M14/3/GEOGR/BP2/ENG/TZ0/XX/M

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MARKSCHEME

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GEOGRAPHY

Higher Level and Standard Level

Paper 2

30 pages

Paper 2 markbands

These markbands are to be used for paper 2 at both standard level and higher level.

	AO1	AO2	AO3	AO4	Paper 2
Level descriptor	Knowledge/ understanding	Application/analysis	Synthesis/evaluation	Skills	Marks 0–10
A	No relevant knowledge; no examples or case studies	No evidence of application; the question has been completely misinterpreted or omitted	No evaluation	None appropriate	0
B	Little knowledge and/or understanding, which is largely superficial or of marginal relevance; no or irrelevant examples and case studies	Very little application; important aspects of the question are ignored	No evaluation	Very low level; little attempt at organization of material; no relevant terminology	1–2
C	Some relevant knowledge and understanding, but with some omissions; examples and case studies are included, but limited in detail	Little attempt at application; answer partially addresses question	No evaluation	Few or no maps or diagrams, little evidence of skills or organization of material; poor terminology	3–4
D	Relevant knowledge and understanding, but with some omissions; examples and case studies are included, occasionally generalized	Some attempt at application; competent answer although not fully developed, and tends to be descriptive	No evaluation or unsubstantiated evaluation	Basic maps or diagrams, but evidence of some skills; some indication of structure and organization of material; acceptable terminology	5–6
E	Generally accurate knowledge and understanding, but with some minor omissions; examples and case studies are well chosen, occasionally generalized	Appropriate application; developed answer that covers most aspects of the question	Beginning to show some attempt at evaluation of the issue, which may be unbalanced	Acceptable maps and diagrams; appropriate structure and organization of material; generally appropriate terminology	7–8
F	Accurate, specific, well-detailed knowledge and understanding; examples and case studies are well chosen and developed	Detailed application; well-developed answer that covers most or all aspects of the question	Good and well-balanced attempt at evaluation	Appropriate and sound maps and diagrams; well structured and organized responses; terminology sound	9–10

Optional Theme A — Freshwater – issues and conflicts

1. (a) Briefly describe *four* possible impacts of the flood on different types of traffic movement in the area shown on the satellite image. ***[4]***

Award ***[1 mark]*** for each of four statements clearly relating to the photo, such as:

- airport under water (air traffic)
- Bruce Highway flooded (road vehicles)
- river transport disrupted (river traffic)
- isolation of Rockhampton from places to the west
- possible closure of bridges
- difficulty in crossing the flood plain (by any means of transport)
- some city streets likely to be impassable
- credit other valid suggestions *eg* "car parks flooded".

Responses must make some reference to two types of traffic (road, air) for maximum ***[4 marks]*** but do not expect every point to be explicitly linked to a particular type of transport.

(b) Explain *two* ways in which agriculture and/or irrigation on flood plains can affect water quality. ***[3+3]***

Explanations are likely to refer to two of the following – salinization, eutrophication, the impacts of agro-chemicals, effluent run-off. In each case, award ***[1 mark]*** for the identification and up to ***[2 marks]*** for the explanation/developed exemplification.

The most likely focus for candidates will be:
Eutrophication ***[1 mark]*** occurs when fertilizers/nitrates are washed into a lake/river ***[1 mark]***. Algae grow, and then die, leading to oxygen depletion ***[1 mark]***.

(c) Examine the factors that affect the response of a stream hydrograph to a rainfall event. ***[10]***

Response of hydrograph should be addressed in terms of lag time, peak discharge, rising and recessional limb, overland flow/throughflow contributions, *etc*. Likely factors will include: basin shape, antecedent rainfall, rainfall intensity and duration, seasonality of rainfall, basin land use, type of farming soil and rock type, affecting porosity and permeability, basin relief, degree of urbanization, forest cover and seasonal changes.

Possible responses include "flashy" response hydrographs (short time lag and very high peak flows), or a response that does not differ markedly from baseflow under some conditions (chalk lithology).

At band D at least two factors should be described and linked to a valid response/change that may be observed in stream hydrographs.

At band E, either a range of factors should be explained and linked with hydrograph features, or there is an examination of how certain factors interrelate *eg*, human/physical combination leads to very flashy response.

At band F, expect both.

Marks should be allocated according to the markbands.

2. (a) Define the terms *drainage divide* and *wetlands*. ***[2+2]***

Drainage divide – the line defining the limit of a drainage basin ***[1 mark]*** separating it from neighbouring basins ***[1 mark]***. Also known as a watershed ***[1 mark]***. Credit alternative phrasing.

Wetlands – areas that are regularly saturated ***[1 mark]*** by groundwater or surface water ***[1 mark]***. These include freshwater marshes, swamps and bogs ***[1 mark]***. Credit alternative phrasing.

