrogance in the title – a more appropriate view (question) would be whether indigenous peoples should be afforded the right to some protection, if they so choose.

Case studies used are likely to include:

1. Australian 'aboriginal' people
2. Native American cultures – e.g. the impact of tar-sands and pipelines
3. Native American rights in the Andes – 'plurinational' state of Bolivia
4. Minority rights in Indonesia (East Timor).

Question 4 – 'Successful management of all health risks must include global as well as national strategies.' Discuss.

- Research the varied ways in which the health risks from pollution and disease can be managed.
- Research a range of locations to illustrate the importance of both global and national management programmes and strategies.

Indicative content

The focus of this title is the efficacy of various management strategies FOR health risks and the relative importance of global management.

The framework chosen may be by the following:

- Different players in the management of health risks.
- Different types of health risk and the role of various management systems in addressing those risks.

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 DALYs, which offer a way of evaluating success.
- The impact of major health risks is largely determined by poverty and limited access to basics such as clean water and sanitation, which can be addressed on several scales.
- Management needs deconstructing carefully as does the evaluation of 'success', and includes global, national and local schemes.
- Global management is most often associated with pandemics that have significant and sometimes catastrophic impacts on human health.
- This extends to global pollution issues – for example the global agreements to control ozone depletion.
- Global management might also extend into economic policies to address poverty.
- However, very many health risks are inherently local and need local solutions – this will include the application of global plans, which are often advisory rather than practical.

In summary

- Global management is significant but certainly not essential to the management of health risks – global management is never more than advisory and thus limited and many health risks are local.

Case studies used are likely to include:

1. Global management of disease management – polio, smallpox
2. Local management of primary healthcare, e.g. mosquito nets
3. The role of pharmaceutical TNCs
4. NGOs operating in South Asia and Sub-Saharan Africa.