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GEOGRAPHY
HIGHER LEVEL
PAPER 2

Tuesday 18 November 2014 (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.
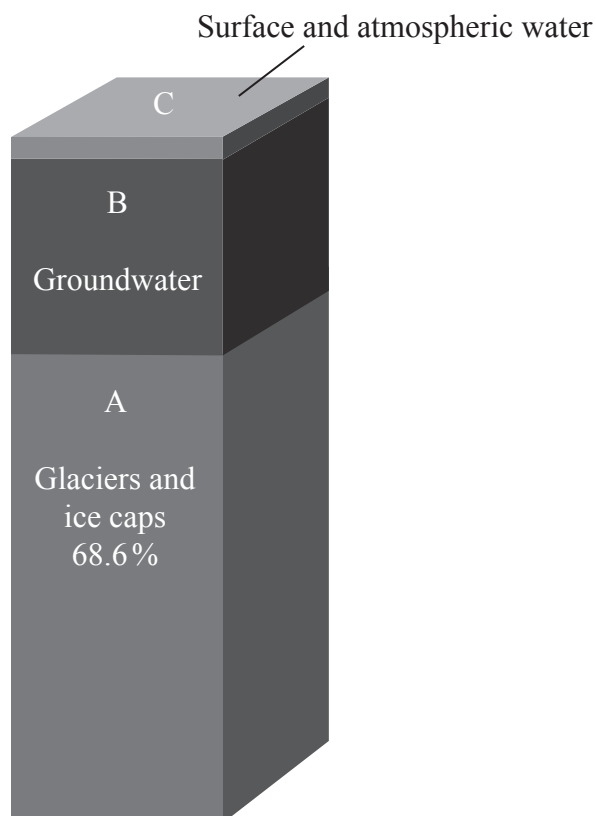* The maximum mark for this examination paper is *[60 marks]*.

Option	Questions
Option A — Freshwater – issues and conflicts	1 – 2
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*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.

Option A — Freshwater – issues and conflicts

1. The diagram shows the three main sources of freshwater on Earth.

Surface and atmospheric water

[Source: *Water in Crisis to the World Fresh Water Resources* by Gleick (1993) Fig. "Distribution of Earth's Water" from Chp. "World fresh water resources" by Shiklomanov. By permission of Oxford University Press, Inc.]

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

(ii) Estimate the percentage of groundwater shown on the diagram. *[1]*

(b) State **two** major types of natural surface freshwater (other than rivers). *[2]*

(c) Explain **three** consequences of a reduction in the volume of ice caps. *[2+2+2]*

(d) Discuss the relative importance of the factors affecting the characteristics of hydrographs. *[10]*

(Option A continued)

