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GEOGRAPHY

Higher Level and Standard Level

Paper 2

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SECTION A

A1. Drainage basins and their management

Either

(a) Essay

To what extent do you agree that river landforms can be classified as either erosional or depositional? ***[20 marks]***

This question invites candidates to review a number of river landforms and evaluate the contribution of erosional and depositional processes to their formation.

It is expected that responses will identify some landforms that are entirely the result of erosional processes (gorges, incised meanders, waterfalls) and some that are entirely depositional (alluvial fans, levees). Good responses should also recognize that a number of landforms are the result of both processes such as flood plains, terraces and meanders.

Responses are not expected to give detailed accounts of the formation of each landform, but the contribution of erosion and deposition should be made clear. Every river landform need not be referred to, but enough should be included to formulate a relevant argument.

Responses that simply catalogue or list river landforms as either erosional or depositional, without any discussion, that is weighing up the relative contributions of erosion and deposition, should not be able to move above band F.

Responses that agree that landforms **can** be classified as either erosional or depositional should be credited, as long as valid evidence is used and the case is well argued.

The marks should be allocated according to the markbands.

Or

(b) Structured question

(i) Define the term *flash flood*. ***[1 mark]***

A flash flood is a sudden rise in the discharge of a river. Responses that define it as a higher discharge with a short lag time are also acceptable.

(ii) Identify factors A and B and briefly explain how they contribute to flash flooding. ***[4 marks]***

Factor A is antecedent rainfall (accept previous rainfall) ***[1 mark]***. Saturated ground will cause more immediate runoff ***[1 mark]***. An alternative possibility for factor A is type of precipitation. Sudden snow melt may result in flash floods.

Factor B could be steepness of slopes or permeability of the surface ***[1 mark]***.

A brief explanation of how each of these causes rapid runoff is required. The surface permeability may relate to the soil or bedrock ***[1 mark]***.

(iii) Explain how human activity can increase the risk of flash flooding. ***[5 marks]***

Any of the following are acceptable: urbanization or any other human activity that involves the construction of extensive impermeable surfaces, deforestation, overgrazing, compaction of soils due to farming, or any human activity that decreases vegetation cover, either temporarily or permanently.

Responses should refer to two factors or more to gain full marks. If only a list of factors is given with no explanation, no more than ***[2 marks]*** should be awarded.

(iv) Referring to *one* specific case study, assess the effectiveness of water management strategies. ***[10 marks]***

The case study should be named and located. The scale of the area chosen may legitimately vary from local, for example the strategies associated with a particular settlement, to an entire drainage basin, or even a region comprised of two or more drainage basins.

A wide variety of strategies for water management may be employed, ranging from large-scale engineering projects to domestic pricing, rationing and conservation measures. The strategies employed should be described, and a clear indication should be given of what issue or issues they are designed to manage. The strategies attempted will depend on factors concerning water supply (availability and water quality), as well as factors concerning conflicting demands (such as urban, domestic, agricultural, industrial, navigational, power generation).

For the response to reach the highest markbands it is essential that some assessment is made of the success (or failure) of different strategies.

Any response that fails to refer to any specific case study or that only refers to flood management strategies may not move beyond band E.

Responses that simply describe management strategies, with no attempt at evaluation, may not move beyond band F.

The marks should be allocated according to the markbands.

A2. Coasts and their management

Either

(a) Essay

Referring to examples, examine how human activity affects erosional processes and landforms in coastal areas. ***[20 marks]***

Human activity often affects the type and rate of erosional processes on coasts. In general, deliberate, planned actions (such as sea walls, cliff consolidation and revetments) are often undertaken to reduce the rate of erosion, protecting constructions (settlements, communications, industry) and existing land uses. Unplanned interventions (as a result of such activities as dredging and the removal of beach material for construction) sometimes result in faster rates of erosion. The precise area where the unplanned intervention takes place is not necessarily the same area as where the erosion rate is altered.

Alternative organization of the material should also be credited, for example human impacts on dune systems that increase wind erosion.

Stronger responses might discuss both temporal and spatial aspects of the title, as well as clearly relate human activity to one or more of the specific erosional processes of abrasion (or corrasion), hydraulic action and solution (of limited relevance in this context). The strongest responses may also try to link human activity to rates of attrition, and thereby to variations in pebble size.

As regards landforms, it is likely that most discussion will focus on cliffs, but stronger responses may also refer to a variety of other landforms. Depositional landforms should not be credited.