(b) Explain how stream discharge is related to channel size *and* shape. ***[6]***

- Award ***[1 mark]*** for defining/calculating discharge.
- Award ***[1 mark]*** for establishing a link between discharge and channel size (*eg* higher discharge in a larger/lower course channel).
- Award ***[1 mark]*** for establishing a link between discharge and channel shape (lower discharge in wide, shallow or deep, narrow channels, or equivalent point made).

The remaining ***[3 marks]*** should be awarded for explanatory points, such as:

- role of hydraulic radius
- importance of wetted perimeter
- idea of friction in relation to stream efficiency
- further development of width/depth or shape explanation.

(c) Using examples, examine the hydrological impacts that can result from the construction of a dam and reservoir across a river channel. ***[10]***

Responses could cover downstream impacts such as more regular discharge, differences in seasonal flow (regime), fewer floods with longer delay and lower peaks.

Upstream impacts could include lower gradient, local base level, increased evaporation and seepage.

In extreme cases lower discharge can cause severe environmental problems *eg*, the Nile Delta erosion and red water famine at Aswan, the discharge of the lower River Colorado.

Accept references to changes in sediment transport immediately downstream or upstream, possibly causing clear water erosion and deposition and effects on fluvial landforms.

Impacts that are not hydrological should not be credited; limited credit may be given for geographical knowledge of some issues about a recognizable dam/reservoir.

At band D, responses are likely to be descriptive and at least two hydrological impacts should be related to changes resulting from dam construction.

At band E expect either a greater range of impacts or an evaluation of how impacts may vary *eg*, positive/negative, short-term/long-term.

At band F, expect both.

Marks should be allocated according to the markbands.

Optional Theme B — Oceans and their coastal margins

3. (a) (i) Define the term *littoral drift* (longshore drift). ***[2]***

The transport/movement of sediment along a coast ***[1 mark]*** by wave action/swash and backwash ***[1 mark]***. Credit alternative phrasing.

(ii) Briefly describe *one named* feature caused by littoral drift. ***[2]***

Accept spits, bars, tombolos, cuspate forelands, beach cusps, drift-aligned beaches as the named feature. There should be a brief description of the chosen landform *eg*, a spit ***[1 mark]*** is a ridge of shingle that is attached to the mainland at one end ***[1 mark]***.

(b) Explain the formation of *two* ocean floor landforms associated with volcanic or tectonic activity. ***[3+3]***

Features include underwater volcanoes, black smokers, trenches, transform faults, mid-ocean ridges and rifts, seamounts, guyots. The explanation should refer to either processes at divergent boundaries (upwelling magma and sea floor spreading) and/or processes at subduction zones.

In each case, award up to ***[2 marks]*** for identification and description of the land forms and up to ***[2 marks]*** for explanation of its formation (maximum ***[3 marks]***).

For example, an ocean trench ***[1 mark]*** is a very deep area of water parallel to the coast ***[1 mark]*** where one plate subducts under another ***[1 mark]***.

(c) "The loss of coral reefs is not just a local concern." Discuss this statement. ***[10]***

Economic and environmental issues can be investigated at both the local and other scales, for instance coral reefs have global biological importance in terms of high biodiversity, potential for medicine, while locally coral reefs also protect coasts by absorbing the strength of hurricanes and tropical storms. Economically they are important breeding grounds for fish and support local incomes, while globally coral reefs can be used to stimulate international tourism in visiting coral reefs. A local issue could include income generated from activities on coral reefs or that use coral *eg*, souvenirs, jewelry *etc*.

To achieve band D, responses will describe a few concerns probably at one scale only.

At band E, expect either a more detailed range of issues (concerns) such as economical/social/environmental, local and global, positive and negative or some explicit discussion of the statement (might contrast local/economic concern with global/environmental concern).

At band F, expect both.

Marks should be allocated according to the markbands.

4. (a) (i) State which of these photographs shows an advancing coast. ***[1]***

Photograph B

(ii) Identify *one* landform in the photograph you have chosen that shows it is an advancing coast. ***[1]***

Raised beach or abandoned/relict cliff

(iii) Define the term *advancing coast.* ***[2]***

Advancing coasts are coasts that are growing ***[1 mark]*** as a consequence of deposition/sediment deposit and/or the infill of coastal marshes ***[1 mark]*** or due to a sea level fall (or uplift of land) ***[1 mark]***.

(b) Distinguish between the climatic conditions experienced on the east coast and the west coast of the Pacific Ocean during an El Niño event. ***[6]***

During El Niño events there is low pressure ***[1 mark]*** off the west coast of South America, rising air, and therefore rain (and floods) ***[1 mark]***.

Whereas off the east coast of Australia there is high pressure ***[1 mark]***, descending air and drought ***[1 mark]***.

Award the remaining ***[2 marks]*** for further development, *eg*, upper level winds blow westwards, surface level winds blow eastwards, or the use of a diagram/diagrams.