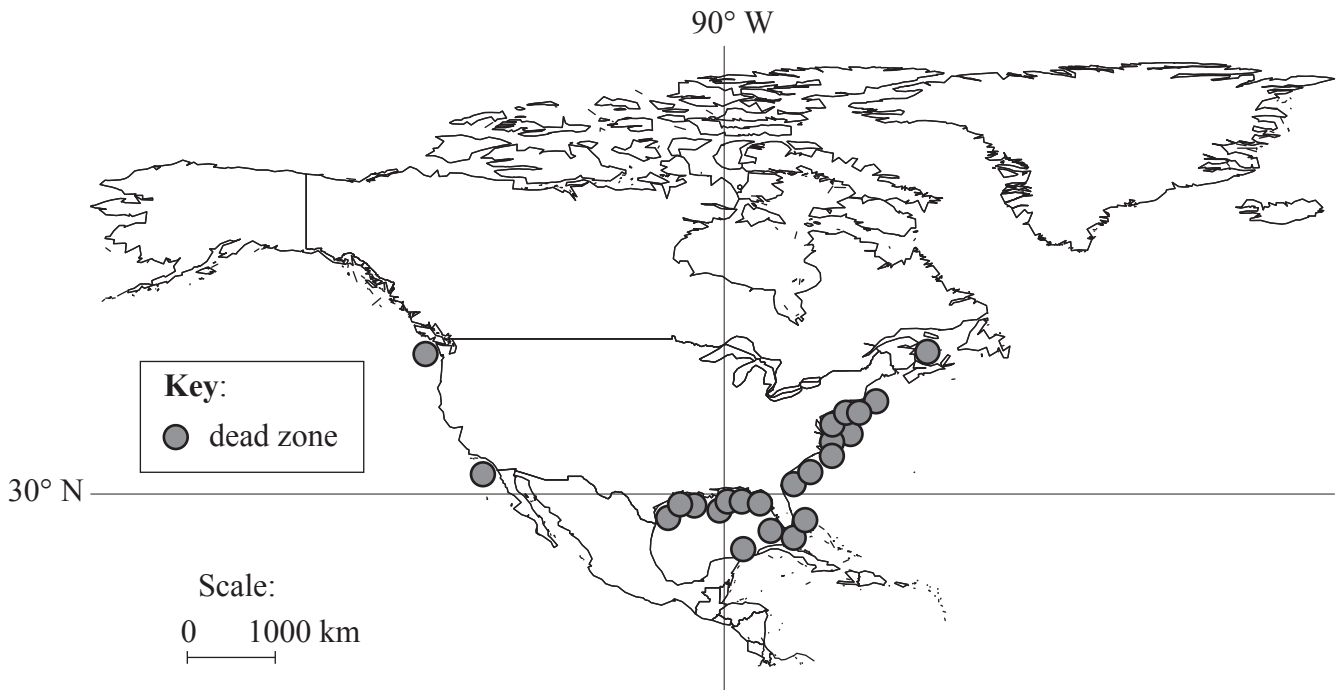**2.** *If you choose to answer this question refer to the photograph on page 2 in the Resources Booklet.*

The photograph shows the course of a river that flows into a lake.

(a) Referring to photographic evidence, identify **and** briefly describe **two** natural features of the river valley floor clearly shown in the photograph. *[2+2]*

(b) Suggest **three** ways in which humans might modify the floodplain shown in the photograph to reduce flood risk. *[2+2+2]*

(c) "Wetland management strategies are never a complete success." Discuss this statement, with reference to **one named** major wetland. *[10]*

End of Option A

Turn over

Option B — Oceans and their coastal margins

3. The map shows the distribution of coastal "dead zones" in North America and the Caribbean. A dead zone is an area with significantly reduced marine life (due to pollution).

[Source: © UNEP]

(a) (i)   Describe the location of dead zones.   *[2]*

(ii) Outline how chemical waste may result in a dead zone.   *[2]*

(b) Briefly explain the formation of:

(i)   **one** coastal landform resulting mainly from erosion;   *[3]*

(ii) **one** coastal landform resulting mainly from deposition.   *[3]*

(c) "Management strategies for coastlines are generally **ineffective**." Discuss this statement with reference to **one named** coastline you have studied.   *[10]*

(Option B continues on the following page)

(Option B continued)

4.   (a)   (i)   Define the term *exclusive economic zone (EEZ)*.   *[1]*

       (ii)   Outline how a conflict might arise from competition over exclusive
              economic zones (EEZs).   *[3]*

   (b)   Explain the role of oceans:

       (i)   as a store of carbon dioxide;   *[3]*

       (ii)   as a source of carbon dioxide.   *[3]*

   (c)   "To provide sustainable fish yields we must stop overfishing the oceans and
         promote aquaculture instead." Discuss this statement.   *[10]*

End of Option B

Option C — Extreme environments

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

The photograph shows a hot, arid landscape.