It is not necessary for the discussion of processes and landforms to be equal for the awarding of full marks, but those responses that fail to examine both may not move beyond band E.

Responses that do not include examples may not move beyond band E.

Marks should be awarded according to the markbands.

Or

(b) Structured question

(i) State the name of the landform represented by the Palisadoes (shown on the map). ***[1 mark]***

The landform is a sandspit ***[1 mark]***. Also accept tombolo.

(ii) Provide a possible explanation for the formation of the Palisadoes. ***[4 marks]***

Mention must be made of longshore drift ***[1 mark]***, with a clear description of how it occurs ***[1 mark]***, and of its direction in this case ***[1 mark]***. The remaining ***[1 mark]*** should be awarded for the idea that this is a gradual process, with numerous stages, or any other relevant point. Any other plausible explanation may also receive credit.

(iii) Referring to the diagram, explain the changes which occur on the beach at point A during a typical 24-hour period. ***[5 marks]***

Award ***[3 marks]*** for an accurate description of the cyclical processes shown in the diagram. Award ***[2 marks]*** for any valid explanations of the changes that may occur on this beach at point A involving constructive and destructive wave action.

(iv) Referring to examples, evaluate the coastal management strategies that may be used in low-lying coastal areas. ***[10 marks]***

The focus on low-lying coastal areas rules out responses that describe strategies related to preventing cliff erosion, but includes strategies related to despositional coastlines, coastal flooding and, though **not** required for full marks, deltas. In general terms, the possible strategies include hard and soft engineering, managed retreat and doing nothing.

Any response that does not have any examples may not move beyond band E.

Any response that makes no attempt to evaluate may not move beyond band F.

The marks should be allocated according to the markbands.

A3. Arid environments and their management

Either

(a) Essay

"In the centre of deserts, wind action is dominant. On the margins of deserts, the action of water is dominant."

Evaluate these statements with reference to arid and semi-arid landforms. ***[20 marks]***

Responses would be expected to examine a number of arid and semi-arid landforms caused by wind action and water action. The location of the landforms and the prevalence of wind and water would also need to be examined before an evaluation could be made. It is expected that most responses would reject both statements as inaccurate, noting that water formed features are to be found in the centre of deserts (due to rapid erosion by the occasional rainstorms), and that encroaching sand dunes are often a feature of marginal areas. However, an alternative view is valid provided it is supported. Stronger responses could also refer to earlier climatic regimes which have resulted in fluvial features in arid areas and aeolian features on the margins.

The marks should be awarded according to the markbands. In the absence of any evaluation, the marks may not move beyond band F.

Or

(b) Structured question

(i) Describe the relationship between the set of values in Diagrams A and B. ***[2 marks]***

Responses should note the broad relationship showing that arid areas have higher water consumption values ***[1 mark]*** and this should be quantified for the remaining ***[1 mark]***.

(ii) With reference to Diagram A, explain why rainfall values alone are insufficient to define aridity. ***[3 marks]***

Responses would be expected to note that there is a great variation in rainfall values ***[1 mark]*** and that aridity can only be defined in terms of the relationship between precipitation and potential evapotranspiration ***[1 mark]***. The remaining ***[1 mark]*** should be allocated to any development, such as noting that Walnut Valley has more than twice the rainfall of Tempe.

(iii) Describe and give possible reasons for the water consumption patterns shown in Diagram B. ***[2+3 marks]***

Responses should recognize that, as indoor use is fairly constant over all the urban areas, its demand is not weather or climate related ***[1 mark]*** and that the higher outdoor consumption is in arid areas ***[1 mark]***. The remaining ***[3 marks]*** should be allocated to possible reasons for this; for example gardens, sportsfields and parks, would require more water in drier areas, and for some quantification.

(iv) Using *at least one* example, examine why access to water resources is an increasingly important international issue in arid regions. ***[10 marks]***

A large number of approaches could be expected, but all responses would have to focus on water as a scarce resource in arid areas, explaining how this resource is shared between nation states and how it has become a major issue, sometimes leading to conflict. This should be illustrated by a clearly described example, identifying the source of the water, the different claims on it and the attempts that have been made to resolve these different claims. It would also be necessary to identify the varying uses to which the water could be put. While not all these elements would carry equal mark weighting, all should be covered.

In the absence of any developed example, or where the example is only local or national (*i.e.* not "international"), responses should not move beyond band E.