Award up to ***[2 marks]*** for an answer that correctly links pressure and weather but confuses east and west.

(c) Using examples, examine the geographic consequences of the pollution of oceans. ***[10]***

The consequences are varied and could include environmental (*eg*, oil spills affecting coastal ecosystems), social (shrimp fishermen affected by death of shrimps and their food supply), economic (falling revenues) and political (who pays, cleans up, *etc*). Implications could be divided into short-term and long-term implications for people (health, employment, potential for tourism, *etc*). There may be other valid approaches.

Good answers may do more than list consequences for a single place; they may show how geographic consequences are interrelated (*eg* pollution in one local area has consequences for other global areas also, due to oceanic circulation; oil pollution in Gulf of Mexico brought a temporary halt to deep oil exploration in other countries; transmission of toxic chemicals through marine food chains/webs may result in worst consequences being experienced at a distance to the actual pollution point source).

For band D, responses should describe at least two consequences related to pollution.

At band E expect either a greater range of consequences or some examination of how consequences for different places/scales are interrelated. At band F, expect both.

Marks should be allocated according to the markbands.

Optional Theme C – Extreme environments

5. (a) (i) Identify *and* describe a landform of glacial erosion in area A on the map. ***[2]***

A – Glacial trough/U-shaped valley; accept truncated spurs, hanging valleys.

Award ***[1 mark]*** for the identification and ***[1 mark]*** for a brief description of shape, size or appearance. For example, a glacial trough ***[1 mark]*** shown as a deep, straight valley ***[1 mark]***.

(ii) Identify *and* describe a landform of glacial erosion in area B on the map. ***[2]***

B – Corrie/Cwm/Cirque. Accept corrie lake/tarn. Do not accept "lake".

Award ***[1 mark]*** for the identification and ***[1 mark]*** for a brief description of shape, size or appearance of the landform. For example, a corrie lake ***[1 mark]*** which is about 1 km wide ***[1 mark]***.

(b) Using map evidence, suggest *two* reasons why the area shown on the map has a low population density. ***[3+3]***

Award ***[1 mark]*** for a reason, ***[1 mark]*** for map evidence and ***[1 mark]*** for some development.

Reasons may include, but are not limited to:

- steep relief/gradients/rugged ***[1 mark]*** so a challenge for economic activity/construction/settlement ***[1 mark]*** and identifies area of map using names or grid reference ***[1 mark]***
- high relief/altitude ***[1 mark]*** leading to low temperatures / short growing season so less than optimum conditions for agriculture ***[1 mark]*** and identifies area of map using names or grid reference ***[1 mark]***
- likely to be poor, thin soil ***[1 mark]*** due to mass wasting or gravity down slope ***[1 mark]*** and identifies area of map using names or grid reference ***[1 mark]***
- inaccessibility/remoteness ***[1 mark]*** due to limited transportation ***[1 mark]*** and identifies area of map using names or grid reference ***[1 mark]***.

(c) "Mineral resources in extreme environments rarely bring benefits to the local people." Discuss this statement. ***[10]***

Some candidates may argue benefits are not/rarely realized due to environmental challenges. Others may focus on the inequities of who benefits. Either approach is acceptable. A range of mineral deposits offer potential wealth to people in extreme environments (*eg* uranium, silver, gold, rare earths *etc*). However, there are physical challenges to resource exploitation *eg*, permafrost in cold environments or lack of transport infrastructure in sparsely populated arid areas. Indigenous people may lack the technology to overcome challenges so outsiders/TNCs gain some/most benefits. However, there may still be gains for local people. Potential benefits include more employment, higher wages, investment, health care and infrastructural improvements.

Another approach might be to argue that minerals bring problems not benefits. Problems could include dependency on benefits among indigenous people, conflict with economic migrants, leakage of money overseas (remittances), possible environmental pollution, conflict over scarce resources (water and land) in arid areas. The environment and local society may no longer be sustainable as a result of mineral exploitation.

Do not credit tropical rainforests.

At band D, responses are likely to be descriptive accounts of the benefits local people could gain/do not gain. Alternatively, a simple account is given of why local people do not gain benefits.

At band E expect either a more detailed account of the mineral resources found in extreme environments and the benefits they bring / do not bring to local people/others or an evaluation of who benefits most from mineral resources (carefully weighs up the benefits for local people and TNCs, for example).

At band F, expect both.

Marks should be allocated according to the markbands.

6. (a) (i) Define the term *desertification*. ***[1]***

The spread/intensification of desert/arid conditions. Credit alternative phrasing which implies change, such as turning/becoming *eg* "the desert has expanded".

(ii) Describe the pattern of areas with a high risk of desertification shown on the map. ***[3]***

Award ***[1 mark]*** for each of the following to a maximum of ***[3 marks]***:

- adjacent to existing deserts
- identification of anomalies *eg*, Western Australia
- limited to central and western Australia (not east)
- reference to place names/tropics/latitude.