(a) (i) Identify any **one** landform shown in area A on the photograph. *[1]*

(ii) Suggest how landform B in the photograph was formed. *[3]*

(b) Explain **two** environmental impacts of tourism on **one named** extreme environment. *[3+3]*

(c) Contrast the challenges for mineral extraction in periglacial environments and hot, arid environments. *[10]*

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

The climate graph is of Arkhangelsk (64°N, 60°E), a periglacial area in northern Russia.
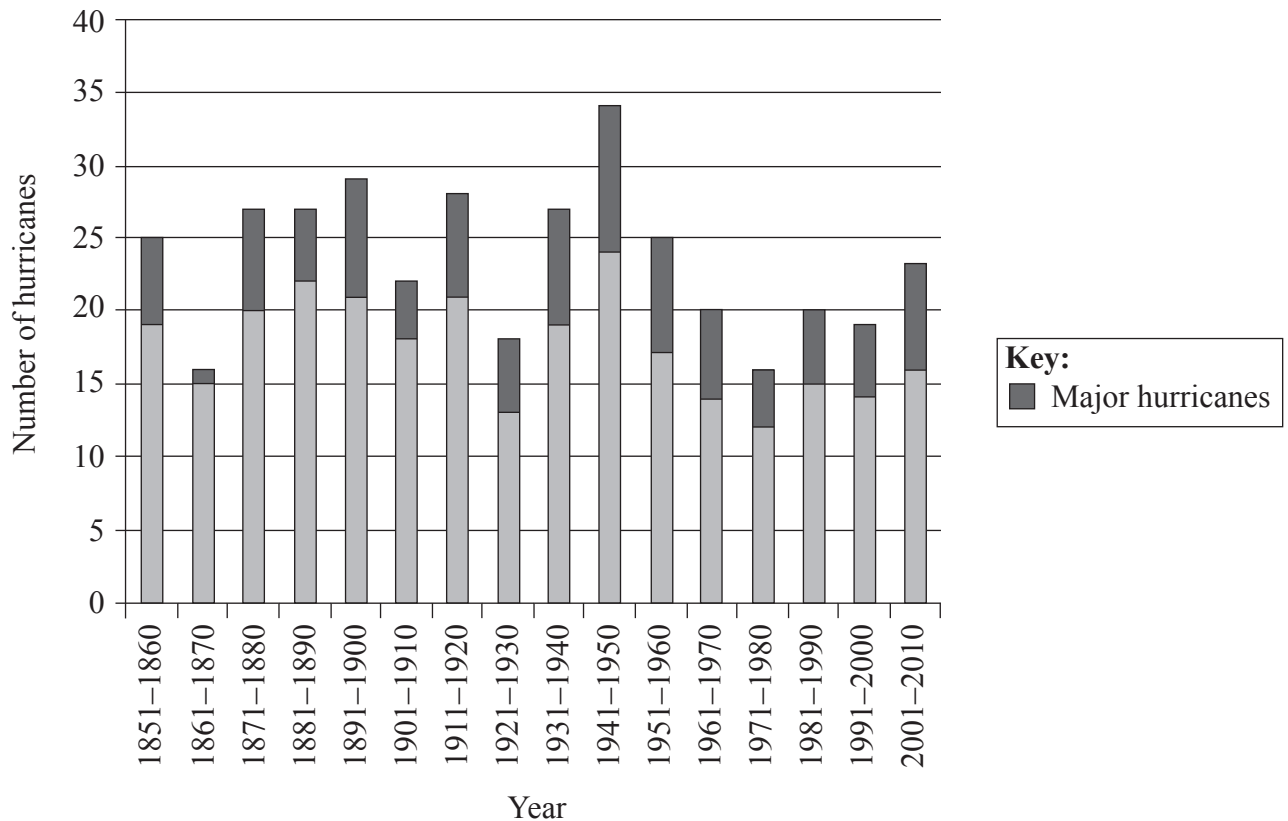
(a) From information shown on the graph:

(i) State the number of months of the year when the average temperature is below 0°C. *[1]*