As the question asks for at least one example, responses should be credited on the basis of quality and not quantity.

Marks should be allocated according to the markbands.

A4. Lithospheric processes and hazards

Either

(a) Essay

Using examples, examine how different types of volcanic eruption have different impacts on people. ***[20 marks]***

Responses require knowledge of the primary and secondary volcanic hazards associated with volcanic eruptions of several different types. Examples of the different types include, at the simplest level, the distinction between basic and acid eruptions.

Responses should draw a distinction between the relatively non-violent eruption of fluid basaltic lava, low in silica content, at high temperatures where gases easily escape, and the violent eruption of viscous, silica-rich acid lava. The eruption of basaltic volcanoes usually has a relatively low impact in terms of loss of life, but higher impacts in terms of property loss and disruption to the local infrastructure. Responses may refer to Hawaiian or Icelandic volcanoes as examples, or, alternatively, to shield or fissure volcanoes. Strombolian type eruptions of high frequency but low impact may also be mentioned in this respect.

More violent eruptions usually have even greater impacts in terms of both loss of life and property. The violence is often caused by long periods of dormancy, during which internal pressure builds up. Responses should also indicate that where acidic magma is present there are violent explosions in the vent producing towering plumes, pyroclastic flows and surges and ash falls. Responses may refer to Vesuvian or Plinian types of eruption, though these terms are not essential, as long as the effects of such eruptions on people and property are made clear. A suitable example would be Pinatubo.

Very viscous (rhyolitic) lava may block the vent and result in a sudden violent eruption through the side of the volcano, or by blowing off the top. In these cases, the effects of hazards such as lateral blasts, nueés ardentes, stratospheric ash clouds, and caldera formation should be analysed in terms of their impact on people and property. Examples could include Mt. St. Helens, Mt. Pelée and Krakatoa.

Responses that take a different approach and simply review a series of contrasting, named volcanoes and the effects of their eruptions should be accepted, as long as the candidate is able to justify the reasons for differences in the type of eruption and analyse the variations in impacts in terms similar to those stated above.

References to secondary hazards such as lahars, volcanic landslides, volcanic earthquakes and tsunami are all relevant, as long as they are related to the type of eruption, but they are not essential to a good answer.

Answers that refer to positive effects of volcanic activity should be credited, provided that each is connected to different types of volcanic eruption. References to differences in levels of development and the ability of a society to respond to the different effects of volcanic eruptions should also be credited. Responses that do not refer to any valid examples may not move beyond band E.

Marks should be awarded according to the markbands.

Or

(b) Structured question

(i) Define the term *mass movement.* ***[2 marks]***

Mass movement is defined as down-slope movement transporting soil and rock material (accept weathered material) ***[1 mark]*** under the influence of gravity ***[1 mark]***.

(ii) Identify the type of mass movement taking place in each of the diagrams A and B. ***[2 marks]***

Diagram A illustrates soil creep ***[1 mark]***. Diagram B illustrates slumping (accept rotational slipping) ***[1 mark]***.

(iii) Explain the processes of mass movement taking place in diagram A and describe their effects on the natural and human landscape. ***[4+2 marks]***

Responses should state that this is a slow process that takes place in humid climates where the slope is covered by vegetation and should include an explanation of the processes of expansion and contraction that lead to the down-slope movement of material. It is important that the process of expansion due to moisture increase and decrease is distinguished from that caused by frost heave. In both cases the method of movement caused by expansion perpendicular to the slope angle and vertical contraction due to gravity should be explained ***[4 marks]***.

The description of the effects on the natural landscape should include terracettes, soil accumulation behind obstacles and bent trees. The effects on the human landscape include tilted poles, fences, walls and gravestones as well as tension cracks in roads ***[2 marks]***. Responses that refer only to effects on either the natural or the human landscape should be awarded only ***[1 mark]***.

(iv) Discuss the relative contribution of natural and human factors to mass movements of the type shown in diagram B. ***[10 marks]***

Responses should distinguish between the human and natural factors that contribute to slumping. Natural factors could include erosion at the base of the slope, the degree of consolidation of the materials on the slope, the permeability and porosity of the materials, the antecedent rainfall, the water content of the materials, the presence of cracks as pathways for lubrication by water, the presence of stronger rocks over softer materials (clays, sands), the possibility of earth tremors.