(b) Suggest *three* reasons why some rainstorms in hot, arid environments result in flash floods. ***[2+2+2]***

Award ***[1 mark]*** for each reason and ***[1 mark]*** for a suggested link with flooding.

Reasons could include:

- torrential precipitation ***[1 mark]*** leads to overland flow/surface water ***[1 mark]***
- precipitation exceeds infiltration rate ***[1 mark]*** thereby causing overland flow ***[1 mark]***
- sparse vegetation leads to less interception ***[1 mark]*** and rapid run-off/less storage ***[1 mark]***
- run-off may be rapidly concentrated in wadis and canyons ***[1 mark]*** which overflow ***[1 mark]***
- nature of desert surfaces (crusts, rocky, impermeable) ***[1 mark]*** also causing rapid run-off ***[1 mark]***.

Award a maximum of ***[4 marks]*** if the reasons do not clearly relate to flash floods in an arid environment, as opposed to generic flooding.

(c) Examine how human activity may be affected by global climate change in *one named* extreme environment you have studied. ***[10]***

Candidates may choose to approach this question in terms of current observable changes or predicted change. Either approach is acceptable.

In cold environments, melting permafrost may give benefits or costs. Benefits could include longer growing seasons, potential for sedentary agriculture, potential for commercial forestry, more rainfall in cold environments, more potential for tourism, and increased accessibility of minerals. There may also be less, but unpredictable sea ice making sea routes more accessible but potentially more hazardous / increased fish availability due to changing sea conditions (increasing fishing potential).

Problems could include traditional ways of life based on hunting and fishing are threatened; out-migration of the younger people, unstable buildings and infrastructure.

Possible loss of snow and its impact on ski resorts in mountainous areas, and the loss of water supply from retreating glaciers, impacting on a range of human activities, is also a valid response.

In hot environments: changes in rainfall patterns may give benefits or costs, benefits may lead to better grazing potential, more food production and more reliable water supplies. Lower rainfall could make marginal land impossible to live on as grass disappears and fuel wood becomes limited. Rainfall patterns could become more extreme, either more flash floods or extreme droughts. Food shortages may become more frequent/intense leading to environmental migration.

Award credit for an evaluation that takes a considered view of how wealthy people in extreme environments may be in a better position to adapt to change *eg*, water management in Dubai.

Do not credit tropical rainforests.

At band D, expect some description of two ways in which human activity may be affected by climate change in a recognizable extreme environment.

At band E expect either a more detailed account of a greater range of impacts, or some explicit evaluation of a variety of different kinds of impact (positive/negative or short-term/long-term).

At band F, expect both.

Marks should be allocated according to the markbands.

Optional Theme D — Hazards and disasters – risk assessment and response

7. (a) Describe the changes shown from 12 August to 14 August in:

(i) Storm intensity; ***[2]***

Increases from category 1 to category 4 ***[1 mark]*** and provides dates or locations for this ***[1 mark]***.

(ii) Storm direction. ***[2]***

Moves towards north-west then moves towards north-east/swings left then right/moves clockwise ***[1 mark]*** and provides dates or locations for this ***[1 mark]***.

(b) Explain *two* factors that affect the formation and development of hurricanes. ***[3+3]***

Award ***[2 marks]*** for a description of each factor and ***[1 mark]*** for the explanation.

Answers could include:

- temperature of ocean ***[1 mark]***, (26 C–27 C) ***[1 mark]***, water depth (at least 60m) to allow evaporation for the energy of hurricanes ***[1 mark]***
- distance from the equator/latitude ***[1 mark]***, between approximately $5^{o} - 30^{o}$ of the equator ***[1 mark]*** as coriolis force ***[1 mark]*** is sufficient away from the equator to generate spin ***[1 mark]***
- movement of hurricanes away from tropical oceans ***[1 mark]*** as they move over colder ocean areas and/or land masses ***[1 mark]*** they decline because of loss of energy ***[1 mark]***
- other possible factors include wind shear, wind speeds, converging winds, development of an equatorial wave.

(c) Using examples, examine the demographic *and* socio-economic factors that affect the vulnerability of a community to hazard events. ***[10]***

Responses should show an understanding of the term vulnerability and include a range of demographic factors (these may include population density, migration, gender, age) and socio-economic factors (these may include education level, wealth, awareness, experience, the level of development, technology, insurance). Many hazard events are socially selective *eg*, Hurricane Katrina in New Orleans (2005) had a disproportionate impact on poorer communities than on richer communities.

To access band D, demographic and/or socio-economic factors should be described and an example named.

To access band E either a good examination of vulnerability should also be provided or a wider range of demographic and socio-economic factors for recognizable location(s) examined.

At band F, expect both.