(ii) Estimate the annual temperature range in °C. *[1]*

(iii) Apart from temperature, outline **one other** climatic characteristic shown on the graph that indicates Arkhangelsk is located in an extreme environment. *[2]*

(b) Explain **three** ways in which people have adapted to the extremes of weather and climate in periglacial areas such as Arkhangelsk. *[2+2+2]*

(c) "Desertification is the main environmental risk for agriculture in hot deserts and semi-arid areas." Discuss this statement, with reference to examples. *[10]*

End of Option C

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Option D — Hazards and disasters – risk assessment and response

7. The chart shows the total number of hurricanes that struck a country per decade from 1851 to 2010.

[Source: adapted from NOAA, www.nhc.noaa.gov]

(a) Describe the trends shown on the graph. *[4]*

(b) (i) Outline the essential characteristics of drought. *[2]*

 (ii) Explain the cause(s) of **one named** drought event. *[4]*

(c) "The level of economic development is the most important factor that influences the vulnerability of a population to environmental hazard risks." Discuss this statement. *[10]*

(Option D continues on the following page)

(Option D continued)

8. (a) Describe **two** ways in which land-use planning (zoning) can reduce hazard risk for a **named** hazard type. *[2+2]*

(b) Explain **three** reasons why people continue to reside in areas that are known to be affected by hazards. *[2+2+2]*

(c) "Hazard events are predictable, disasters are not." Discuss this statement. *[10]*

End of Option D

Option E — Leisure, sport and tourism

9. (a) Outline what is meant by the terms:

   (i) primary tourist resources; *[2]*

   (ii) secondary tourist resources. *[2]*

   (b) Using examples, explain **three** reasons for the growth of tourism in more remote locations. *[2+2+2]*

   (c) To what extent do the advantages of ecotourism outweigh any disadvantages? *[10]*

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

   The map shows the area around Locarno in southern Switzerland. The scale of the map is 1:50 000 and the contour interval is 25 metres.

   (a) Using map evidence, name **and** locate **two** different leisure activities or facilities shown in the area north of gridline 16. *[2+2]*

   (b) Referring to the map, explain **three** factors that may influence the shape of the catchment area for the sports stadium. *[2+2+2]*

   (c) Examine the use of sport and recreation as a regeneration strategy in **one or more** urban areas. *[10]*

End of Option E

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Option F — The geography of food and health

