



22125202



**GEOGRAPHY  
HIGHER LEVEL  
PAPER 2**

Monday 7 May 2012 (morning)

2 hours

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**INSTRUCTIONS TO CANDIDATES**

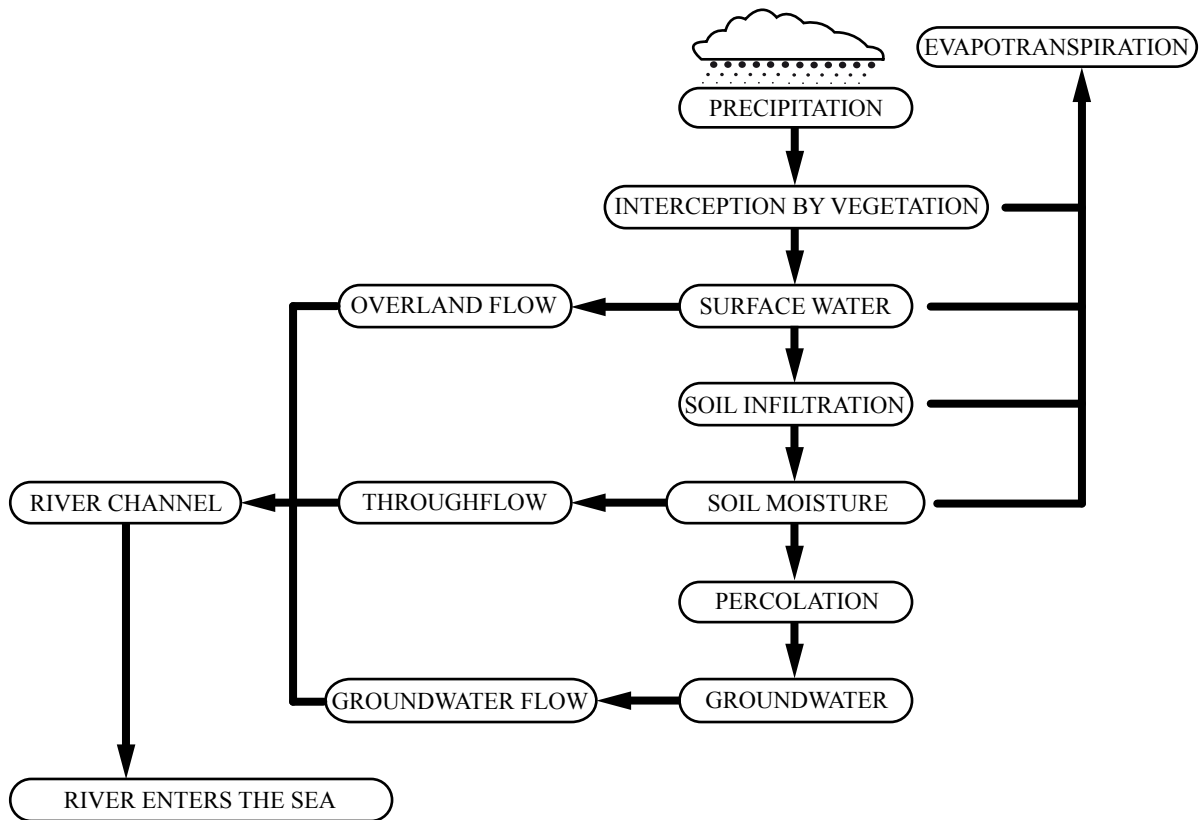
- Do not open this examination paper until instructed to do so.
- Answer three questions. Each question is worth *[20 marks]*.
- Each question must be selected from a different optional theme, A – G.
- Do not answer two questions on the same optional theme.
- Use case studies, examples, maps and/or diagrams 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 the inputs, outputs, stores and transfers that occur within a drainage basin as an open system.



[Source: adapted from [http://www.bbc.co.uk/scotland/education/int/geog/rivers/images/basin/diag\\_processes.gif](http://www.bbc.co.uk/scotland/education/int/geog/rivers/images/basin/diag_processes.gif)]

- (a) Identify **two transfers** and **two stores** shown in the diagram. [2+2]
- (b) Explain **three** ways in which human activity can reduce the time taken for water to pass through the system. [2+2+2]
- (c) Examine how an international conflict has arisen as a result of competing demands for freshwater. [10]

2. *If you choose to answer this question refer to the map on pages 2 and 3 in the Resources Booklet.*

The map extract shows an area in western Mexico. The scale of the map is 1:250000 and the contour interval is 100 metres.