Marks should be allocated according to the markbands.

8. (a) With reference to *either* earthquakes *or* volcanic eruptions, describe *two* ways in which people's quality of life deteriorates at point A on the diagram. ***[2+2]***

Award ***[1 mark]*** for each impact on people (*eg* their home lost) and ***[1 mark]*** for how this affects quality of life (*eg* have to sleep in the open), or some detail of how the hazard led to this (ground shaking, liquefaction, volcanic ash).

Accept other valid statements.

(b) With reference to *either* an earthquake *or* a volcanic eruption, distinguish between the types of response to the hazard event that occur at point B and point C on the diagram. ***[6]***

B represents short-term response such as:
- emergency search and rescue of collapsed buildings
- the provision of emergency aid / food / shelter
- the arrival of specialist personnel (external agencies)
- evacuation in case of aftershocks / further eruptions
- other valid short-term suggestions.

C represents longer term organized response, such as:
- reconstruction (possibly with improved design or land zoning)
- wreckage clearance
- salvage operations
- care and rehabilitation (physical/mental)
- other valid long-term suggestions.

Award ***[1 mark]*** for each appropriate response that is outlined and ***[1 mark]*** for any further development of that point (may use examples, or qualify statements in other ways).

Award up to ***[4 marks]*** for either B or C; balance is not expected. Maximum ***[3 marks]*** if ideas do not relate to earthquake or volcano.

(c) "Improved building design is the most effective way for people to reduce their vulnerability to hazards." Discuss this statement. ***[10]***

Improvements in building design could include modifications such as steel reinforcement, base isolators, movable hydraulic joints, strategies to reduce building shaking, shatter proof glass, deep foundations. Low cost designs include wooden buildings that shake in an earthquake, low density buildings, buildings on stilts, reinforced roofs *etc*. Similar improvements in building design/modification could be discussed with reference to volcanoes, hurricanes and other hazards.

A detailed description of building design is not required, although there should be a sound understanding of its importance.

Discussion should include other ways to reduce vulnerability including land-use zoning, early-warning systems, hard engineering structures such as sea walls, soft engineering structures such as mangrove swamps and belts of trees, response and awareness training, evacuation planning, emergency shelters, investment in emergency services, improved monitoring and prediction of natural hazards, insurance schemes.

At band D, responses are likely to be descriptive and might only cover building design or other simple ways of reducing vulnerability.

At band E, responses should either consider more ways in greater depth or offer some more explicit evaluation *eg*, a combination of ways is needed.

At band F, expect both.

Marks should be allocated according to the markbands.

Optional Theme E – Leisure, sport and tourism

9. (a) (i) Define the term *environmental carrying capacity.* [2]

The (maximum) number of people/visitors ***[1 mark]*** before the local environment/area becomes damaged/harmed ***[1 mark]***. Accept alternative phrasing.

(ii) Define the term *perceptual carrying capacity*. [2]

Award up to ***[2 marks]*** for any of the following:

- amount of people before the environment/area/activity is spoiled/not enjoyed by those people or others
- provides details of different user groups and their perceptions/feelings
- provides detail of specific issues linked to negative feelings *eg* noise, congestion.

(b) Referring to specific activities, analyse why the leisure facilities in a central business district (CBD) differ from those in the rural–urban fringe. *[6]*

Differences could include different types of activity or differences in the size, scale and target users of the facilities.

Award up to ***[2 marks]*** for the range of activities covered by the answer (should have at least two in each case). Typical facilities in a CBD could include cinemas, theatres, restaurants, museums, whereas the rural–urban fringe may contain specialist sports grounds, garden centres, multiplex cinema, country parks. Also credit rural activities *eg* mountaineering facilities, ski slopes, mountain biking facilities.

Award up to ***[4 marks]*** for an analysis of why differences exist. Likely reasons that can be identified for ***[1 mark]*** each include:

- high accessibility in CBD attracts activities requiring many visitors
- land prices are lower at fringe so attracts activities needing space (do not credit simply "more space")
- CBD may be old, so home to historic visitor attractions
- younger people in CBD / older at fringes and this affects local facilities
- outdoor facilities linked with forest (*eg* paintballing), topography, *etc*
- clustering of activities in CBD where tourists gather
- high profits in CBD (due to high footfall) attract high threshold retailing (lower profit/not for profit at fringes).

Alternatively, two reasons, well explained (uses examples or concepts like threshold) would merit ***[4 marks]***.

(c) "Sport and recreation are an effective means of regeneration for urban areas." Discuss this statement. ***[10]***

Candidates may agree or disagree with this statement. Barcelona and Beijing are often given as good examples of how sport can help regenerate a city. The London 2012 Olympics is considered to be a major success in the regeneration of London's East End whereas Atlanta and Athens may be examples of where sport has had less success. Other methods could be discussed, such as property-led regeneration, new retail developments, urban development corporations, provided they are legitimate spin-off effects from the initial investment in sport rather than entirely alternate strategies.