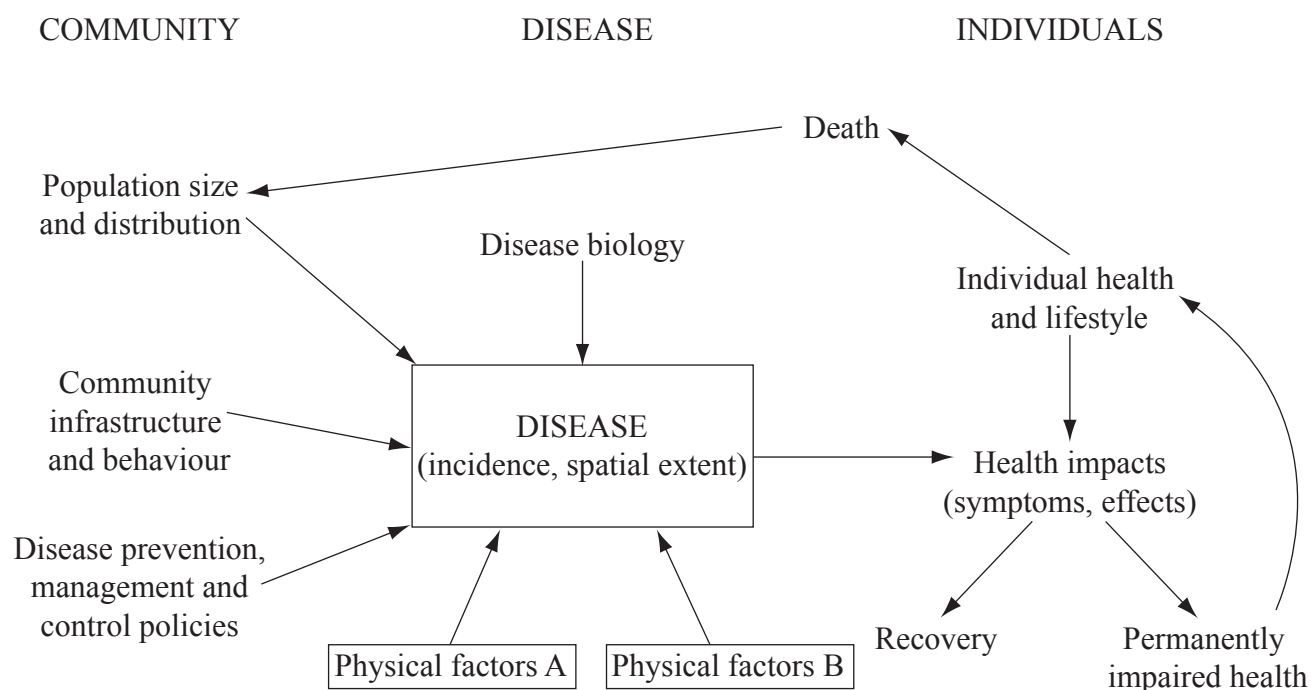11. *If you choose to answer this question refer to the map on page 5 in the Resources Booklet.*

    The map shows the changes between 1970 and 2010 in the average life expectancy for different regions of the world.

    (a) Describe the pattern of the changes in average life expectancy shown on the map. *[4]*

    (b) Suggest **three** reasons, **other than** improved health programmes, why life expectancy has increased in **named** regions in recent years. *[2+2+2]*

    (c) Referring to examples, examine how transnational corporations (TNCs), including agribusinesses, affect food production and food availability. *[10]*

(Option F continued)

12. The diagram shows some of the factors that affect the likely impacts of a disease on individuals and the community in which they live.

[Source: ©International Baccalaureate Organization 2015]

(a) Identify **two** possible physical factors (A and B) that may affect the incidence and/or spatial extent of the disease. *[2]*

(b) Briefly outline how population distribution can affect the incidence of the disease. *[2]*

(c) Explain **two** management strategies that have been used to limit the spread of **either one named** water-borne disease **or one named** vector-borne disease. *[3+3]*

(d) "For all communities, the prevention of disease is at least as important as its treatment." Discuss this statement, referring to **one or more** examples of disease. *[10]*

End of Option F

Turn over

Option G — Urban environments

13. (a) State **four** main characteristics of a central business district (CBD). *[4]*

    (b) Explain the processes of gentrification and counter-urbanization. *[3+3]*

    (c) Contrast the causes and effects of air pollution for **two named** urban areas. *[10]*

14. The figure shows information about urban deprivation for selected low income regions of the world.

AFRICA			ASIA			LATIN AMERICA
Northern	**Sub-Saharan**	**Eastern**	**Southeastern**	**Southern**	**Western**	
Moderate proportion of slum dwellers	Very high proportion of slum dwellers	Moderate proportion of slum dwellers	High proportion of slum dwellers	High proportion of slum dwellers	Moderate proportion of slum dwellers	Moderate proportion of slum dwellers

Key:

☐ Clearly improving conditions
▨ Some improvement in conditions
■ Deteriorating conditions

[Source: ©International Baccalaureate Organization 2015]

    (a) Outline the pattern and trend shown in the figure. *[2+2]*

    (b) Explain **three** factors that influence the location of squatter settlements in urban areas. *[2+2+2]*

    (c) "The rapid city growth caused by in-migration can never be controlled." Discuss this statement, referring to **one or more** examples. *[10]*

End of Option G