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GEOGRAPHY
HIGHER LEVEL
PAPER 2

Wednesday 15 May 2013 (morning)

2 hours

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer three questions. Each question is worth *[20 marks]*.
- Each question must be selected from a different optional theme, A – G.
- Do not answer two questions on the same optional theme.
- Use case studies, examples, maps and/or diagrams where relevant.
- A copy of the Geography Paper 2 Resources Booklet is required for this paper.
- The maximum mark for this examination paper is *[60 marks]*.

*Answer **three** questions. Each question must be selected from a different optional theme. (Do not answer two questions on the same optional theme.)*

Wherever possible, answers should include case studies and examples, and where relevant, large, well drawn maps and diagrams.

Optional Theme A — Freshwater – issues and conflicts

1.   The diagram shows some of the factors affecting flood risk in a drainage basin.
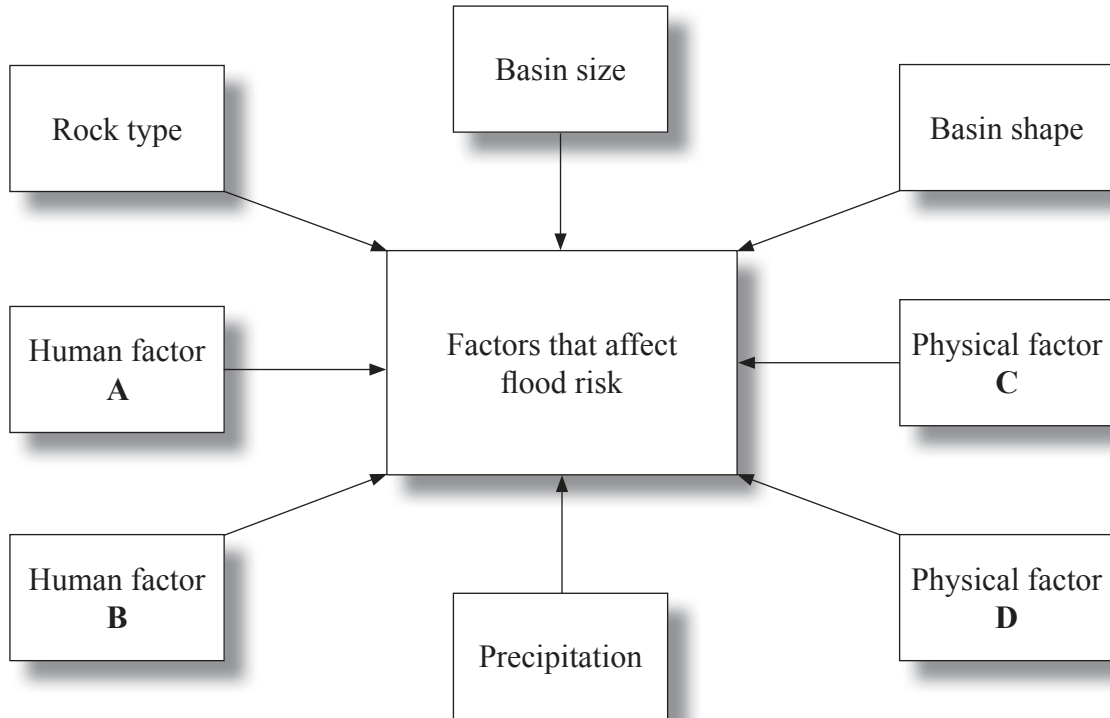
[Source: © International Baccalaureate Organization 2013]

(a)   Identify possible human factors A and B and possible physical factors C and D.   *[4]*

(b)   Explain how **two** physical factors other than precipitation can affect the magnitude of floods.   *[3+3]*

(c)   "River management strategies always result in unwanted impacts." Using examples, discuss this statement.   *[10]*

2. (a) Describe **two** characteristics of natural levées.   *[2+2]*

    (b) (i) Define the term *wetlands*.   *[2]*

        (ii) Explain **two** reasons why some wetlands are protected.   *[2+2]*

    (c) "Multi-purpose schemes result in more benefits than problems." Discuss this statement, referring to both physical **and** human impacts.   *[10]*

Optional Theme B — Oceans and their coastal margins

3. *If you choose to answer this question refer to the diagram on page 2 in the Resources Booklet.*

The diagram shows one interpretation of an area of marine pollution (commonly referred to as an oceanic "garbage patch") and some ocean currents in the northern hemisphere.