The effectiveness of some strategies may only be evident over the long-term, and it may not be possible to assess "effectiveness" in the case of recent case studies such as the 2012 London Olympics.

Different groups mays have differing perspectives on whether the changes are "effective" for them or others, *eg* those displaced by gentrification or those who do not like the noisy visitors that sport can attract.

At band D, responses are likely to be descriptive and might only consider one side of the argument.

At band E, expect either a wider range of more detailed impacts of sports/recreation regeneration for urban areas or some more explicit discussion of effectiveness.

At band F, expect both.

Marks should be allocated according to the markbands.

10. (a) Describe the distribution of the participating teams. ***[4]***

Award ***[1 mark]*** for any of the following:

- they are globally dispersed / spread out / scattered
- covering most continents
- often only one or two per continent
- they are mainly between the tropics
- although England is an exception
- only the West Indies and Guyana are west (of the prime meridian/western hemisphere) / most are east (of prime meridian)
- they are mainly coastal
- although Zimbabwe is an exception
- with the exception of England, this sport is mainly played in a country that has a neighbouring country that also plays this sport
- credit other distributional points.

Do not credit "mostly LEDCs" or "ex-colonies of the UK" (as these are not descriptive points).

(b) Using examples, suggest how social and cultural factors can affect people's participation in international sports. ***[6]***

The focus should be on social/cultural factors. Credit economic/cost factors if linked to idea of social groups / classes / poverty / inequalities in society.

There are many possible factors to discuss:

- some sports are associated with relatively affluent people – equestrian, polo, golf
- other sports are associated with poorer people – football, boxing
- gender/ethnicity have played a role now or in the past in barring access *eg*, women and boxing
- some sports are associated with diasporas (Gaelic football and hurling with the Irish diaspora, for example)
- sports associated with political developments, *eg*, in cricket most of the countries were part of the former British Empire
- more recent adopters could be related to media exposure/TV access (credit as social factor)
- links with education, aspirations and role models.

Award ***[1 mark]*** for each factor that is correctly linked to a sport and is a valid influence on participation. Also award ***[1 mark]*** for a further development/rationale (*eg*, cost of buying golf clubs, *etc* for those in low-income social groups).

Full marks could be achieved by three factors with development example or rationale provided, or six factors identified. Do not expect explicit separation of social and cultural factors.

(c) "Physical factors influence the location of tourist activities more than human factors." Discuss this statement, with reference to examples. ***[10]***

Physical factors include climate, relief and landscape, flora and fauna, oceans, lakes and rivers. These give rise to a wide variety of tourist activities such as beach holidays, climbing, skiing, bird watching, diving, sailing, surfing, fishing and so on. However, physical factors alone can never be sufficient to generate a tourism industry, as tourists require transport, accommodation and catering.

Human factors include transport (accessibility), culture, heritage, food and drink, political, entertainment, family, economic (affordability), and the provision of secondary tourist resources (hotels, airports, catering). They also include factors relating to the tourists themselves (age, gender, wealth, culture).

Most types of tourism depend on a mix of physical and human factors. Coastal resorts (*eg*, Costa del Sol) depend on sun, sand and sea but also air transport, hotels, catering and entertainment.

Responses that achieve band D are likely to be descriptive accounts, and might only consider physical or human factors.

At band E candidates should either provide some balanced explanation of physical and human factors supported by examples, or some explicit evaluation of the statement (*eg*, answer depends on type of tourist activity).

At band F, expect both (explanation and evaluation).

Marks should be allocated according to the markbands.

Optional Theme F — The geography of food and health

11. (a) Referring to the map, describe the spread (diffusion) of this disease between 2005 and 2009. ***[4]***

Award ***[1 mark]*** for each of the following:
- starts in a single place
- starts in Central Africa/East Africa
- moves in waves, or a sequence
- first wave ends in two places, second wave in three places, *etc*
- disease jumps/leapfrogs over many unaffected places
- spreads from low to high income places
- shows a pattern of diffusion by relocation/expansion/recognizes types of diffusion
- uses map evidence to identify at least three affected places (*eg*, Australia, USA, France/Europe).

(b) Suggest *three* possible reasons why the disease spread to some countries and not others. ***[2+2+2]***

Possibilities include movement of tourists/travellers; location of transport links such as regular flights; transmission to relatives living in another country; effective prevention campaigns in some countries (hence it did not spread there). Accept comments about commonality of climate provided they are related to countries or regions of broadly similar climate (*eg*, from Madagascar to Bahamas).
Also accept: preventative measures, vaccinations, border controls, migration, transport, trade.

Award ***[1 mark]*** for each reason, with a further ***[1 mark]*** for development or exemplification, which should be related to country–country spread.
For each reason, award only ***[1 mark]*** if reference is only made to spread within a country.