Human factors include the removal of the base of the slope for construction, cut and fill, loading of the top of the slope by building, channelling of water onto the slope increasing loading and lubrication, vegetation clearance allowing more infiltration of precipitation, leakage of water from services such as water pipes and sewage pipes, irrigation of lawns, vibrations from transport (trains, heavy trucks).

Responses may conclude that such slumps can occur without human interference but that human activity increases the risk and frequency of such movements.

Not all human and natural factors need to be considered but stronger responses should discuss the importance of a range of both. Answers that only refer to either human or natural factors should not move beyond band E.

A5. Ecosystems and human activity

Either

(a) Essay

"Management of ecosystems is good in theory, but does not always work well in practice."

Using examples, discuss this statement. ***[20 marks]***

Responses to this question will be dependent on the examples chosen and responses would be expected to consider at least two, but the scale of the examples might vary. The purpose of the management strategies should be clearly identified (to effect beneficial changes in plant and animal systems by protecting and conserving, or to ensure sustainability), the operation and implementation fully described, and then the success (or failure) of the strategies assessed. It would also be necessary for responses to identify the problems that had to be overcome in attempting to implement the strategies. These could be political (such as resistance from vested interest groups), economic (such as costs of implementation), social (such as apathy from local communities), and environmental (such as insufficient knowledge resulting in inappropriate techniques). Not all these would necessarily be applicable to the examples chosen, and there could well be other factors that are relevant. Strongest responses might show some awareness of the time scale (short term failures, but promise of greater success in the longer term, for instance), and some appreciation that the aim of any management scheme could only be to mitigate the damage sustained, and not to return the ecosystem to its original state.

Responses that fail to refer to examples may not move beyond band E.

Marks should be awarded according to the markbands.

Or

(b) Structured question

(i) Define the term *ecosystem*. ***[2 marks]***

All definitions should make reference to the links between plants, animals and the physical environment ***[2 marks]***.

(ii) Identify the components marked A and B in the diagram. Briefly justify your identification. ***[2+2 marks]***

A should be identified as plants ***[1 mark]*** as it is the only component to absorb energy through photosynthesis ***[1 mark]***, **B** should be identified as soil ***[1 mark]***, being the only component to import nutrients, as all other components lose energy and recycle nutrients ***[1 mark]***.

(iii) Describe the nutrient cycling in a biome of your choice using *only* an annotated diagram. ***[6 marks]***

It is most likely that responses would show a Gersmehl diagram (similar to the main diagram, but indicating different sizes of stores and different rates of transfers) for their chosen biome, but other diagrams are acceptable. Annotations, in this case, need not be detailed. However, if the size of the stores and speed of transfers are not shown diagrammatically, the annotations should provide an explanation of them. Award ***[3 marks]*** for a correctly labeled diagram, and ***[3 marks]*** for annotations. Diagrams that refer to food chains, webs or energy transfers should not be credited.

Written comments not on the diagram should not be given any credit.

(iv) Examine the limitations of a conservation strategy that has been implemented in an ecosystem of your choice. ***[8 marks]***

Responses would be expected to give a description of the ecosystem of their choice ***[2 marks]***, in addition to both describing and explaining the conservation strategy that has been implemented ***[2 marks]***. A large number of ecosystems could be selected and it is possible that this balance of marks may need to be adjusted. However, the final ***[4 marks]*** should be reserved for the examination of the limitations.

A6. Climatic hazards and change

Either

(a) Essay

"The only effective responses to the problems of acid rain and the depletion of stratospheric ozone are international, and not local or national."

Discuss this statement. ***[20 marks]***

The causes of and problems resulting from acid rain and ozone depletion should be described briefly. Answers should demonstrate an understanding of the way in which acid rain and ozone depletion are problems that often straddle international boundaries and that responses to the problems are unlikely to have much effect unless they are part of a wider international agreement. Some knowledge of relevant international agreements and their effectiveness should be shown. Some indication of potential solutions should be examined and these may include international, national and local initiatives in reducing CFCs and industrial emissions.

Examples or case studies, though not asked for in the question, should be credited but answers that do not include these may still be awarded high marks. Answers that discuss global warming and/or the enhanced greenhouse effect are not relevant and should not be credited.

Responses that do not include both acid rain and ozone depletion may not move above band E.

The marks should be allocated according to the markbands.

Or

(b) Structured question

(i) State the name of the weather system X shown in the satellite image. ***[1 mark]***

The photo shows a tropical cyclone. It is equally acceptable to name this weather system as a hurricane, a typhoon, or a tropical storm.