- (a) Describe the geographical characteristics of the Río Grande de Santiago downstream from La Presa. [4]
- (b) Analyse how the freshwater resources shown in box A on the map could be used for different purposes. [6]
- (c) “People should not try to prevent rivers from flooding.” Discuss this statement. [10]

**Optional Theme B — Oceans and their coastal margins**

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

The map shows surface ocean currents in the Atlantic Ocean in January.

- (a) Describe the pattern of ocean currents shown on the map. [4]
  - (b) Explain the functioning and importance of the oceanic conveyor belt. [6]
  - (c) “Ocean fishing can never be sustainable.” Discuss this statement. [10]
4. (a) Identify **two** abiotic resources found in each of the following:
- (i) continental shelf areas, [2]
  - (ii) ocean floor deposits. [2]
- (b) Explain **three** consequences of oil pollution in oceans. [2+2+2]
- (c) Examine the effects of the loss of coral reefs and mangrove swamps. [10]

**Optional Theme C — Extreme environments**

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

The photograph shows a periglacial landscape in southern Iceland.

- (a) Briefly describe **two** erosional landforms shown in this photograph. [2+2]
  - (b) Explain **three** ways in which the characteristics of periglacial environments hinder resource development. [2+2+2]
  - (c) With reference to **one or more** extreme environments, discuss whether human activities can be sustainable. [10]
6. (a) Describe the climatic characteristics of **either** periglacial **or** glacial environments. [4]
- (b) Explain **two** landforms associated with deposition by glaciers. [3+3]
- (c) Examine the opportunities and challenges for agriculture in hot, arid areas. [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 world distribution of severe drought events from 1974 to 2004.

- (a) Describe the distribution of areas in the northern hemisphere that have been affected by **five or more** severe drought events from 1974 to 2004. [4]
- (b) Analyse **three** ways in which communities can reduce the impact of drought. [2+2+2]
- (c) “Hazard preparedness is more important than hazard prediction.” Discuss this statement with reference to any **one** hazard other than drought. [10]

8. (a) Define:

- (i) *hazard risk*, [2]
- (ii) *hazard probability*. [2]

- (b) Explain **three** factors that affect the way that people perceive hazards. [2+2+2]
- (c) Examine the impact of a recent human-induced (technological) hazard event. [10]

**Optional Theme E — Leisure, sport and tourism**

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

The map shows an area in Utah, USA, where tourism is important.

- (a) Identify **one** possible heritage tourism location **and one** possible ecotourism location shown on the map and justify your choice. [2+2]
- (b) Explain how the carrying capacity may be different for **two** of the activities at Three Peaks recreation area. [6]
- (c) Discuss the factors affecting the distribution of leisure facilities in urban areas. [10]

10. (a) Define:

- (i) *leisure*, [2]
- (ii) *tourism*. [2]

- (b) Analyse **three** geographic factors, other than accessibility and affluence, that determine levels of participation in **one** named sport you have studied. [2+2+2]
- (c) Compare the influence of accessibility and affluence on the growth of **either** recreation **or** tourism **or** sport. [10]

**Optional Theme F — The geography of food and health**

11. (a) (i) Define the term *health-adjusted life expectancy*. [2]
- (ii) State **one** reason why this is a better measure of the health of a population than child mortality. [2]
- (b) Referring to **one or more** diseases, explain how **three** geographic factors influence the spread of disease. [2+2+2]
- (c) “Affluent societies are less affected by disease than those with a high level of poverty.” Discuss this statement. [10]
12. The map shows the energy efficiency ratios for agriculture in selected provinces in Canada.