For example: disease only spreads to some countries with very regular flights ***[1 mark]*** *eg*, Australia and France, as these are rich countries where people fly frequently ***[1 mark]***. Or, the disease spreads to countries where many citizens have moved abroad ***[1 mark]*** as economic migrants may return home at intervals ***[1 mark]***.

Credit may be given for reference to a disease other than the one shown on the map.

(c) Referring to *named* areas, examine the reasons why their populations may experience food deficiency. ***[10]***

A clear understanding of food deficiency is expected in stronger responses. In a broad sense, food deficiency refers to an overall lack of available food. This food deficiency may result from: physical factors such as climate, droughts, soil degradation; human factors such as overcrowding; economic factors such as insufficient income to purchase; demographic factors such as rapidly rising population; political factors such as reluctance or inability to trade in world markets.

Food deficiency may also be used to describe situations where the dietary needs of (some) people for a healthy life are not met, despite a sufficient quantity of food being available (*eg*, lack of vitamins in the diet). However, it is not necessary to include this aspect to be awarded full marks.

At band D, at least two reasons should be *described* and related to food deficiency. Responses that do not refer to a specific area (whatever the scale) may be credited as high as band D.

At band E there should be either more than two reasons examined/discussed, in more detail, with example(s) (*eg* rapid population growth in LEDCs and climate problems such as drought) or an examination that shows the reasons are complex/interrelated/do not apply to all parts of the population.

At band F, expect both.

Marks should be awarded according to the markbands.

12. (a) Referring to the graph, describe the global pattern of land available for farming. ***[4]***

Award ***[1 mark]*** for each valid descriptive statement. Possibilities include:

- sub-Saharan Africa has the most available farmland
- in sub-Saharan Africa more than 50% of land is more than six hours from the market
- in Latin America only 25% of land is more than six hours from market
- East/Southeast Asia has the least
- almost all the available land is in low-income regions
- the region with the most available land within 6 hours of markets is Latin America and Caribbean
- the region with the least land within six hours of markets is East/Southeast Asia, *etc*.

If there is no quantification, maximum ***[3 marks]***.

Very simple listing should be limited to ***[2 marks]***.

(b) Using examples, explain how trade barriers and/or trade agreements can affect the production of food. ***[6]***

Examples may be given of trade barriers/agreements (EU), of food (bananas), or both. (There should be at least two examples of trade agreements/barriers, or of food such as bananas.)

Award ***[1 mark]*** for each example of a barrier/agreement/country *eg*, EU/CAP and ***[1 mark]*** for each basic explanation of how production is affected by a rule *eg*, import tariffs. Award ***[1 mark]*** for further development or exemplification *eg*, difficulties created for Kenyan farmers seeking access to EU markets.

Other barriers/agreement that could be explained include:

- choice of crops
- amounts grown (quotas)
- preferential trade access
- agreement to use GM crops
- health hazards/bans
- set aside
- fair trade.

If no actual examples of barriers/agreements given, no more than ***[4 marks]*** should be awarded.

Two exemplified ideas, well-explained, can gain ***[6 marks]***.

(c) Contrast the geographic impacts of *two named* diseases. ***[10]***

The command term "contrast" requires candidates to give an account of the differences between the two diseases (not their similarities).

The focus should be on the impacts of the diseases, rather than their causes. Impacts could be related to contrasting levels of economic development (LEDC versus MEDC).

The impacts will depend on the two diseases chosen. Some imbalance in the coverage of the two diseases is acceptable, even when awarding full marks. Geographic impacts may be subdivided into demographic, economic, social, political, *etc*, or by scale into local, national, regional, international. Either approach is acceptable for full marks, though it is likely that stronger responses will combine these approaches in some way.

The term "impacts" is understood to include measures taken with respect to the prevention, treatment, cure (if applicable) and management of the diseases, as well as mortality rates, lost working hours, health care costs, *etc*.

Responses at band D are likely to be a *descriptive* account of the impacts of any two diseases (do not expect balance).

At band E expect <u>either</u> a range of impacts of two named diseases examined/discussed <u>or</u> some explicit contrast(s) made using concepts such as scale, timescale, severity, *etc*.

At band F expect both.

Marks should be allocated according to the markbands.

Optional Theme G — Urban environments

13. (a) (i) Define the term *urbanization*. ***[1]***

Urbanization is the increasing percentage/proportion of a country's population living in towns and cities. Accept alternative phrasing. Do not accept rural–urban migration.

(ii) Describe the changes in the distribution of millionaire cities as shown on the maps. ***[3]***

Award ***[1 mark]*** each for:

- there are more millionaire cities in all continents
- major growth along coasts
- may identify regional clusters, *eg*, India, Japan
- makes a valid north–south contrast
- credit other valid points or attempt at quantification, *eg*, has risen from two to five in Australia, or uses phrasing to show very significant growth/more than doubled.