(ii) State the direction in which the weather system is moving, and justify your answer. ***[1+1 marks]***

The system is moving from the east towards the west ***[1 mark]***, as shown by the clouds trailing behind it ***[1 mark]***. Answers that state that the system will curve polewards due to the Coriolis force should be credited but clockwise and landwards are not valid responses.

(iii) Describe and explain the changes of weather that would be experienced as this weather system passes directly overhead. ***[4+3 marks]***

For full marks responses should give a good description and must include an explanation of the three key phases: the approach of the tropical cyclone (falling pressure, increasing clouds, rising winds, onset of rain and high wind speeds of the eyewall), the calm eye (low pressure, sudden drop of windspeed, cessation of rainfall, clearer skies in the eye) and the cyclone's retreat (sudden reversed high wind speeds of the eyewall and rainfall, followed by gradual reduction in both, rising pressure and clearing skies). A strong discussion of one phase may make up for a weaker discussion of a different phase.

(iv) To what extent are the human responses to *one* named climatic hazard related to a country's level of development? ***[10 marks]***

Human responses to climatic hazards include insurance, monitoring, forecasting, precautions, education, warning systems, evacuation and reconstruction. Many of these are likely to be affected by a country's level of development, though this relationship is often far from simple. Even in MEDCs, higher levels of technology do not guarantee that weather hazards will not lead to devastating economic and human consequences. Some LEDCs take sophisticated precautions and have excellent monitoring and evacuation systems in place.

Any response that does not discuss one named climatic hazard or fails to discuss levels of development may not move beyond the bottom of band E.

Any response that fails to assess the extent of human responses may not move beyond band F.

The marks should be allocated according to the markbands.

SECTION B

B7. Contemporary issues in geographical regions

Either

(a) Essay

Examine how physical, economic and socio-political factors have caused the contemporary geographical issues in a region you have studied. ***[20 marks]***

This question examines how physical, economic and socio-political geography have shaped a region and resulted in contemporary geographical issues. The region should be clearly defined, and more than one issue identified. Responses involving an inappropriate choice or scale of region will be self-limiting. Responses that also consider the possible solutions to contemporary geographical issues should not be penalised.

Any response that fails to examine all three types of factors may not move beyond band E, although it is not necessary to treat all three factors equally to access the higher markbands.

The marks should be allocated according to the markbands.

Or

(b) Structured question

(i) Explain why the regions shown on Map A differ so greatly from the regions shown on Maps B and C. ***[2 marks]***

The original data is identical, so the difference is a result of the boundaries (figures in %) chosen for the regional divisions. ***[1 mark]*** for this idea, and ***[1 mark]*** for some quantification of it, such as the fact that the lower limit of the highest category is only 15% for A compared with 30% for B and C.

(ii) Describe *one* situation in which Map A may be more useful than Maps B and C, and justify your answer. ***[4 marks]***

There are numerous possible responses, but Map A suggests that more regions have a high number of occupied housing units lacking a telephone (*i.e.* that telephone availability is poor). At first glance, the other maps suggest that telephone availability is much better. A map like Map A might be chosen, therefore, to illustrate a news article calling for more investment in the provision of telephones, or to make a political point about how relatively poor the region is. Up to ***[2 marks]*** can be awarded for any plausible description of a situation where Map A would be useful, and up to ***[2 marks]*** for the justification.

(iii) Locate *your* local region and define its boundaries using *only* an annotated map. ***[4 marks]***

Up to ***[2 marks]*** may be awarded for locational details (such as place names, or latitude and longitude), and up to ***[2 marks]*** for defining the boundaries. An indication of scale must be provided for the full ***[4 marks]*** to be awarded. No credit should be given in this part for written material that is neither written on nor linked to the map by arrows or a key.

(iv) Referring to examples, examine whether the boundaries of a single-feature region are easier to define than the boundaries of a multi-feature region. ***[10 marks]***

This question examines the delimitation of single-feature and multiple-feature regions. Regions referred to must be clearly defined, with the defining features named. Responses involving an inappropriate choice or scale of region will be self-limiting. It is anticipated that most responses will conclude that the boundaries of a single feature region are more easily defined than those of a multi-feature region, but all responses should be considered on their merits.

Any response that does not refer to examples may not move beyond band E.

The marks should be allocated according to the markbands.