(a) Describe the size and location of the oceanic "garbage patch" shown. *[2+2]*

(b) Explain why most types of ocean pollution occur along coastal margins. *[6]*

(c) Compare the conflicts that arise in coastal areas from habitat restoration schemes with those that arise from aquaculture. *[10]*

4. *If you choose to answer this question refer to the map on page 3 in the Resources Booklet.*

The map shows the surface salinity of the world's southern oceans (the numbers refer to the practical salinity scale (PSS)).

(a) Describe the pattern of ocean salinity shown on the map. *[4]*

(b) (i) Explain what is meant by the La Niña phenomenon. *[2]*

(ii) Using examples, analyse **two** economic impacts associated with La Niña. *[2+2]*

(c) Examine the role of oceans as a store and source of carbon dioxide. *[10]*

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Optional Theme C — Extreme environments

5. *If you choose to answer this question refer to the map on pages 4 and 5 in the Resources Booklet.*

The map extract shows the area around Bekejo in Ethiopia. The scale of the map is 1:50 000. The contour interval is 20 metres.

   (a)   (i)   Identify the vegetation types found at A and B. *[2]*

         (ii)   Using the map extract and key, suggest **two** reasons why the area shown could be considered an extreme environment. *[2+2]*

   (b)   Briefly explain **two** weathering processes likely to operate in area C on the map. *[2+2]*

   (c)   For **one named** type of extreme environment, examine the impacts of tourism on the natural environment. *[10]*

6.   (a)   (i)   Identify **one** type of cold extreme environment. *[1]*

         (ii)   State **three** physical characteristics of the cold extreme environment that you identified in (a)(i). *[3]*

   (b)   Explain why semi-arid areas are considered to be extreme environments. *[6]*

   (c)   "Global climate change will prevent people from living in extreme environments." Discuss this statement with reference to **one or more** extreme environments. *[10]*

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

7. *If you choose to answer this question refer to the map on page 6 in the Resources Booklet.*

    The map shows the population exposed to tectonic hazards in south and east Asia.

    (a) Describe the pattern of high population exposure to tectonic hazards shown on the map. *[4]*

    (b) Suggest **three** reasons why communities often underestimate the probability of a tectonic hazard event occurring in their locality. *[2+2+2]*

    (c) Examine the ways in which vulnerability to **either** earthquake **or** volcanic hazards can be reduced. *[10]*

8. (a) (i)   Identify a scale used to measure the magnitude of one hazard type. *[1]*

        (ii) Describe the main features of the scale you identified in (a)(i). *[3]*

    (b) Explain the occurrence of hurricanes (tropical cyclones, typhoons) in a **named** area. *[6]*

    (c) "The economic impact of disasters is increasing while related deaths are decreasing." Discuss this statement, with reference to examples of disasters. *[10]*

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Optional Theme E — Leisure, sport and tourism

9. The graph shows the impact of hosting the Olympic Games on the GNI of a country.
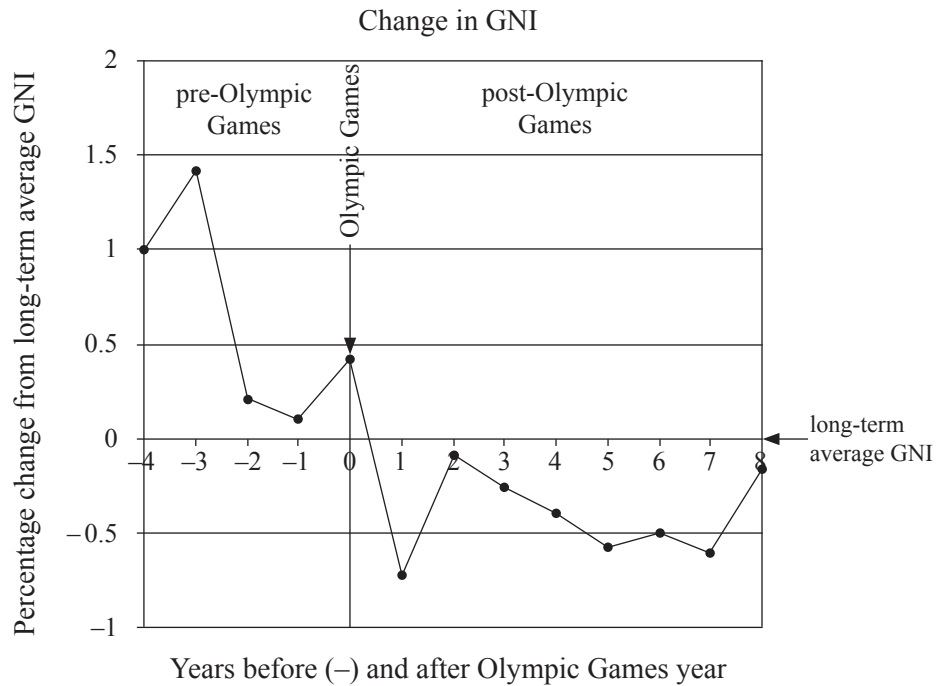
Change in GNI