[Source: adapted from T McRae, CAS Smith and LJ Gregorich (eds.), (2000), *Environmental Sustainability of Canadian Agriculture: Report of the Agri-Environmental Indicator Project. A Summary*. Ottawa: Agriculture and Agri-Food Canada]

- (a) Identify the province with the most efficient energy ratio. [1]
- (b) Describe the pattern of energy efficiency ratios shown on the map. [3]
- (c) Suggest **three** reasons why energy efficiency ratios vary within a country or region. [2+2+2]
- (d) Examine recent changes in agricultural systems that have led to increased food availability in some areas. [10]



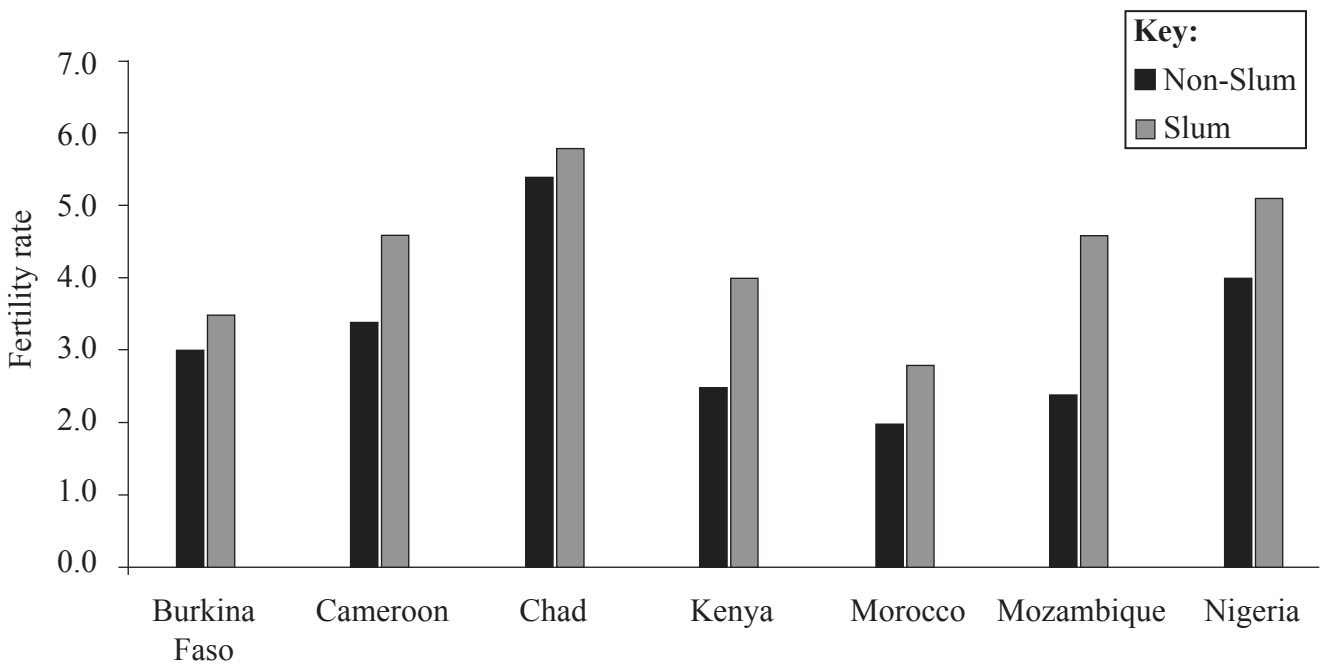
**Optional Theme G — Urban environments**

**13.** *If you choose to answer this question refer to the satellite images on page 8 in the Resources Booklet.*

The false-colour satellite images compare the Pearl River Delta in southern China in 1979 and 2003.

- (a) Describe the pattern of urban growth since 1979. [4]
- (b) Suggest **three** reasons for the rapid growth of some cities. [2+2+2]
- (c) Examine the factors that determine the socio-economic characteristics and location of residential areas within cities. [10]

**14.** The graph shows fertility rates in 2006 for slum and non-slum areas in various African countries. Fertility is an indicator of poverty.



[Source: adapted from *State of World Population* (2007), UNFPA]

- (a) Describe the differences in fertility shown on the graph. [4]
- (b) Explain **three** other social differences between slum and non-slum populations. [2+2+2]
- (c) Evaluate the effectiveness of **one or more** strategies to control rapid city growth resulting from in-migration. [10]