B8. Settlements

Either

(a) Essay

Analyse the main factors responsible for the variations in land use and functions in the Central Business District of a large urban area. Include a map to illustrate your answer. ***[20 marks]***

The focus must be on the CBD and any other area beyond this should not be credited, other than zones of assimilation and discard. The interpretation of a large urban area may vary, but the scope for discussion will be limited if the chosen urban area is too small. Variations may be regarded as spatial as well as temporal (historical change over time) but the answer may focus on either. Reference to inner urban theories and models such as bid rent and core frame might provide a basis for discussion and would be particularly useful if applied to the CBD under discussion. The analysis should recognize a number of factors influencing the land-use patterns. These might include the need for access to the centre and intense competition for space resulting in high land values and high buildings. Horizontal as well as vertical zoning of commercial functions should be identified and explained in terms of access and profit maximizing. More recent attempts to revive the CBD might also be relevant and include pedestrianization, the development of shopping malls, markets, green spaces, heritage and tourist sites and entertainment.

Variations in land-use and functions should be clearly illustrated on a large, well-labelled and accurate map, which could gain a maximum of ***[5 marks]***.

It is expected that stronger responses will make reference to specific named areas within the CBD. Responses which are accurate but involve no analysis may not move beyond band F.

The marks should be allocated according to the markbands.

Or

(b) Structured question

(i) Define the term *primate city*. ***[1 mark]***

This is the first ranked city in the urban hierarchy of a country with a population more than twice that of the second ranked city.

(ii) Briefly explain *three* ways in which the data shown in the graph may be unreliable. ***[3 marks]***

The data for 2015 is a prediction and is therefore uncertain**.** Enumeration of population varies from one country to another in terms of the date of the census and the method of data collection. Population data may be distorted for political reasons; uncertainties resulting from population mobility or the growth of informal squatter areas should be credited. Three distinct and valid reasons should be awarded ***[3 marks]***.

(iii) Describe and provide possible explanations for the changes over time in the percentage of urban population living in the primate cities shown on the graph. ***[3+3 marks]***

In the case of all cities, the level of primacy declines over time with the greatest changes having occurred between 1950 and 2000 ***[1 mark]***. However, those cities with lower levels of primacy in 1950 such as Costa Rica have experienced less dramatic declines in primacy ***[1 mark]***. In all cases, the predicted decrease in the level of primacy will be negligible between 2000 and 2015 ***[1 mark]***. Responses that do not include any quantification of changes may not be awarded more than ***[2 marks]*** of the ***[3 marks]*** available for description.

With the exception of Athens, all the primate cities are located in the less developed world where the concentration of development has been focused on the capital city, which is often a port. Countries such as Kuwait and the Lebanon had 100 % of their urban populations concentrated in their primate cities in 1950 due to their small size and lack of development. For all of the countries on the graph, primacy declines as the overall level of urbanization in a country increases and there is greater diversification in the urban system. The period of greatest urban diversification (1950-2000) often coincides with the period of most rapid economic development. Thereafter, predicted levels of primacy stabilize as the rate of urbanization slows down. Allocate ***[3 marks]*** to explanations.

(iv) Referring to examples, examine the benefits that counter-urbanization brings to rural settlements. ***[10 marks]***

Responses should show an understanding of the process of counter-urbanization and a methodical and well-structured review of a range of benefits to rural settlements. These benefits might include the influx of either younger or possibly retired people and the regeneration of population, the refurbishment of old property and the construction of new property, upkeep of the appearance of the village, revival of local services such as schools and transport, introduction of new services suited to affluent newcomers and a stimulus to the economy in general. Rises in threshold population allows the introduction of higher order services. References to urban areas should receive no credit. Responses that do not refer to any valid examples may not move beyond band E.

The marks should be allocated according to the markbands.

B9. Productive activities: aspects of change

Either

(a) Essay

"The growth of agribusiness has been environmentally damaging and socially disruptive."

Discuss this view with reference to specific examples. ***[20 marks]***

The discussion should cover three elements of this essay; the growth of agribusiness, the degree of environmental damage and the social disruption caused by its development. To move beyond band F, responses should include discussion of all three elements, although the discussion need not be balanced. The following factual material would be relevant, and stronger responses would include most of these ideas, but examples and emphasis might vary. Specific examples of named places are essential. Responses that fail to include examples may not move beyond band E.