(b) Explain *three* reasons for the movement of *named* economic activities within urban areas. ***[2+2+2]***

Possible economic activities include retail, services, manufacturing, leisure.
There are many possibilities:

- land values too high in CBD so shops/offices move to edge of town
- new attractions of new road/rail links attract a range of businesses
- business parks established in new areas with good accessibility
- brownfield site redevelopment for offices/shops may have advantages *eg*, cost
- enterprise zones/export processing zones have cost/benefits for light industries.

Award ***[1 mark]*** for each basic reason for movement (advantage should be clear) and ***[1 mark]*** for further explanation/exemplification. For example, services in Cardiff have relocated to the accessible Cardiff Gate business park ***[1 mark]*** which has much lower costs per square metre than the CBD ***[1 mark]***.

Award a maximum of ***[4 marks]*** if no economic activities are named.

(c) Examine the reasons why it is difficult to manage urban areas sustainably. ***[10]***

Sustainability should be defined – good answers will acknowledge environmental/economic/social dimensions. Candidates may discuss aspects such as housing, population growth, pollution, transport, housing and employment. Contrasting case studies of sustainable urban management might be used. These may be drawn from high-income countries and low-income countries. Examples may include Curitiba, the London Olympics, Masdar City. Credit any valid example at any urban scale.

Reasons are likely to include:

- cost – *eg*, the cost of developing a new sustainable transport system, housing *etc*
- availability of money – this can operate at a household level/city government level *eg*, being able to afford solar panelling
- political will – corruption may be a problem in some locations / vote-catching / NIMBYism (people not wanting new developments such as a recycling scheme in their locality ("back-yard"))
- available technology – some debt-ridden cities may not be able to afford new forms of renewable energy, for example
- rapid population growth and rate of consumption of resources – over-consumption of resources as standards of living rise
- high population densities
- legislation – introduction of Agenda 21 statements
- waste output – encouraging people to re-use, recycle, reduce.

To access band D at least two reasons should be described.

At band E expect <u>either</u> a greater range or depth of reasons for management challenges (may offer contrasting examples) <u>or</u> some explicit examination of what sustainable management actually involves, and the challenge it brings.

At band F expect both.

Marks should be allocated according to the markbands.

14. (a) (i) Identify *one* group of working people that have been classified as "not formally employed". ***[1]***

People in the informal sector. Also accept charity work, carers, criminal activity or specified groups of informal workers *eg*, car windscreen cleaners.

(ii) Distinguish between the main employment characteristics for the two areas shown. ***[3]***

Award ***[1 mark]*** for any of the following, up to ***[3 marks]***:

- area A has most people in "skilled manual"/category 4
- area B has most people in "not formally employed"/category 7
- area B has an even spread across groups 3–6 / different types of manual work
- area A has a high category 2–3 / lower professional groups
- credit other valid significant points, or attempts at quantification.

(b) Explain *two* population movements taking place *within* large cities. ***[3+3]***

For each population movement, award ***[1 mark]*** for the identification of a population movement and ***[2 marks]*** for reasons explaining why the movement occurs. These can be outlined push or pull factors, but do not double-credit "mirrored" reasons (*eg*, less space in inner city, more space out of town).

A range of answers are possible, for example:

- the movement of families with children from the inner city to the suburbs ***[1 mark]***
- due to push factors such as pollution from traffic ***[1 mark]***
- the pull factors such as better education opportunities ***[1 mark]***.

(c) "Most large cities suffer from a serious problem of urban poverty for which there is no solution." Discuss this statement. ***[10]***

There are many problems related to poverty that candidates can use. These include deprivation, overcrowding, poor quality housing, crime and inequality. Candidates may agree or disagree with the statement. Likely contrasts will be made between high-income countries and low-income countries.

Urban poverty and deprivation can take many forms – unemployment and underemployment, poor diet, lack of clean water. Solutions may be very costly, and there might not be the political will to invest resources on the most deprived. Overcrowding can lead to pressure on resources (water, sanitation) and it may help spread disease. Solutions include new housing developments, site and service schemes, provision of piped water and improved sanitation.

Solutions could include informal/shanty towns, new towns, new cities, affordable housing, rural development. The fundamental problem is that as long as cities are attractive places for people to live and work, they will continue to attract more people, thereby making it difficult to solve the problem of poverty.

Credit answers that argue that urban poverty can be resolved (Curitiba, economic growth in China, India pulling people out of poverty).

At band D, responses are likely to describe either some urban problems or one or more possible solutions. Evidence may be generalized or lacking.

At band E, expect either a greater range of problems and/or solutions to be covered or some explicit discussion of the truth of the statement (*eg*, recognizes the urban context determines the severity of the problem and/or the solutions sought).

At band F, expect both.

Marks should be allocated according to the markbands.