[Source: International Monetary Fund]

(a) State the change in GNI:

    (i) during the year of the Olympic Games; *[1]*

    (ii) one year after the Olympic Games. *[1]*

(b) Describe what is meant by the *sphere of influence* of a sporting event. *[2]*

(c) Suggest reasons why a country's GNI increases before and during the Olympic Games. *[6]*

(d) Examine the changes in the international tourism industry that have led to the development of more remote tourism locations. *[10]*

10. The graph shows responses from hikers to the question "How many people would you like to encounter during a hike*?" for two rural locations, A and B.
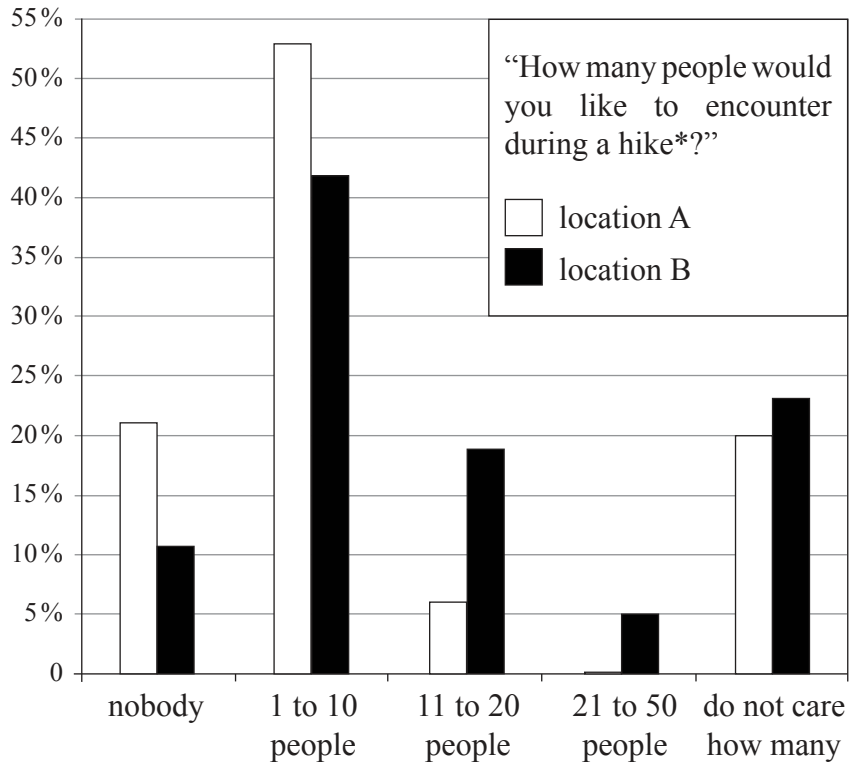

[Source: This figure was adapted from an article first published in *Mountain Research and Development* (MRD):
Boller F, Hunziker M, Conedera M, Elsasser H, Krebs P. 2010. Fascinating remoteness: The dilemma of hiking tourism development in peripheral mountain areas. *Mountain Research and Development* 30(4): 320–331.
http://dx.doi.org/10.1659/MRD-JOURNAL-D-10-00018.1.]

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*   Hike: a leisure time walk in the countryside

(a) (i) Define the term *carrying capacity*.   *[1]*

   (ii) State whether location A or B has the higher perceptual carrying capacity
         and justify your answer.   *[1+2]*

(b) Explain **three** factors that affect the distribution of sports facilities in urban areas.   *[2+2+2]*

(c) Examine the effectiveness of using sport and recreation to promote urban
    regeneration.   *[10]*