The growth of agribusiness:
responses should show an understanding of agribusiness operations – farming systems which are increasingly organized around scientific principles involving backward links to agricultural supply industries and forward links to processing industries. Agribusiness is increasingly dominated by a small number of large TNCs which once concentrated on traditional commodities such as coffee, sugar, tea and cocoa and may now have expanded into high-value food such as, poultry, shellfish and organic vegetables. The growth of this sector reflects technical changes in food industry, improved efficiency of global transport, the liberalization of world trade as well as increasing demand for the exotic by affluent societies. TNCs are attracted to LEDCs with low labour costs, good communication links, and the ability to produce high-quality fresh products for niche markets in MEDCs.

Environmental damage:
agribusiness practices are often unsustainable and lead to the overexploitation of local resources and degradation of the environment. Groundwater is often depleted through over-abstraction and the inefficient use of irrigation systems. Local watercourses are often polluted through the use of chemical fertilizers and pesticides and excessive production of livestock waste associated with intensive factory farming. Soil is exhausted through the practice of monocultural production, the enlargement of fields and wind erosion. The application of biotechnology and the involvement of GM crops can reduce biodiversity. Examples can be drawn from both LEDCs and MEDCs.

Social disruption:
labour-saving innovations reduce the demand for a workforce and much work becomes seasonal. Higher yields lead to lower crop prices or cause farmer bankruptcy resulting in reduced farm labour forces, rural out-migration and rapid urbanization. Agribusiness tends to accentuate inequalities between rich and poor causing social division. It can also lead to lack of economic and environmental control by local communities.

Marks should be allocated according to the markbands.

Or

(b) Structured question

(i) With reference to the data given in the graphs, classify each country according to its current level of economic development. Justify your answer. ***[4 marks]***

Country A is a MEDC and Country B a LEDC or NIC/NIE ***[2 marks]***. Justification should refer to changing proportions in each sector in 2002 ***[2 marks]***.

(ii) Provide possible reasons for the changes in the employment structure of *either* country A *or* country B. ***[6 marks]***

In either case, responses should provide some chronological explanation for the decline in employment in the primary sector followed by a shift towards tertiary activity. This is related to a number of developments including: new agricultural technology, lack of rural employment, the development of new transport systems enabling populations to become more mobile, the growth of industry and its concentration in urban areas, the increasing affluence of society and the development of tertiary activities in response to increasing demands. Accept other valid reasons. Allow up to ***[2 marks]*** for each fully developed reason. Alternatively, breadth might compensate for depth, but a list should receive a maximum of ***[2 marks]***.

(iii) "Manufacturing industry can never be sustainable." Evaluate this statement. ***[10 marks]***

Manufacturing industry might be considered to be the most environmentally damaging of all employment sectors. Responses should clearly define industrial sustainability in terms of protecting resources, minimising environmental pollution and promoting economic and social welfare. To access the top markband the socio-economic aspects should be included.

There is evidence of economic and social advancement in many NICs/NIEs through the expansion of manufacturing industry, but varying degrees of success with the costly introduction of new technology controlling industrial emissions and the disposal of waste. Very often, TNCs can operate in such countries without observing pollution controls. However, in more advanced economies sustainable practices such as recycling of materials is evident.

Economic development and industrialization are closely linked and the involvement of more LEDCs in the future may lead to further environmental problems. The more optimistic view may stress the importance of global responsibility and the drive towards sustainable practices through international legislation. Whichever view is taken, to access higher markbands responses should be supported by evidence and valid examples. Where there is no evaluation responses may not move beyond band F.

Marks should be allocated according to the markbands.

B10. Globalization

Either

(a) Essay

Discuss the extent to which the process of globalization has reduced physical and cultural diversity on an international scale. ***[20 marks]***

Responses should address three elements in the question: the process of globalization, the development of homogenized landscapes and convergence of culture. To move beyond band F responses should include discussion of all three elements although it need not be balanced. The key points of discussion should include most of the following:

The process of globalization has involved the flow of people, money, goods, ideas and culture between nations. This diffusion has been encouraged by the breaking down of international barriers and liberalization of trade and the expansion of international tourism, which may have resulted in loss of national distinctiveness.

In some rural areas, physical diversity has been reduced by the activities of agribusiness resulting in monocultural landscapes and ecological losses. In many urban areas the influence of TNCs has also been important resulting in the adoption of common styles and structures. Cultural diversity has also been reduced by universal adoption of common languages, customs, morals, dress and food.

The counter-argument might recognize that the impact of globalization varies. It may be most intense in countries that can most easily adopt a different culture and less so where countries are less accessible or adaptable. There may be some resistance to the cultural effects of globalization and efforts made to emphasize and redefine national identity. These might include political movements against the processes of Americanization or McDonaldization of culture and the possible rise of religious fundamentalism. Thus, there may be a tendency towards more diversity.

The discussion should recognize variations in the impact of globalization. Stronger responses should be well supported by examples to illustrate both the physical and cultural aspects under review. Responses may not move beyond band F where there is no attempt to argue the case.

Marks should be allocated according to the markbands.

Or

(b) Structured question

(i) With reference to the photographs and the table, for each of the *three* destinations identify:

(a) *one* different negative impact ***[3 marks]***
(b) *one* different positive impact. ***[3 marks]***

There is a wide range of possibilities, but each of the 6 impacts should be different and drawn from either the table or photographs. For example, one positive impact in Antarctica would be the recognition of the importance of research stations (table) and one negative impact would be the intrusion upon penguin breeding-grounds (photograph). Interpretation of positive and negative impact may vary, and the identification should be more than a one word answer.

(ii) Explain the increasing tourist demand for holidays in remote destinations. ***[6 marks]***

Reasons would include: improvements in long haul transport, infrastructural developments of the destination, promotion of remote destinations by the media, the desire to explore the unknown, the desire for healthy recreation, weariness with popular locations and the stagnation of existing tourist destinations. For ***[6 marks]*** responses should cover at least three distinct, well-developed reasons.

(iii) Examine the success of strategies adopted to conserve a named tourist destination. ***[8 marks]***

The choice of example can range in scale from national to local and the likely environments would include those in need of conservation where there may be fragile environments or unique heritage sites. Antarctica would be a suitable choice but there are many others.

The discussion should focus on one tourist destination only, but there should be more than one conservation strategy. Strategies promoting ecotourism would be particularly relevant and there should be an explanation for the need to conserve and the level of success.

Descriptive accounts that do not consider how successful strategies have been may not be awarded more than ***[5 marks]***.

Responses which do not include a named destination may not be awarded more than ***[3 marks]***.

SECTION C

C11. Topographic mapping

(a) Give a possible reason for the circular (or semi-circular) patterns seen in the south of the *photograph*. ***[1 mark]***

Any plausible explanation (irrigation, circular ploughing/harvesting, crop circles) should be awarded ***[1 mark]***.

(b) Determine the direction of flow of the River Murray, giving a reason. ***[2 marks]***

As it leaves the map, the river is flowing westwards ***[1 mark]*** as evidenced by the angles of junction of small tributaries, the morphology of Horseshoe Lagoon, and the direction arrow in grid square 6189 ***[1 mark]***. The mark for direction can be awarded for other ways of stating direction, provided the overall direction of flow is clear.

(c) State the 6-figure grid reference for the south-western corner of the aerial photograph. ***[2 marks]***

The south-western corner is 578 852. Award ***[1 mark]*** for easting 577, 578 or 579 and ***[1 mark]*** for northing 851, 852 or 853. Accept answers where the eastings and northings are reversed.

(d) Describe and give possible reasons for the land use on the edge of the urban area. ***[3+2 marks]***

The map reveals that the urban fringe (next to the more densely built-up area shown in pink) is used for many purposes, including settlement, recreation (drive-in theatre, sports ovals), waste management (effluent park) and tourism or migrant workers (caravan park).

Up to ***[3 marks]*** may be awarded for the identification of these functions, with the remaining ***[2 marks]*** allocated to an explanation of why the urban fringe is a suitable location for these activities.

(e) Using *only* an annotated map, divide the area shown on the map into regions, and describe the essential characteristics of each region. ***[10 marks]***

It is expected that at least four distinct regions will be identified and described: the urban area; the River Murray and land subject to flooding that borders it (game reserve and conservation park); the orchards or vineyards (close network of communications and linear settlement pattern); the unsettled, low, undulating area.

Responses that only identify three regions, or adopt a non-standard system of divisions, could also be acceptable.

No credit may be given for any material that is neither written on the map, nor related to it closely by means of arrows or a key.

As a general guide, ***[4 marks]*** are available for the map (general neatness, orientation, scale) and ***[6 marks]*** for an accurate delimitation and description of the regions.