Optional Theme F — The geography of food and health

11. The diagram shows a simplified fair trade system for the export of peppers from Kerala, India, to consumers in Germany.
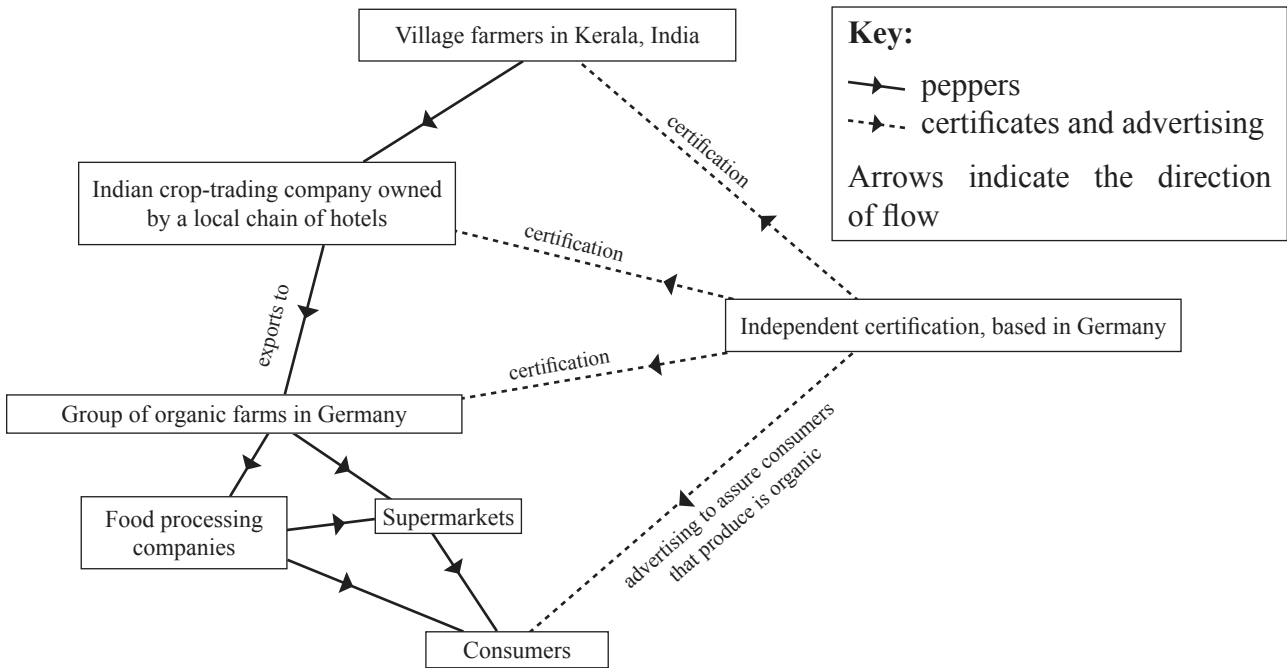

[Source: © International Baccalaureate Organization 2013]

(a) (i) Describe what is meant by *fair trade*. *[2]*

(ii) Referring to the diagram, identify **two** features of this system that make it an example of fair trade. *[2]*

(b) Explain how fair trade can help to alleviate local food shortages in regions where food crops are grown. *[6]*

(c) "Food miles are an excellent indicator of agriculture's environmental impact." Discuss this statement, referring to examples. *[10]*

12. (a) (i) Briefly describe what is meant by "diseases of affluence". *[2]*

(ii) State **two** examples of diseases of affluence. *[2]*

(b) Explain why health-adjusted life expectancy (HALE) is a better way to quantify the health of a community than infant mortality. *[6]*

(c) To what extent have the management strategies for **one named** disease been successful? Refer to **one** country or region in your answer. *[10]*

Optional Theme G — Urban environments

13. The diagram shows the urban ecological footprint for two cities, A and B.

> Diagram removed for copyright reasons.
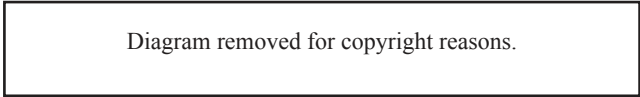
(a)   (i)   Define the term *urban ecological footprint*.   *[2]*

(ii)   Referring to the diagram, state which city has the larger urban ecological
footprint and justify your choice.   *[1+3]*

(b)   Explain **two** ways in which urban air pollution can be reduced.   *[2+2]*

(c)   Referring to examples, compare the patterns of formal and informal economic
activities in urban areas.   *[10]*

14. (a)   (i)   Define the term *megacity*.   *[1]*

(ii)   Explain **two** processes responsible for population growth in megacities.   *[2+2]*

(b)   Using **only** an annotated diagram, explain the operation of a sustainable
urban system.   *[5]*

(c)   Examine the effects of human activity on the climate of urban areas.   *[10]*